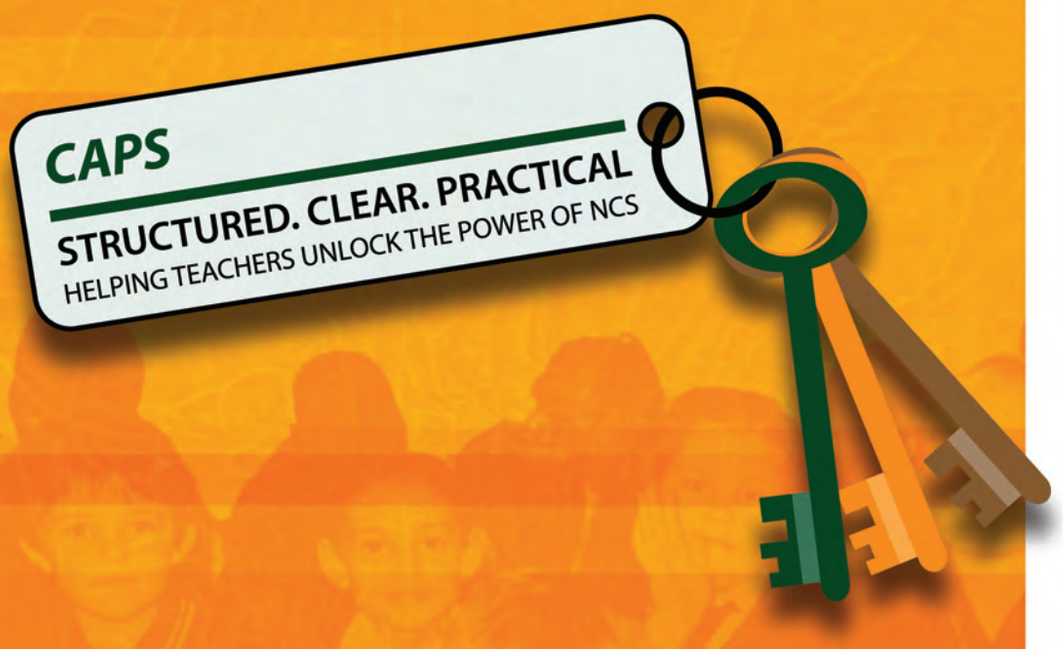
ISIXHOSA MATHEMATICS

National Curriculum Statement (NCS)

Curriculum and Assessment Policy Statement



Foundation Phase
Grade 1-3

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

INKCAZELO YEPOLISI KAZWELONKE YEKHARITYHULAM NOKUHLOLA

ISIGABA 1-3

IMATHEMATIKA

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ISBN: 978-1-4315-0449-7

Design and Layout by: Ndabase Printing Solution

Printed by: Government Printing Works

FOREWORD BY THE MINISTER



Our national curriculum is the culmination of our efforts over a period of seventeen years to transform the curriculum bequeathed to us by apartheid. From the start of democracy we have built our curriculum on the values that inspired our Constitution (Act 108 of 1996). The Preamble to the Constitution states that the aims of the Constitution are to:

- heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights;
- improve the quality of life of all citizens and free the potential of each person;
- lay the foundations for a democratic and open society in which government is based on the will of the people and every citizen is equally protected by law; and
- build a united and democratic South Africa able to take its rightful place as a sovereign state in the family of nations.

Education and the curriculum have an important role to play in realising these aims.

In 1997 we introduced outcomes-based education to overcome the curricular divisions of the past, but the experience of implementation prompted a review in 2000. This led to the first curriculum revision: the *Revised National Curriculum Statement Grades R-9* and the *National Curriculum Statement Grades 10-12* (2002).

Ongoing implementation challenges resulted in another review in 2009 and we revised the *Revised National Curriculum Statement* (2002) and the *National Curriculum Statement Grades 10-12* to produce this document.

From 2012 the two National Curriculum Statements, for *Grades R-9* and *Grades 10-12* **r**espectively, are combined in a single document and will simply be known as the *National Curriculum Statement Grades R-12.* The *National Curriculum Statement for Grades R-12* builds on the previous curriculum but also updates it and aims to provide clearer specification of what is to be taught and learnt on a term-by-term basis.

The *National Curriculum Statement Grades R-12* represents a policy statement for learning and teaching in South African schools and comprises of the following:

(a) Curriculum and Assessment Policy Statements (CAPS) for all approved subjects listed in this document;

(b) *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R-12*; and

(c) *National Protocol for Assessment Grades R-12.*



MRS ANGIE MOTSHEKGA, MP
MINISTER OF BASIC EDUCATION

IZIQULATHO

ISAHLUKO SOKU-1: INTSHAYELELO NEMVELAPHI 3

1.1 Imvelaphi 3

1.2 Amagqabantshintshi 3

1.3 Iinjongo eziphangaleleyo zekharityhulam yomzantsi afrika 4

1.4 Ukwabiwa kwexesha 6

1.4.1 Isigaba esisisiseko 6

1.4.2 Isigaba esiphakathi 6

1.4.3 Isigaba esiphezulu 7

1.4.4 Ibanga 10 - 12 7

ISAHLUKO SESI- 2: INKCAZELO, IINJONGO, IZAKHONO NOMXHOLO 8

2.1 Intshayelelo 8

2.2 Yintoni imathematika? 8

2.3 Iinjongo ezingundoqo 8

2.4 Izakhono ezingundoqo 9

2.5 Iinkalo zemixholo ekugqalwe kuyo 9

2.6 Ulwabiwo lweenkalo zemixholo 11

2.7 Imathematika kwisigaba esisisiseko 11

2.7.1 Izikhokelo zolawulo lweklasi 12

2.7.2 Abafundi abaneengxaki zokufunda kwimathematika 13

2.7.3 Imisebenzi yokubala ngentloko 14

2.8 Ibanga labaqalayo(r) 14

2.9 Izixhobo ezicetyswayo: igumbi lesigaba esisisiseko 18

ISAHLUKO SESI- 3: INKCAZELO YOMXHOLO 19

3.1 Intshayelelo 19

3.2 Inkcazelo yomxholo ukubonisa inkqubela-phambili 19

1. Amanani, ii-opareyshini nolwalamamo 20

2. Iipateni, isiphumo sentsebenziswamo yamanani / ifankshini ne-aljibra 28

3. Isithuba nemilo (ijiyometri) 29

4. Umlinganiselo 32

5. Indlela yokusebenza ngolwazi oluqokelelweyo 37

3.3 Inkcazelo ngomxholo 39
3.4 Ukulandelelanisa nesantya somxholo 40
3.5 Amanqaku nezikhokelo zokufunda 107

ISAHLUKO SEI-4: UKUHLOLA 593

4.1 Intshayelelo 593
4.2 Ukuhlola okungekho sesikweni okanye kwemihla ngemihla 593
4.3 Ukuhlola okusesikweni 593
4.4 Inkqubo yokuhlola okusesikweni 594
4.5 Ukurekhoda nokuripota (nokunika ingxelo ngomsebenzi) 595
4.6 Uphononongo lokuhlola 595
4.7 Ulwazi gabalala 596
4.8 Exemplar assessment tasks for grades 1 to 3 596

ISAHLUKO SOKU-1: INTSHAYELELO NEMVELAPHI

1.1 IMVELAPHI

I*Nkcazelo yeKharityhulam yeSizwe yeBanga R - 12 (NKS*) icacisa ipolisi yekharityhulam nokuhlola ezikolweni.

Ukuphucula ukusetyenziswa kwayo, iNkcazelo yeKharityhulam yeSizwe ihlaziyiwe, yaye uhlaziyo luya kuqala ukusebenza ngeyoMqungu/ngoJanyuwari 2012. Isifundo ngasinye senzelwe uxwebhu olunye lwePolisi yeKharityhulam nokuHlola endaweni yala maxwebhu madala angala: INkcazelo yeKharityhulam yeSizwe, iziKhokelo zeNkqubo yokuFunda kunye neziKhokelo zokuHlola zesiFundo kwiBanga R - 12.

1.2 AMAGQABANTSHINTSHI

(a) *INkcazelo yeKharityhulam yeSizwe (NKS) yeBanga R - 12 (EyoMqungu/Janyuwari 2012)* imele inkcazelo yepolisi yokufunda nokufundisa kwizikolo zoMzantsi Afrika yaye iquka oku kulandelayo:

(i) INkcazelo yePolisi yeSizwe yeKharityhulam nokuHlola yesifundo ngasinye kwezo zifundo zivunyiweyo zesikolo;

(ii) Uxwebhu lwepolisi oluthi, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R - 12.*; kunye

(iii) Noxwebhu lwepolisi oluthi, *National Protocol for Assessment Grades R - 12 (EyoMqungu/Janyuwari 2010).*

(b) Uxwebhu oluthi, *National Curriculum Statement Grades R - 12 (eyoMqungu/Janyuwari 2012)* lungena endaweni yala maxwebhu eNkcazelo yeKharityhulam yeSizwe mabini alandelayo:

(i) i*Revised National Curriculum Statement Grades R - 9, Government Gazette No. 23406 of 31 May 2002*, kunye

(ii) ne*National Curriculum Statement Grade 10 - 12 Government Gazettes, No 25545 of 6 October 2003 and No. 27594 of 17 May 2005*.

(c) Amaxwebhu enkcazelo yekharityhulam yesizwe ekuthethwe ngawo kwimihlathana (a) no(b) aquka la maxwebhu epolisi alandelayo, aza kuthi aye eyekiswa ngokuyekiswa, engenelewa yi*National Curriculum Statement Grades R - 12 (eyoMqungu/Janyuwari 2012)* ngo2012 - 2014:

(i) INkcazelo yeKharityhulam yeSizwe yezifundo ngezifundo, isiKhokelo seNkqubo yokuFundisa kunye nesiKhokelo sokuHlola sesiFundo yeBanga R - 9 neyeBanga 10 - 12;

(ii) Uxwebhu lwepolisi oluthi, *National Policy on assessment and qualifications for schools in the General Education and Training Band*, olubhengezwe kwi*Government Notice No. 124* ekwi*Government Gazette No. 29626* of 12 February 2007;

(iii) Uxwebhu lwepolisi oluthi, the *National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF)*, olubhengezwe kwi*Government Gazette No.27819* of 20 July 2005;

(iv) Uxwebhu lwepolisi oluthi, *An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding learners with special needs,* olupapashwe kwi*Government Gazette, No.29466* of 11 December 2006, lufakwe kuxwebhu lwepolisi oluthi, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R - 12;* kunye

(v) Uxwebhu lwepolisi oluthi, *An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding the National Protocol for Assessment (Grades R - 12)*, olubhengezwe kwi*Government Notice No.1267* in *Government Gazette No. 29467* of 11 December 2006.

(d) Uxwebhu lwepolisi oluthi, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades* R - 12; kunye namacandelo akwiPolisi yeKharityhulam nokuHlola njengoko ebonisiwe kwisahluko sesi-2, 3 nesesi-4 solu xwebhu aqulethe izithethe nemigangatho ye*Nkcazelo yeKharityhulam yeSizwe yeBanga R - 12.* Ngoko ke, olu xwebhu luya kuthi, ngokwe*candelo 6A* le*South African Schools Act* (uMthetho oLawula iZikolo zaseMzantsi Afrika), *ka1996 (uMthetho wama-84 ka1996,)* lwenze isiseko sokuxhobisa umPhathiswa weMfundo esisisiSeko ukuba akwazi ukubeka awona manqanaba aphantsi eziphumo nemigangatho, ngokunjalo neenkqubo nemigaqo yokuhlola inkqubela phambili yabafundi, manqanaba lawo za kusebenza kwizikolo zikaRhulumente nezabucala.

1.3 IINJONGO EZIPHANGALELEYO ZEKHARITYHULAM YOMZANTSI AFRIKA

(a) *INkcazelo yeKharityhulam yeSizwe yeBanga R - 12* inika isikhokelo kulwazi, izakhono nezithethe ezinokufundwa ezikolweni zaseMzantsi Afrika. Le kharityhulam ijonge ukuqinisekisa ukuba abafundi bafumana ulwazi nezakhono ngeendlela ezihambelana nobomi babo bemihla ngemihla. Kungoko ke le kharityhulam ikhuthaza uluvo lokusebenzisa kakhulu iimeko zalapha, kodwa ibe ikwayise iso nemiba ebalulekileyo yehlabathi jikelele.

(b) INkcazelo yeKharityhulam yeSizwe yeBanga R - 12 yenza oku kulandelayo:

- Ixhobisa abafundi ngolwazi, izakhono nezithethe eziya kubanceda ukuba bakwazi ukuzimela nokuthabatha inxaxheba ekuhlaleni njengabemi belizwe elikhululekileyo; nokuba bavela kweyiphi imo yezentlalo, uhlanga, isini, bekhangeleka njani ngokomzimba okanye bekuliphi inqanaba lengqiqo;
- Ivulela abafundi amathuba okuya kwimfundo ephakamileyo;
- Incedisa abafundi ukuba bakwazi ukuphuma kumaziko emfundo baye kumaziko omsebenzi; yaye
- Inika abaqeshi umfanekiso ocacileyo ngobuchule nolwazi abanalo abafundi.

(c) INkcazelo yeKharityhulam yeSizwe yeBanga R - 12 isekelwe phezu kwale mithetho-siseko ilandelayo:

- *Ukuphuculwa kwezentlalo:* ukuqinisekisa ukuba kuyalungiswa ukungalingani kwezemfundo okwabangelwa lixesha lobandlululo, nokuba bonke abemi banikwa amathuba emfundo alinganayo;
- *Ukufunda ngokubandakanyeka kusetyenziswa ingqiqo:* ukukhuthaza indlela yokufundisa efuna abafundi ukuba bathathe inxaxheba bebonakalisa ingqiqo, endaweni yokufunda ngokubethelela izimvo nokufunda nje bengaziqiqisisi iinyaniso okanye izimvo abazinikwayo;
- *Ulwazi nezakhono ezikumgangatho ophakamileyo:* ukubekwa kweyona migangatho isezantsi yolwazi

nezakhono ekufuneka abafundi bezibonakalise kwibanga ngalinye, kananjalo nokumiselwa imigangatho ephezulu enokufikelelwa kuzo zonke izifundo;

- *Ukuqhubela phambili:* umxholo wokufundwayo neemeko ekufundwa phantsi kwazo kwibanga ngalinye ubonisa ukuqhubela phambili, ukususela kokulula ukuya koko kuntsonkothileyo;

- *Amalungelo oluntu, uqukaniso, ukukhathalelwa kokusingqongileyo nobulungisa bezentlalo:* ukufakwa kwemithetho-siseko neendlela zokwenza ubulungisa kwezentlalo nokukhathalela indalo esingqongileyo kwanamalungelo oluntu, njengoko ebekiwe kuMgaqo-siseko weRiphablikhi yoMzantsi Afrika. INkcazelo yeKharityhulam yeSizwe yeBanga 10 - 12 ibonakalisa uvakalelo kwimiba yeyantlukwano enjengendlala, ukungalingani, uhlanga, isini, ulwimi, ubudala, ukuba nenkubazeko neminye imiba;

- *Ukuxatyiswa kolwazi lwemveli:* ukuthathela ingqalelo ubutyebi bembali kunye nelifa lemveli leli lizwe njengeentsika zokuxhasa izithethe eziqulethwe nguMgaqo-siseko; kunye

- *Nentembeko, umgangatho ophezulu, kunye negalelo elibonakalayo:* ukunika imfundo enokuthelekiseka neyamanye amazwe ngokomgangatho, ukunatyiswa kwanokungena nzulu kwayo kwimiba efundiswayo.

(d) INkcazelo yeKharityhulam yeSizwe yeBanga R - 12 ijonge ukuphuhlisa abafundi abakwaziyo:

- ukuchonga nokusombulula iingxaki bathabathe izigqibo besebenzisa ingqiqo nokucinga okubonakalisa ubugcisa;
- ukusebenza ngempumelelo bebodwa naxa bekunye nabanye njengamalungu eqela;
- ukuzicwangcisa nokuzilawula bona buqu kunye nemisebenzi yabo ngentembeko nangempumelelo;
- ukuqokelela, ukuhlalutya, ukucwangcisa nokuhlaba amadlala ulwazi;
- ukunxibelelana nabanye ngempumelelo besebenzisa ubuchule bokubonwayo, bemiqondiso kunye/okanye nezinye izakhono zolwimi ngeendlela ezahlukileyo;
- ukusebenzisa inzululwazi nobuchwepheshe ngempumelelo nangokubonakalisa ukuba noxanduva ngokunengqiqo ekukhathaleleni indalo esingqongileyo nempilo yabanye; kunye
- nokubonisa ukuliqonda ihlabathi ukuba liyiseti yezinto ngezinto ezizalanayo ngokuqaphela ukuba iimeko ezisonjululwa phantsi kwazo iingxaki azizimelanga zodwa geqe.

(e) Ukuqukaniswa kwemfundo kufuneka kube ngundoqo ekulungiseleleni, ekucwangciseni nasekufundiseni kwisikolo ngasinye. Oku kunokwenzeka kuphela xa bonke ootitshala benolwazi oluphangaleleyo malunga nendlela yokuqonda nokusombulula izidingo zokufunda kunye nendlela yokucwangcisela abafundi abangafaniyo.

Undoqo ekulawuleni ukuqukaniswa kwemfundo kukuqinisekisa ukuba izidingo ziyachongwa zize zisonjululwe ngawo onke amaqela enkxaso efanelekileyo asesikolweni, aquka ootitshala, amagosa esithili, amaQela eNkxaso amaZiko athile, abazali neZikolo zabaFundi abaneeMfuno eZizodwa njengamaZiko aXhobisa ngoLwazi. Ukusombulula izidingo eklasini, ootitshala mabasebenzise iindlela ngeendlela zokujongana neyantlukwano kwikharityhulam ezifana nezo zikuxwebhu lweSebe leMfundo esisisiSeko oluthi *Guidelines for Inclusive Teaching and Learning (2010).*

1.4 UKWABIWA KWEXESHA

1.4.1 IsiGaba esisisiSeko

(a) Ixesha elabelwe ukufundisa kwisiGaba esisisiSeko limi ngolu hlobo:

ISIFUNDO	IBANGA R (IIYURE)	IBANGA 1-2 (IIYURE)	IBANGA 3 (IIYURE)
ULwimi lwaseKhaya	10	7/8	7/8
ULwimi lokuQala oloNgezelelweyo		2/3	3/4
Izibalo	7	7	7
IzaKhono zoBomi • ULwazi lokuQala • UbuGcisa beZandla • EzemiThambo • UkuziPhatha neNtlalo	6 (1) (2) (2) (1)	6 (1) (2) (2) (1)	6 (1) (2) (2) (1)
LILONKE	**23**	**23**	**25**

(b) Ixesha elabelwe ukufundisa leBanga R, 1 nelesi-2 ziiyure ezingama-23. IBanga lesi-3 ziiyure ezingama-25.

(c) IBanga R - 2 labelwe iiyure ezilishumi, zize zibe li-11 kwiBanga lesi-3. ULwimi lwaseKhaya lwabelwe ezona lwimi zininzi ezisi-8 nezona zimbalwa ezisi-7; luze uLwmi oLongezelelweyo lwabelwe ezona zimbalwa zibe 2 zize ezona zininzi zibe 3 kwiBanga R - 2. KwiBanga lesi-3 ezona yure zininzi zisi-8, zize zibe si-7 ezona zimbalwa kuLwimi lwaseKhaya; kanti kuLwimi oloNgezelelweyo ezona zimbalwa zi-3, zize ezona zininzi zibe 4.

(d) IMathematika yabelwe iiyure ezisi -7.

(e) KwizaKhono zoBomi, uLwazi lokuQala lwabelwe iyure e-1 kwiBanga R - 2, zi-2 kwiBanga lesi-3, njengoko kubonisiwe kwizibiyeli kwiBanga.

1.4.2 IsiGaba esiPhakathi

(a) Ixesha elabelwe ukufundisa kwisiGaba esiPhakathi limi ngolu hlobo:

ISIFUNDO	IIYURE
ULwimi lwaseKhaya	6
ULwimi lokuQala oloNgezelelweyo	5
IMathematika	6
INzululwazi nobuChwepheshe (neTeknoloji) beNdalo	3,5
INzululwazi yezeNtlalo	3
IzaKhono zoBomi • UbuGcisa beZandla • EzemiThambo • UkuziPhatha neNtlalo	4 (1,5) (1) (1,5)
ZIZONKE	**27,5**

1.4.3 IsiGaba esiPhezulu

(a) Ixesha elabelwe ukufundisa kwisiGaba esiPhezulu limi ngolu hlobo:

ISIFUNDO	IIYURE
ULwimi lwaseKhaya	5
ULwimi lokuQala oloNgezelelweyo	4
IMathematika	4,5
IiNzululwazi zezeNdalo	3
INzululwazi yezeNtlalo	3
UbuChwepheshe (iTeknoloji)	2
INzululwazi yoLawulo lwezoQoqosho	2
IziFundo ngezoBomi	2
UbuGcisa neNkcubeko	2
ZIZONKE	**27,5**

1.4.4 IBanga 10 - 12

(a) Ixesha elabelwe ukufundisa iBanga 10 - 12 limi ngolu hlobo:

IZIFUNDO	IIYURE
1. ULwimi lwaseKhaya 2. ULwimi lokuQala oloNgezelelweyo 3. IMathematika 4. IziFundo ngezoBomi 5. Ubuncinane bazo naziphi izifundo ezithathu ezikhethwe **kwiQela B** isiHlomelo B, iiTheyibhile B1 – B8 zoxwebhu lwepolisi oluthi, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12,* ngokuxhomekeke kwimigaqo ebekwe kumhlathi wama-28 wolu xwebhu lwepolisi.	**4.5** **4.5** **4.5** **2** **12 (3x4yr)**
ZIZONKE	**27,5**

Ixesha elabelwe ukufundisa ngeveki malisetyenziselwe ukufundisa izifundo ngokweemfuno zezifundo zeNkcazelo yeKharityhulam yeSizwe yeBanga R - 12 (NKS) ezichatshazelwe apha ngasentla, hayi ezinye izifundo ezongezelelweyo. Ukuba umfundi ufuna ukongeza izifundo, makongezelwe elinye ixesha lezo zifundo azongezileyo.

ISAHLUKO SESI- 2: INKCAZELO, IINJONGO, IZAKHONO NOMXHOLO

2.1 INTSHAYELELO

KwisiGaba esisisiSeko, izakhono eziphambili kwiKharityhulam yoLwimi lwaseKhaya zezi:

Kwicandelo lesibini, isiGaba sesiSeko seMathematika iNkcazelo yePolisi yeKharityhulam nokuHlola inika ootitshala ingcaciso yeMathematika, iziphumo ezingundoqo, izakhono ezingundoqo, ugxininiso kumxholo, umthamo weenkalo zemixholo, izixhobo zokufunda ezinokusetyenziswa kwisifundo seMathematika kwisiGaba esisiSeko, izikhokelo ezinokusetyenziswa ukuxhasa abafundi abaneengxaki ekufundeni iMathematika, ukubala ngentloko nokomeleza ukufundisa izakhono zokubala kwabaqalayo kwiBanga labaQalayo.

2.2 YINTONI IMATHEMATIKA?

IMathematika lulwimi olusenza ukuba sisebenzise iisimboli namanani ukuchaza ulwalamano lwamanani lwejiyometri nolweegrafu. Ngumsebenzi owenziwa ngabantu oquka iipateni zokuqaphela, zokumela nezokuphanda nezolwalwamano ngokomgangatho ophathekayo nezokuhlala naphakathi kwezinto ngokokwazo. Incedisa ukwakha inkqubo yokubala ngentloko eqinisa ukusebenzisa ukucinga nzulu, ngokuchanekileyo nokwenza izisombululo eziza kukhokelela ekuthatheni izigqibo ezizizo.

2.3 IINJONGO EZINGUNDOQO

Iinjongo zokufunda nokufundisa iMathematika kukuphuhlisa ezi zinto zilandelayo kumfundi:

- Izinto ezingundoqo kunxibelelwano lweMathematika zisetyenziswa kwezentlalo, kwezisingqongileyo, kwezenkcubeko nezobudlelwano ngezoqoqosho;
- Ukuzithemba nokukwazi ukumelana nayo nayiphi imeko yeMathematika ngaphandle koloyiko lwayo;
- Ukufuna ukwazi nokuthanda iMathematika;
- Ukuncoma, ukuyonwabela, ubuhle nondiliseko lweMathematika;
- Ukuqaphela ukuba iMathematika inecandelo lobugcisa obenziwa ngabantu;
- Ulwazi olunzulu lweengqiqo ukunika intsingiselo yeMathematika; kunye
- Nokufumana ulwazi olungundoqo nezakhono ezifunekayo:
    - Ukusebenzisa iMathematika kwizinto ezibonwayo, kwezentlalo nezokusombulula iingxaki zeMathematika;
    - Ukufunda izifundo ezinxulumeneyo; kunye
    - Nokufunda banzi ngeMathematika.

2.4 IZAKHONO EZINGUNDOQO

- Ukwakha izakhono ezingundoqo zeMathematika, umfundi kufuneka:
- Akhe isigama esichanekileyo seMathematika;
- Akhe isigama samanani, ingqiqo yamanani, ukubala nokusebenzisa izakhono;
- Afunde ukumamela, ukuthetha, ukucinga, nokuqiqa usebenzisa ulwazi olufumeneyo;
- Afunde ukuphanda, ukuhlalutya, ukumela ukutolika ulwazi;
- Afunde ukubuza imibuzo nokusombulula iingxaki; kunye
- Nokwakha ulwazi nokubaluleka kweMathematika nendima eyidlalayo ebomini, nakuphuhliso lobume bomfundi.

2.5 IINKALO ZEMIXHOLO EKUGQALWE KUYO

IMathematika kwisiGaba esisisiSeko siquka iinkalo ezintlanu. Inkalo nganye yongeza kulwazi lwezakhono ezingundoqo. Le theyibhile ingezantsi ibonisa ugxininiso jikelele lweenkalo zemixholo kunye nezakhono eziziinkalo kwisiGaba esisisiSeko.

Itheyibhile 2.1 Umxholo ekugqalwe kuyo kwiMathematika yesiGaba esisisiSeko

ULWAZI LOMXHOLO LWEMATHEMATIKA		
Iinkalo zemixholo	**Umxholo ekugqalwe kuyo jikelele**	**Umxholo ekugqalwekuyo kwisiGaba esisisiSeko**
Amanani, liOpareyshini nolwalamano	Ulwazi/ uphuhliso lwamanani luquka: • Intsingiselo yeendidi zamanani ahlukeneyo; • Ukuzalana phakathi kweendidi zamanani ahlukeneyo; • Ukuzalana ngobukhulu beendidi zamanani ezahlukeneyo; • Ukuboniswa kwamanani ngeendlela ezahlukeneyo; kunye • Nefuthe lokusebenza ngamanani.	Uluhlu lwamanani oluphuhliswa kwiBanga lesi-3 luquka amanani azeleyo ukuya kwi-1000 namaqhezu aqhelekileyo. Kwesi sigaba, ingqiqo ngamanani yabafundi iphuhliswa ngezinto eziphathwayo ukubala ingqokelela yezinto, ipatishini, ukudibanisa iikhwantithi, ukubala ngokuqakatha ngeendlela ezahlukeneyo, ukusombulula izibalo zamazwi, nokwakha nokwahlula amanani. • Ukubala kunceda abafundi ekuphuhliseni ingqiqo ngamanani, ukubala ngentloko, uqikelelo, izakhono zokubala nokunakana iipateni. • Ingqiqo yamanani ikhulisa abafundi ngeemilo zamanani ikwaphuhlisa iindlela ezinokwenza kube lula ukubala. • Ukusombulula iingxaki kunceda abafundi ekuchazeni iindlela abacinga ngayo ngokuthetha nangokubhala ngokuba bazobe benze neesimboli. • Abafundi bakhulisa ulwazi lwabo lwabasaqala ukubala ngokudibanisa, ngokuthabatha ngokuphindaphinda nangokwahlulahlula. • Abafundi baphuhlisa ulwazi lwabo lwamaqhezu ngokubala basombulule izibalo kuquka nokwaba izinto eziphathekayo nangokusebenzisa imizobo.Iingxaki zezibalo maziquke nezisombululo eziza kunikwa nemazisekelwe kumanani apheleleyo okanye amaqhezu, ukwehlulelana makungaquki ukufumana amanani apheleleyo qha, makuquke nokufumana ukuqokelelwa kwengqokelela yezinto. Kweli nqanaba, abafundi abalindelekanga ukuba bafunde nokuba babhale iisimboli zamaqhezu.

ULWAZI LOMXHOLO LWEMATHEMATIKA		
linkalo zemixholo	**Umxholo ekugqalwe kuyo jikelele**	**Umxholo ekugqalwekuyo kwisiGaba esisisiSeko**
liPateni, iiFankshini neAljibra	I-Aljibra lulwimi lokufunda nokuthetha ngoninzi lweMathematika yaye lungagqithiselwa nasekufundweni kwemisebenzi nokunye ukuzalana kwezinto. Esona siseko sale nkalo yomxholo kukuba abafundi bafumane izakhono ezaneleyo ekusebenziseni iAljibra. Kukwagqalwe: • ukucaciswa kweepateni nokuzalana kwazo kusetyenziswa ukubonisa ulwazi lweesimboli, iigrafu, neetheyibhile, kunye • ukufuna uchaze ukungatshintshi nokutshintsha kweepateni, kunye nokuzalana okwenza abafundi ukuba benze uqikelelo nokusombulula iingxaki.	Kwesi sigaba, abafundi basebenzisa zombini: • Iipateni zamanani (umzekelo: ukubala ngokuqakatha); kunye • Neepateni zejiyometri (umzekelo: imizobo). Abafundi mabasebenzise izinto eziphathekayo, imizobo neesimboli xa bekhuphela, besongeza, bechaza naxa besenza iipateni. Ukukhuphela iipateni kunceda abafundi ukubona indlela eyiyo ezenziwe ngazo iipateni. Ukongeza iipateni kunceda abafundi ukuba bakhangele ukuba bazilandele kakuhle na iipateni. Ukuchaza iipateni kunceda abafundi ukuba baphuhlise izakhono zabo zolwimi. Ukubethelela kulandelelwano lweepateni kwenza isiseko sokuphuhlisa izakhono zokucinga ngeAljibra. Iipateni zamanani zincedisana nophuhliso lokwazi nokwakha amanani, ukusebenzisa nolwalamano lwamanani. Iipateni zejiyometri ziquka ulandelelwano lwemigca, inkangeleko, nezinto kunye neepateni zelizwe jikelele, kwiipateni zejiyometri abafundi basebenzisa ulwazi lwabo lwesimo nobume.
IsiThuba neMilo(ijiyometri)	Ukufunda isiThuba neMilo kunceda ekulandeleni nasekuthandeni ipateni, ekulandeleni, ukuphumelela nasekuboneni ubuhle kwizinto zendalo nenkcubeko. Ibethelela: • kwiimpawu, ulwalamano; • ukuziqhelanisa, iindawo; kunye • nenguqulelo yezinto ezinokwakheka kuka 2-D no 3-D.	Kwesi sigaba abafundi babethelela kwizinto ezinokwakheka kuka 2-D no 3-D, iimo, iindawo nezalathiso. • Abafundi bafunda ngezinto ezinembonakalo yamacala amathathu neemo ezinembonakalo yamacala amabini, ukwahlula, ukwahlula ngakwamaqela, ukuchaza nokubiza agama azo. • Abafundi bazoba iimilo bakhe ngezinto. • Abafundi bayazitshintsha bazichaze iimilo nezinto ezikwiindawo ezibangqongileyo ezifana nezinto neemilo zeMathematika. • Abafundi bachaza indawo ezikuyo izinto, bona nabanye besebenzisa isigama. • Abafundi balandela benika izalathiso.
Imilinganiselo	Umlinganiselo ubethelela ekukhetheni nasekusebenziseni imivo ngokufanelekileyo, izixhobo, neefomyula ukuqikelela ubungakanani beempawu zeziganeko, iimo, izinto nokusingqongileyo. Ijongene ngqo nolwazi lwenzululwazi, iteknoloji nezezimali kwilizwe jikelele, inceda umfundi ukuba: • Enze uqikelelo olwenza okuvakalalyo; yaye • Aqonde ulwazi lwemilinganiselo neziphumo zazo.	• Kwesi sigaba, ulwazi lwabafundi kumlinganiso luphuhliswa ngokwenza izinto ezahlukeneyo besebenzisa izinto eziphathekayo, iimilo, befunda iimpawu zobude, umthamo, ubunzima, ieriya nexesha. • Abafundi balinganisa umthamo weemilo zezinto besebenzisa iiyunithi ezingamiselekanga apho kufanelekileyo, ezinjengezandla, izantya, nezikhongozeli, njalo njalo. • Abafundi bathelekisa ubuninzi ngokwahlukeneyo besebenzisa isigama sokuthelekisa esinje ngobude/ ubufutshane, ubunzima/ ubukhaphukhaphu, njalo njalo. • Abafundi baziswa kwiiyunithi ezinjengeegrem, iikhilogrem, iimililitha, iilitha, iisentimitha neemitha. Imisetyenzana yexesha kufuneka ibekelelwe abafundi baqhelaniswe ukwazi ixesha elidlulayo phambi kokuba bakwazi ukulifunda.

ULWAZI LOMXHOLO LWEMATHEMATIKA		
Iinkalo zemixholo	**Umxholo ekugqalwe kuyo jikelele**	**Umxholo ekugqalwekuyo kwisiGaba esisisiSeko**
Ukusebenzangowazi oluqokelelweyo	Kwindlela yokusebenza ngolwazi oluqokelelweyo, abafundi babonisa izakhono: • zokuqokelela; • ukucwangcisa; • ukubonisa; kunye • nokuhlalutya ucacise ulwazi olunikiweyo.	Ugxininiso kumaBanga asisiseko ekufundiseni nasekufundeni indlela yokusebenza ngolwazi oluqokelweyo ukuhlela izinto nedatha ngeendlela ezahlukeneyo, zixhomekeke kubomi bezinto nedatha. • Abafundi kulindeleke ukuba batolike ze bakhe iigrafu zemifanekiso neegrafu zezitena ngongqamaniso lwamanani nedatha abayinikiweyo.

2.6 ULWABIWO LWEENKALO ZEMIXHOLO

Ulwabiwo lweenkalo zeMathematika lunceda iinkalo ezimbini: ulwabiwo lunika isikhokelo ngexesha emalinikwe nokufundisa kwinkalo yomxholo ngokufanelekileyo; okwesibini ulwabiwo lunika isikhokelo ngendlela umxholo omawuhlolwe ngayo.

Ulwabiwo lweenkalo zemixholo alufani kumaBanga esiGaba esisisiSeko.

Itheyibhile 2.2 Ulwabiwo lweenkalo zemixholo kwisiGaba esisisiSeko

ULWABIWO LWEENKALO ZEMIXHOLO			
Ummandla womxholo	**IsiGaba 1**	**IsiGaba 2**	**IsiGaba 3**
Amanani, ii-Opareyshini noLwalamano*	65%	60%	58%
Ipateni, iiFankshini neAljibra	10%	10%	10%
Isithuba nesimo (Ijiyometri)	11%	13%	13%
Imilinganiselo	9%	12%	14%
Ukusebenzisa nolwazi oluqokelelweyo	5%	5%	5%
	100%	**100%**	**100%**

*KwisiGaba sabaQalayo (R - 3), kubalulekile ukuba kugxininiswe ekufundiseni amanani, ukusebenza nolandelelwano kwiMathematika. Kubalulekile ukuba abafundi baphume bewazi kakuhle amanani bekwazi nokubala. Injongo kukuba abafundi baqiniseke bazithembe kumanani nasekubaleni. Ngenxa yesi sizathu ixesha lokufundisa amanani, ukusebenza nolandelelwano longeziwe. Uninzi lomsebenzi kwipateni malenziwe kwiipateni zamanani ukubethelela ulwazi lwabafundi ngamanani.

2.7 IMATHEMATIKA KWISIGABA ESISISISEKO

IMathematika yesiGaba esisisiSeko iqinisa uqhagamshelwano phakathi kobomi babafundi abasaqalayo naBangaphandle esikolweni, neMathematika enzima kwiizigaba ezingaphambili kwelinye icala. KwisiGaba sabaQalayo, abafundi mabakrotyiswe kwimiba yeMathematika ebanika amathuba okuba bathethe baze barekhodishe iingcinga zabo zeMathematika.

Ixesha elichithwa ekufundiseni iMathematika linegalelo ekuphuhliseni ulwazi lwengqiqo nezakhono kubafundi. Imisetyenzana ekufuneka abafundi beyenzisiwe kukuba akufunekanga ibe ngxaka-ngxaka koko kufuneka igxininiswe kwingqiqo yeKharityhulum yeMathematika.

2.7.1 Izikhokelo zolawulo lweklasi

Ixesha elisikelwe ukufundisa iMathematika kusuku ngalunye kufuneka luthathwe njengepiriyodi. Ngepiriyodi yeMathematika ezi zinto zilandelayo kufuneka zenzeke:

- **Imisebenzi yeklasi yonke**
  - IMathematika ebalwa ngentloko
  - Ukuqukunjelwa kwemisebenzi yengqiqo
  - Ukulawula iklasi (ukunika imisebenzi yomfundi ngamnye, njalo njalo).
- **Ukufundisa amaqela amancinci**
  - Ukubala
  - Uphuhliso lwamanani engqiqo (imisebenzi yokuthetha neyenziwa ngezandla)
  - Ukusombulula iingxaki (imisebenzi yokuthetha neyenziwe ngezandla)
  - Ukurekhodisha okubhaliweyo
  - Ukuphuhlisa iindlela zokubala (imisebenzi yokuthetha neyenziwe ngezandla)
  - Iipateni
  - Isithuba nesimo
  - Imilinganiselo
  - Indlela yokusebenza ngolwazi oluqokelelweyo
- **Ukusebenza wedwa**

  Abafundi bayaziqhelanisa baqukumbele iingqiqo eziphuhliswe ekufundisweni kwiklasi yonke nakumaqela amancinci.

  *Imisebenzi yeklasi yonke***:** apho kugxininiswa kubalo lwentloko, makubekho uqukumbelo lwengqiqo nokunikwa imisebenzi kangangemizuzu engama-20 ngosuku ekuqaleni kwesifundo seMathematika. Ngeli xesha utitshala uza kusebenza neqela lonke leklasi eqwalasela ekwarekhodisha, apho kufanelekileyo, amagama eentsuku zeveki, umhla, abafundi abakhoyo nabangekhoyo esikolweni nokuba injani imo yezulu. Ukubala ngentloko kuquka ukubala ngentloko okukhawulezileyo okunje ngokuthi “inani phambi nasemva kwesi-8 ngu-2 ngaphezu/ngaphantsi ko-8 ngu: 4+2; 5+2; 6+2” njalo njalo. Ngeli thuba utitshala makaqukumbele iingqiqo ezinobunzima. Enye into ebalulekileyo utitshala amakayenze kukuba anike iklasi yakhe imisebenzi ephangaleleyo nemisebenzi abayenza bodwa ngokwabo ngelixa ancedisana namaqela amancinci.

  Imisebenzi yamaqela amancinci: olona hlobo lusebenzayo kuxa utitshala esebenza ngamaqela amancinci (8 ukuya kwi-12) anabafundi abalingana ngokucinga emethini okanye ezitafileni, ngelixa abanye besebenza bodwa. Utitshala usebenza ngokuthetha nangokwenza nabafundi, besebenza imisebenzi enjengokubala, ukuqikelela, uphuhliso lwengqiqo lwamanani nokusombulula iingxaki, nemisebenzi yeepateni, izithuba neemilo, imilinganiso, indlela yokusebenza ngolwazi oluqikelelweyo, ekufuneka icwangciswe ngobunono.

Ukwenzela ukubethelela ukufunda, ukubhala makube yinxalenye yemisebenzi yamaqela apho kunokwenzeka.

Abafundi mababe nezinto zokubhala (umzekelo: iincwadi zokubhala) zemisebenzi yokusombulula iingxaki. Imisebenzi yamaqela mayibe nonxibelelwano, abafundi mabakhuthazwe ukuba “benze, bathethe baze barekhodishe” iingcinga zabo ngeMathematika.

Ootitshala mabazame ukungabajongeli phantsi abafundi abaqonda kade; nabo kufuneka banikwe imisetyenzana enzima. Kuba lula ukuxuba imisebenzi kwiqela labantwana abakwinqanaba elilinganayo lokucinga. Kodwa amaqela axubeneyo asebenza kakuhle ukwakha, ukulinganisa iipateni nokuhlela okanye imidlalo.

Imisebenzi eyenziwa ngabanye: ngeli lixa utitshala asebenza ngeqela elincinci, amanye amaqela makenze imisebenzi yeMathematika eyahlukeneyo ebethelela nequkumbela iingqiqo nezakhono ebezifundisiwe kumaqela amancinci. Imisebenzi eyenziwa ngabanye mayohlula-hlulwe ukulungiselela amaqela ahlukeneyo ngokucinga. Imisebenzi yamaqela azimeleyo aquka:

- Iincwadi zemisebenzi;
- Incwadi zemisebenzi yokubhala/ amakhadi okubala, ukudlala ngamanani, imisebenzi elula ngokusemxholweni, njalo njalo;
- Imidlalo yeMathematika enjengeLudo, dominos, iiphazili ; kunye
- Nemisebenzi equka ukwakha, ukuHlola, iipateni okanye imilinganiselo.

Iphiriyodi yeMathematika kufuneka incede abafundi abaneengxaki zokufunda, nemisebenzi yabantwana abakrele-krele nemisebenzi yokuHlola, njalo njalo.

Imisebenzi yamaqela amancinci nazimeleyo mayijongwe, ikorekishwe ngutitshala njengemisebenzi yohlaziyo ecwangcisiweyo nengacwangciswayo.

Ukujongwa kwendlela abafundi abafunda nabafundiswa ngayo incedisa utitshala ukuba enze uhlaziyo oluqhubekayo, alandele ukujonga inkqubo yabo aze acwangcise imisebenzi yokuncedisana nabafundi abafumana iingxaki.

2.7.2 Abafundi abaneengxaki zokufunda kwiMathematika

Kubalulekile ukuba abafundi abaneengxaki zokufunda kwiMathematiki bakrotyiswe kwimisebenzi eyenzelwe ukufunda. Ixesha elininzi malisetyenziswe kwimizekelo nemisebenzi yezandla neyenziwayo kunabanye abafundi, umzekelo, ukusetyenziswa kwemisebenzi enzima msinyane kungadodobalisa ukuqhubeka kwaba bafundi. Aba bafundi mabanikwe ithuba elongezelelweyo:

- Lokugqibezela imisebenzi;
- Ukufumana izakhono zokucinga (belandela iindlela ezithile); kunye
- Nemisebenzi yokuHlola.

Inani lemisebenzi emayenziwe malilungiselelwe abafundi kodwa kungasileli izakhono ekufuneka zifundisiwe.

2.7.3 Imisebenzi yokubala ngentloko

Ukubala ngentloko kunendima enkulu kwikharityhulam. Iibhondi zamanani neetheyibhuli zokuphinda-phinda zithatha ngokuba abafundi bayazi okanye bamele ukukhumbula uluhlu lwesigaba ngasinye. Kwakhona, ukubala ngentloko kwenzelwa ukubala ukuya kufika kumanani amakhulu ubala ngokuqakatha nokwenza imisebenzi enjengo“kubala phantsi naphezulu kwileli yamanani”, umzekelo, utitshala unokubuza le mibuzo ilandelayo “imibuzo ethungelanayo” “qala kuma-796 yongenza ngesi-7. Ewe, ngama-803 nciphisa isi-5. Ewe, ngama-798. Yandisa nge-10…wandise ngesi-2… kuma-90…unciphise ngesi-5…” njl. Le misebenzi incedisa abafundi ekwakheni imigca-manani yokubala ngentloko.

Ukubala ngentloko kubonakala kakhulu xa kubalwa naxa kuphuhliswa icandelo lamanani ngokunxulumene nesihloko samanani neepateni, kunokuphinda kuvele kwimisebenzi yolinganiselo nakwindlela yokusebenza ngolwazi oluqokelelweyo. Xa besebenzisa imisebenzi yokubala ngentloko, utitshala makangabanyanzeli abafundi ukuba benze imisebenzi abangenakho ukuyenza — izixhobo zokubhala nezokubala mazisoloko zifumaneka kubafundi abazifunayo.

2.8 IBANGA LABAQALAYO(R)

Indlela yokufunda iMathematika mayisetyenziswe ngokunxulumanisa nangokufunda ngokudlala. Utitshala makasoloko ezixhobisa, abe nomcebisi kunomququzeleli. Umcebisi usebenzisa amathuba okufunda okungacwangciswanga xa abafundi besenza imidlalo ngokukhululekileyo kwikona yokudlala ngokuzikhethela okanye kweyeebhloko zokwakha, zesanti, nemidlalo yamanzi nemisebenzi, encediswa ngutitshala kwizibalo ezijongene nengqiqo ezinjengokubala, uphuhliso lwengqiqo yamanani, nesithuba nesimo, iipateni, ixesha neminye imisebenzi eqalayo yeMathematiki. Imibala yodwa asiyongqiqo yeMathematika, kodwa ingasetyenziswa ekuphuhliseni iingqiqo zeMathematika ezinjengokuhlenga-hlengisa, ukwahlula-hlula nokuchaza.

Yonke imiba yeBanga labaQalayo, iquka ubume beklasi, ukufundisa nokufunda makukhokelele ekuphuhlisweni kokufunda komfundi ngokupheleleyo. Uphuhliso olunxulunyaniswe nokufunda kwabaqalayo, inyumerasi luquka nokuphuhliswa kwengqondo (ukusombulula iingxaki, ukucinga ngolandelelwano nokuqiqa), uphuhliso lolwimi (ulwimi lweMathematika kunye nokuphuhlisa izakhono zokushukuma kunye nemvakalelo yobume. Zonke ezi meko zingaphuhliswa ngamabali, iingoma, imidlalo yeminwe, izicengcelelzo, imidlalo yamanzi, iithoyi zokufundisa kunye nemidlalo yeebhodi, ngokwakha nemisebenzi yokuzungeza, imidlalo yemibono, imidlalo yangaphandle neyaseyadini yokudlala. Imidlalo emininzi mayiquke izakhono zenyumeresi, umzekelo, ukulinganisa izixhobo zokupheka okanye ukubala xa uyokuthenga.

Ngamanye amazwi, ukufumana izakhono zeMathematika yabaqalayo nezinye izakhono ezinxulumene neMathematika ezinjengezootitshala abaphum’ izandla, kulandela le migaqo yamanqanaba okufunda ilandelayo:

- Kwinqanaba lezinto ezibanjwayo (esebenzisa umzimba nemizwa);
- Kwinqanaba lezinto eziphathekayo (3-D, usebenzisa izinto ezinje ngeebhloko, iziciko zeebhotile, amasebe, neezinye izinto ezisekuhlaleni); kunye
- Besebenzisa/ bebonisa iphepha nepensile (ezemizobo, amakhadi okuthelekisa njl.)

KwiBanga labaQalayo ithayimtheyibhile ibizwa ngokuba yinkqubo yemihla ngemihla, iquka la macandelo alandelayo:

- Imisebenzi ekhokelwa ngutitshala;
- Izinto ezenziwa rhoqo; kunye

- Imisebenzi ekhokelwa ngabafundi okanye imidlalo ekhululekileyo.

Ugxininiso malube sekusetyenzisweni kwezi zakhono kwisicwangciso semihla ngemihla ukukhuthaza ulwazi lwenyumeresi yabaqalalyo ngokuyonwabela nangokufunda. Umzekelo, ekufundeni okukhokelwa ngutitshala inyumeresi ifunyanwa ngexesha lesangqa. Uninzi lwezangqa lunokunikwa ukuphuhlisa iMathematika kwisangqa sakusasa xa abafundi bebuliswa kujongwa abakhoyo nabangekhoyo; lithuba lokufundisa amanani nokubala. Kwezinye izangqa, ezinjengezangqa zeMathematika, izangqa zamalungu asetyenziswa ukubona, ukushukuma, umculo nezangqa zobugqi zinokuncedisa ukufundisa iMathematika.

Imisebenzi yobugcisa bokuyila inokubethelela kwiMathematika, umzekelo, kusetyenziswe iimilo zejiyometri njengezangqa nezikwere ukwenza ikholaji okanye ukuyila iipateni zokwenza ifreyimi yemifanekiso. Itshati yemozulu, ikhalenda neengoma zeentsuku zokuzalwa zinika ixesha lokufundisa izakhono zeMathematika. Lulwazi lukatitshala olunokuphuhlisa imfundo yabafundi.

- *Indlela zokwenza izinto*, apho abafundi bathatha inxaxheba, njengexesha lokutya, ukufika, ixesha lokugoduka, ixesha lokuya ezimfanelweni (ngasese), zonke ezo zinto zinokusetyenziswa ukufundisa iMathematika. Abafundi abanxibe bomvu, umzekelo, yiya ezimfanelweni (ngasese) (imibala kunye namanani aqhelekileyo), umfundi ngamnye ufumana ipleyiti kunye nesonka (ungqamaniso lwamanani), uThandi ufuna isonka sesibini, uMandla yena wanele. Le nto ikhokelela kumathuba okufundisa, ngamanye amazwi, ukuba ngumcebisi wokufundisa.

- Ngexesha lokudlala utitshala angakhuthaza ukufundiswa kweMathematika yabaqalayo kwiindawo ezilungiselelwe ukudlala. Imidlalo yangaphandle enjengokugwencela (ukukhwela) emaplangeni okanye ukuqhuba ibhayisekile kunokukhuthaza isigama esinjengokunyuka/ ukwehla, ezantsi/ phezulu, ukukhawuleza/ ukucotha, phezulu/ ezantsi, njl. Imidlalo yesanti namanzi iza kuqinisa ulwazi lwezakhono ezinjengobunzima, nomthamo. Yonke le misebenzi ikhuthaza izakhono zamalungu omzimba, ikhuthaza ukufundisa esikolweni ilitheresi nenyumeresi. Nantsi imizekelo yezi zakhono:

    - Ukuphuhlisa ulwazi lwendawo yesithuba, umzekelo emva, phambili, ngaphantsi, emva kwento (umzekelo, le nto ingayanyaniswa nendawo yenani kwiMathemathika); kunye

    - Nezalathiso kunye namacala (zinganxulumaniswa namanani nokubhala iileta nasekufundeni ukunene nasekhohlo).

Le nto sithetha ngayo apha ngentla ibonisa indlela iBanga labaQalayo eliphuhlisa ukusombulula iingxaki, ukucinga ngengqiqo nemfundo yokuba ngabemi ngenxa yokubethelela ukuba ngabafundi abasebenzisanayo nabaxoxisanayo. Ngokusebenzisa amathuba afundisekayo, utitshala makakhuthaze abafundi ukuba bajonge izigqibo abazithathayo baqikelele okunokwenzeka, umzekelo, ukuba isikhongozeli esisetyenziswe ngexesha ebesesisetyenziswe kumdlalo wamanzi singathatha amanzi angaphezu kwesinye isikhongozeli.

Ngokunika ingcebiso aze acele umngeni kubantwana ukuba bacinge ngezinye iindlela zokusombulula iingxaki, aphinde abakhuthaze ukuba bacinge nzulu ngezizathu nangezigqibo abathi bazithathe. Ngale ndlela yokucinga awuncedi iMathematika kuphela, koko uphuhlisa ulwazi ngokupheleleyo yaye izizathu zikaCAPS ziyaphuhliseka kakhulu.

Iindlela zokuhlaziya kwiBanga labaQalayo mazibe zezinganyanzelisi ukubhala uvavanyo yaye abantwana maBangafakwa kuxinzelelo lokubhala uvavanyo. Ngenxa yesi sizathu, imisebenzi yokuHlola ayifakwanga kulo mqulu kaCAPS. Umsebenzi ngamnye wovavanyo mawulungiswe ngobunono ukwenzela ukuba unxulumanise izakhono ezininzi.

KwiBanga labaQalayo uvavanyo lwenziwa ngokujonga, utitshala erekhodisha esebenzisa itshekhilisti. Loo nto inika indlela aqhuba ngayo umfundi ngamnye wonyaka wonke, ubunzima abufumeneyo neendawo ebegqwese kuzo. Olu hlobo lunceda ukukhawulelana neengxaki nendawo agqwesa kuzo ukuba ziqhubele phambili.

Indlela yakudala, yokufundisa abafundi bevaleleke kwigumbi lokufundela engenakudlala mayingasetyenziswa, nanjengoko ingakukhuthazi ukufunda inyumeresi ngokugqibeleleyo komfundi okwisiGaba sabaQalayo. IBanga labaQalayo malingenziwa iBanga loku-1. Eli Banga linezalo iimpawu ezibonisa indlela abantwana abakule minyaka abazifumanela ngayo ubomi jikelele, ulwazi, izakhono, nendlela yokuziphatha eza kubanika amathuba kwiminyaka ezayo yokufunda okuseSikweni.

INKQUBO YEMIHLA-NGEMIHLA: IBANGA LABAQALAYO (R)

(Ukusaka ± 7:30 – 13:00)

UKUFIKA NEMIDLALO

Ama- 36 emiz

Ukubulisa Iimini Zokuzalwa Irejista Iindaba

IIMISEBENZI Iilwimi EKHOKELWAYO Izibalo NGUTITSHALA Izakhono zobomi

IiLwimi
IziBalo
Izakhono zoBomi

Ama- 50 emiz

- IMISEBENZI YOBUGCISA (yonke imihla: undoqo -1 +2/3 imisebenzana exhasayo)
- UKUDLALA IMIDLALO YOKUZIKHETHELA EKLASINI

- Imidlalo yelizwe lokuzakhela
- Imidlalo yokulinganisa
- Ukwakha
- Ukudlala ngeebhloko
- Iithoyi zokufunda
- Imidlalo yokusebenzisa ukucinga
- Iiphazili
- Ikona yeencwadi
- Ixesha lokuthula

Ama- 30 emiz

IMISEBENZI Iilwimi EKHOKELWA Izibalo NGUTITSHALA Izakhono zoomi

I-10 Iemiz

IXESHA LOKUYA KUZIKHULULA (NGAS-ESE) uLwimi, IziBalo, IzaKhono zoBomi

Ama- 20 emiz

IXESHA LOKUTYA
uLwimi, IziBalo, izaKhono zoBomi

Ama- 60 emiz

Ukudlala Imidlalo Yokuzikhethela Eklasini Ze Kucocwe.

- Umdlalo Ngamanzi
- Umdlalo Ngesanti
- Umdlalo Ngokulinganisa
- Iibhola
- Oojingi
- Iithoyi Zamavili
- Iithoyi Zokufunda
- Ijangili jim
- Amatayara
- Imithambo
- Imidlalo

I-10 Iemiz

IXESHA LOKUYA KUZIKHULULA uLwimi, IziBalo, izaKhono zoBomi

Ama- 30 emiz

IIMISEBENZI IiLwimi EKHOKELWAYO IziBalo NGUTITSHALA Izakhono zobom

Ama- 30 emiz

IBALI Yonke imihla

Ixesha lokuphumla/ lokuthula ze kugodukwe

IZIBALO

- Imisebenzi Esekelwe Kwikharithyulam (Caps) (Izibalo)
- Iingoma Nomculo
- Imisebenzi Efuna Ucinge
- Izicengcelezo Zokubala
- Iingxoxo Ngezihloko
- Umfuniselo Wezenzululwazi
- Imidlalo Yokuzikhethela
- Okwenziwa Imihla Ngemihla

ULWIMI

- Imisebenzi esekelwe kwi-kharityhulam (caps)
- (Ulwimi lwasekhaya)
- Amabali
- Ukudlala eqongeni
- Iincwadi/imifanekiso
- Ukufunda imifanekiso
- Iingxoxo
- Imisebenzi efuna ucinge
- Ipowusta yomzali
- Ileta yomzali
- Iindaba
- Imibongo nezicengcelezo
- Umculo/iingoma
- Izikali/ iiteyiphu
- Iingxoxo ngezihloko
- Imisebenzi yoluntu
- Ezenziwa imihla ngemihla
- Imidlalo yokuzikhethela

IZAKHONO ZOBOMI

- Imisebenzi ethathelwe kwipolisi yekharityhulum nokuhlola (Izakhono zobomi)
- Iingoma nomculo
- Imibongo nezicengcelezo
- Ukuxoxwa kwemixholo
- Imihla yokuzalwa
- Imisebenzi yesiqhelo
- Ukudlala okukhululekileyo

2.9 IZIXHOBO EZICETYSWAYO: IGUMBI LESIGABA ESISISISEKO

- Izinto zokubala
- idayisi elikhulu
- ifreyim enkulu yokubala
- itshati yobude
- iposta enkulu ka-1 – 100 neka-101 – 200 (itshati ye-100)
- iintlobo ezahlukeneyo zomgca-manani
- iseti yefladi-khadi(Flard cards)
- imali yokudlala — umwangalala nengamaphepha
- ikhalenda yonyaka esikuwo
- iwotshi yosiba enkulu yodonga
- isikali
- iibhloko zokwakha
- udongwe
- iintlobo zeebhokisi ngokweemilo nobungakanani obuvela emakhaya
- iintlobo zeebhotile zeplastiki nezikhongozeli zokubonisa ubungakanani
- imizekelo yesifiye/ingqukumba (sphere) (ibhola), amaxande, ityhubhu, ikhowuni, ipiramidi kunye nesilinda. Utitshala angazenzela ezakhe izixhobo.
- Iiplastiki, amakhalibhodi azizikwere, amaxande ahlukeneyo, izangqa, oonxantathu beendidi zobukhulu
- Imidlalo yeMathematika, umzekelo, iLudo, inyoka neleli, iiphazili ezijiko-jiko, idomino, iiTangram, njl.
- Ezifunekayo kwiBanga labaQalayo (R) neloku-1:
- Iindawo zesanti nokudlala ngamanzi
    - Izixhobo zokugwencela, zokuncekelela, zooswingi nezoogqaphu
    - Ivenkile yomdlalo nezinto zokuthengwa ngemali yokudlala
    - Imidlalo exutyiweyo enjengothi ‘yintoni esesikwereni’?
    - iibhloko

ISAHLUKO SESI- 3: INKCAZELO YOMXHOLO

3.1 INTSHAYELELO

KuMjikelo weMfundo noQeqesho Jikelele kukho iinkalo ezintlanu zemixholo yeMathematika:

- Amanani, ii-Opareyshini noLwalamano.
- Iipateni, iiFankshini/ifankshini i ne-aljibra.
- Isithuba nemilo (Ijiyometri).
- Umlinganiselo.
- Ukusebenza ngolwazi oluqokelekweyo.

Umxholo wenkalo nganye uyacazululwa ube zizihloko zeMathematika, umzekelo, kwisiThuba neMilo kwisiGaba esisisiSeko isihloko esinye sineemilo ezinokwakheka kuka (2-D). Iingqiqo nezakhono zixeliweyo kwisihloko ngasinye. ICandelo lesi-3 leNkcazelo yePolisi kaZwelonke yeKharityhulam nokuHlola linika lize licacise ngomxholo weMathematika ofunekayo.

3.2 INKCAZELO YOMXHOLO UKUBONISA INKQUBELA-PHAMBILI

Iitheyibhile zesigaba ezingamagqabantshintshi zibonisa inkcazelo yeengqiqo nezakhono nenkqubela-phambili ukusuka kwiBanga labaQalayo ukuya kwelesi-3.

Nangona kunjalo, kwizihloko ezithile, iingqiqo nezakhono ziyafana kumaBanga amabini okanye amathathu alandelelanayo. Ingcaciso ngomxholo iza kukunika izikhokelo ngendlela inkqubela-phambili efanele ukuba imiliselwe ngayo. Okufumaneka kumxholo othile makufundwe kunye nangcaciso ngomxholo lowo.

Amagqabantshintshi ngesiGaba esisisiSeko abonisa inkqubela-phambili ngeenkalo zomxholo; Ukubala ngamanani nolwalamano, iipateni, imisebenzi ne-aljibra, umlinganiselo nokusetyenziswa kolwazi/ datha kwiBanga labasaQalayo – ukuya kwelesi-3 njengoko kuxeliwe kule theyibhile ingasezantsi:

AMAGQABANTSHINTSHI ESIGABA ESISISEKO 1. AMANANI, II-OPAREYSHINI NOLWALAMAMO				
Inkqubela-phambili yamanani, ukubala nolwalamano. • Inkqubela-phambili engundoqo kumanani, ukubala nolwalamano yenzeka ngeendlela ezintathu: - Uluhlu lwamanani luyanda. - Iindidi ezahlukeneyo zamanani ziyafundiswa. - Iindlela zokubala ziyaguquka. • Njengokuba ummandla wamanani owenza izibalo usanda ukuya kwiBanga lesi-3, abafundi kufanele babe neendlela ezichanekileyo zokubala. • Imeko-bume mayithathelwe ingqalelo uluhlu lwamanani lweBanga kunye nokukwazi ukubala kwabafundi.				
ISIHLOKO	**IBANGA LABAQALAYO**	**IBANGA LOKU-1**	**IBANGA LESI-2**	**IBANGA LESI-3**
UKUPHUHLISA INGQIQO YAMANANI: Bala ngamanani apheleleyo.				
1.1 **Bala izinto.**	**Bala izinto eziphathekayo.** Qikelela uze ubale uye kufika kwi-10 lezinto ezisetyenziswa imihla ngemihla ngokuzithemba.	**Bala izinto eziphathekayo.** Qikelela uze ubale uye kufika kuma-50 ezinto ezisetyenziswayo imihla ngemihla ngokuzithemba. Kukhuthazwa ukubala ngokuqukanisa.	**Bala izinto eziphathekayo.** Qikelela uze ubale uye kufika kuma-200 ezinto ezisetyenziswayo imihla ngemihla ngokuzithemba. Kukhuthazwa ukubala ngokuqukanisa.	**Bala izinto eziphathekayo.** Qikelela uze ubale uye kufika kwi-1 000 lezinto ezisetyenziswayo imihla ngemihla ngokuzithemba. Kukhuthazwa ukubala ngokuqukanisa.
1.2 **Bala usiya phambili, ubale ubuya umva.**	Bala uye phambili nasemva ngezinye ukususka kwisi-1 ukuya kwi-10; Sebenzisa izingqisho neengoma zamanani.	Bala uye emva naphambili ngezinye ukusukela kulo naliphi inani phakathi kwe-0 ukuya kwi-100. • Bala uye phambili: • Ngama-10 ukususkela kwisininzi sama-10 phakathi ko-0 ne-100. • Ngezi-5 ukususkela kwisininzi sezi-5 phakathi kwe-0 ne-100. • Ngezi-2 ukususkela kwisininzi sezi-2 phakathi kwe-0 ne-100.	Bala uye phambili nasemva: • Ngoo-1 ukususkela kulo naliphi inani eliphakathi kwe-0 nama-200. • Ngama-10 ukususkela kwisininzi sama-10 phakathi kwe-0 nama-200. • Ngezi-5 ukususkela kwisininzi sezi-5 phakathi kwe-0 nama-200. • Ngezi-2 ukususkela kwisininzi sezi-5 phakathi kwe-0 nama-200. • Ngezi-3 ukususkela kwisininzi sezi-3 phakathi ko-0 nama-200. • Ngezi-4 ukususkela kwisininzi sezi-4 phakathi kwe-0 nama-200.	Bala uye phambili nasemva: • Ngoo-1 ukususkela kulo naliphi inani eliphakathi kwe-0 ne-1000. • Ngama-10 ukususkela kwisininzi sezi-10 phakathi kwe-0 ne-1000. • Ngezi-5 ukususkela kwisininzi sezi-5 phakathi kwe-0 ne-1000. • Ngezi-2 ukususkela kwisininzi sezi-2 phakathi kwe-0 ne-1000. • Ngezi-3 ukususkela kwisininzi sezi-3 phakathi kwe-0 ne-1000. • Ngezi-4 ukususkela kwisininzi sezi-4 phakathi kwe-0 ne-1000. • Ngama-20, ngama-25, ngama-50 ne-100 ukuya kwi-1000.
UKUPHUHLISA INGQIQO YAMANANI: Ukumela amanani azeleyo.				

ISIHLOKO	IBANGA LABAQALAYO	IBANGA LOKU-1	IBANGA LESI-2	IBANGA LESI-3
1.3 **Iisimboli zamanani namagama amanani**	**Qaphela, gqala uze ufunde amanani.** • Qaphela, gqala uze ufunde iisimboli zamanani ukusuka ku-1 ukuya kwi-10. • Qaphela, gqala uze ufunde amagama amanani ukusuka ku-1 ukuya kwi-10.	**Qaphela, gqala uze ufunde amanani.** • Qaphela, gqala uze ufunde iisimboli zamanani ukusuka ku-1 ukuya kwi-100. • Bhala iisimboli zamanani ukusuka ku-1 ukuya kuma-20. • Qaphela, gqala uze ufunde amagama amanani ukusuka ku-1 ukuya kwi-10. • Bhala amagama amanani ukusuka ku-1 ukuya kwi-10.	**Qaphela, gqala uze ufunde amanani.** • Qaphela, gqala uze ufunde iisimboli zamanani ukusuka kwi-0 ukuya kuma-200. • Bhala iisimboli zamanani ukusuka kwi-0 ukuya kwi-100. • Qaphela, gqala uze ufunde amagama amanani ukusuka kwi-0 ukuya kwi-100. • Bhala amagama amanani ukusuka kwi-0 ukuya ku-100.	**Qaphela, gqala uze ufunde amanani.** • Qaphela, gqala uze ufunde iisimboli zamanani ukusuka kwi-0 ukuya kwi-1 000. • Bhala iisimboli zamanani ukusuka kwi-0 ukuya kwi-1 000. • Qaphela, gqala uze ufunde amagama amanani ukusuka kwi-0 ukuya kwi-1 000. • Bhala amagama amanani ukusuka kwi-0 ukuya kwi-1 000.
UKUPHUHLISA INGQIQO YAMANANI: Chaza, thelekisa uze ucwangcise amanani azeleyo.				
1.4 **Chaza, thelekisa uze ucwangcise amanani azeleyo.**	**Chaza, thelekisa uze ucwangcise ingqokelela yezinto ukuya kwi-10.** • Chaza amanani azeleyo ukuya ku-10. • Thelekisa ukuba kwezi ngqokelela zimbini zinikiweyo zezinto ziziphi ezinkulu, ezincinane, ezincinane kunenye, ezinkulu kunezinye, ezingaphezu kwenye, ezingaphantsi kwezinye, ezilingana nenye, ezininzi, ezimbalwa ukuya kutsho ku-10. • Cwangcisa ngaphezu kweengqokelela ezimbini ezinikiweyo zezinto ukusukela kweyona incinane ukuya kweyona inkulu ukuya kutsho kwi-10.	**Chaza, thelekisa uze ucwangcise ingqokelela yezinto ukuya kuma-20.** • Chaza uze uthelekise ingqokelela yezinto ngokobuninzi, ngokobuncinane nangokufanayo. • Chaza uze ucwangcise ingqokelela yezinto ukusukela kweyona ininzi ukuya kweyona incinane nokusuka kweyona incinane ukuya kweyona inkulu.		

ISIHLOKO	IBANGA LABAQALAYO	IBANGA LOKU-1	IBANGA LESI-2	IBANGA LESI-3
1.4 **Chaza, thelekisa uze ucwangcise amanani azeleyo.**	**Sebenzisa amanani aqhelekileyo ukubonisa ucwangciso, indawo okanye ubume.** Phuhlisa ulwazi ngamanani aqhelekileyo, umzekelo, okokuqala, okwesibini, okwesithathu ukuya kweyesithandathu neyokugqibela.	**Chaza, thelekisa uze ucwangcise amanani ukuya kutsho kuma-20.** • Chaza uze uthelekise amanani azeleyo ngokobuncinane kunelinye, ubukhulu kunelinye nokuba ngaphezulu kwelinye, ngokuba ngaphantsi kwelinye, nokulingana nelinye. • Chaza uze ucwangcise amanani ukusukela kwelona lincinane ukuya kwelona likhulu nokusukela kwelona likhulu ukuya kwelona lincinane. **Sebenzisa amanani aqhelekileyo ukubonisa ucwangciso, indawo okanye ubume.** Beka izinto emgceni ukusukela kweyokuqala ukuya kweyeshumi okanye eyokuqala ukuya kweyokugqibela, umzekelo, eyokuqala, eyesibini, eyesithathu..... kweyeshumi.	**Chaza, thelekisa uze ucwangcise amanani ukuya kutsho kuma-99.** • Chaza uze uthelekise amanani azeleyo ukuya kuma-99 ngokobuncinane kunelinye, ubukhulu kunelinye nokuba ngaphezulu kwelinye, ngokuba ngaphantsi kwelinye, nokulingana nenye. • Chaza uze uthelekise amanani azeleyo ukuya kuma-99 ukusukela kwelona lincinane ukuya kwelona likhulu nokusukela kwelona likhulu ukuya kwelona lincinane. **Sebenzisa amanani aqhelekileyo ukubonisa ucwangciso, indawo okanye ubume.** Beka izinto emgceni ukusukela kweyokuqala ukuya kweyeshumi okanye eyokuqala ukuya kweyokugqibela, umzekelo, eyokuqala, eyesibini, eyesithathu..... kweyamashumi amabini.	**Chaza, thelekisa uze ucwangcise amanani ukuya kutsho kuma-999.** • Chaza uze uthelekise amanani azeleyo ukuya kuma-999 ngokobuncinane kunelinye, ubukhulu kunelinye nokuba ngaphezulu kwelinye, ngokuba ngaphantsi kwelinye, nokulingana nelinye. • Chaza uze uthelekise amanani azeleyo ukuya kuma-99 ukusukela kwelona lincinane ukuya kwelona likhulu nokusukela kweyona likhulu ukuya kwelona lincinane. **Sebenzisa amanani aqhelekileyo ukubonisa ucwangciso, indawo okanye ubume.** Sebenzisa, funda uze ubhale amanani aqhelekileyo, kuquka ukushunqulela (okokuqala, okwesibini, okwesithathu ukuya kweyama-31).
UKUPHUHLISA INGQIQO YAMANANI: Ixabiso lendawo elimi kuyo inani				
1.5 **Ixabiso lendawo elimi kuyo inani. elimi kuyo inani.**		**Qalisa ukuqonda ixabiso lendawo elimi kuyo inani ubuncinane amanani amivo mi-2 ukuya kuma-20.** • Cazulula amanani amivo mi-2 abe zizininzi ze-10 kunye nemivo (neeyunithi).	**Qalisa ukuqonda ixabiso lendawo elimi kuyo inani ubuncinane amanani amivo mi-2 ukuya kwi-99.** • Cazulula amanani amivo mi-2 ukuya kwi-99 abe zizininzi ze-10 kunye nemivo. • Chonga uze uxele ixabiso lendawo lomvo ngamnye.	**Qaphela ixabiso lendawo ame kuyo amanani amivo mi-3 ukuya ku-999.** • Cazulula amanani amivo mi-3 ukuya kwi-999 abe zizininzi ze-100, zibe zizininzi ze-10 kunye nemivo. • Chonga uze uxele ixabiso lendawo lomvo ngamnye.

ISIHLOKO	IBANGA LABAQALAYO	IBANGA LOKU-1	IBANGA LESI-2	IBANGA LESI-3
SOMBULULA IINGXAKI ZOKUBALA KWIMEKO ETHILE				
1.6 **Iindlela ngeendlela kusombulula iingxaki zezibalo**	Sebenzisa iindlela ngeendlela ezilandelayo ukuya kutsho kwi-10: • Izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala.	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo:	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo:	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo:
1.6 **Iindlela ngeendlela zokusombulula iingxaki zezibalo**	• Ileli yamanani aphathekayo.	• Izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Imifanekiso yokuzoba ibali ngezibalo. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	• Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	• Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula • amanani. • Imigca-manani. • Ukuwelisela inani kumashumi.
1.7 **Ukudibanisa okuthabatha.**	Sombulula iingxaki zokubala izibalo (amabali ngezibalo) ngokusemxholweni ucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kwi-10.	Sombulula iingxaki zokubala izibalo (amabali ngezibalo) ngokusemxholweni ucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma-20.	Sombulula iingxaki zokubala izibalo (amabali ngezibalo) ngokusemxholweni ucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma-99.	Sombulula iingxaki zokubala izibalo (amabali ngezibalo) ngokusemxholweni ucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma-999.
1.8 **Ukudibanisa okuphindiweyo okukhokelela kuphindaphindo lwamanani.**		Sombulula iingxaki zokubala izibalo (amabali ngezibalo) ngokusemxholweni ucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma-20.	Sombulula iingxaki zokubala izibalo (amabali ngezibalo) ngokusemxholweni ucacisa isisombululo sakho kwiingxaki zezibalo usebenzisa ukudibanisa ngokuphindaphindeneyo nophindaphindo oluneempendulo ukuya kuma-50.	Sombulula iingxaki zokubala izibalo (amabali ngezibalo) ngokusemxholweni ucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kwi-100.
1.9 **Ukwahlula ngokwamaqela nokwaba ngokulinga okukhokelela kulwahlulwa-hlulo.**	Sombulula uze ucacise izisombululo kwizibalo zamagama ngokusemxholweni (izibalo zamazwi) eziquka ukwaba ngokulinganayo, ukwahlula ngokwamaqela ngamanani azeleyo ukuya kutsho kwi-10 kunye neempendulo ezinokuquka iintsalela.	Sombulula uze ucacise izisombululo kwiingxaki zezibalo abazenza ngokwabo abafundi kuquka ukwaba ngokulinganayo nokwahlula ngokwamaqela amanani azeleyo ukuya kutsho kuma-20 kunye neempendulo eziquka iintsalela.	Sombulula uze ucacise izisombululo kwiingxaki zezibalo abazenza ngokwabo abafundi kuquka ukwaba ngokulinganayo nokwahlula ngokwamaqela amanani azeleyo ukuya kutsho kuma-50 kunye neempendulo eziquka iintsalela.	Sombulula uze ucacise izisombululo kwiingxaki zezibalo abazenza ngokwabo abafundi kuquka ukwaba ngokulinganayo nokwahlula ngokwamaqela ukuya kutsho kwi-100 kunye neempendulo ezinokuquka iintsalela.

ISIHLOKO	IBANGA LABAQALAYO	IBANGA LOKU-1	IBANGA LESI-2	IBANGA LESI-3
1.10 **Ukwaba ngokulinganayo okukhokelela kumaqhezu.**			Sombulula uze ucacise izisombululo kwiingxaki eziprekthikhali zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu amanyeneyo.	Sombulula uze ucacise izisombululo kwiingxaki eziprekthikhali zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu angamanyananga namanyeneyo.
1.11 **Imali**	Phuhlisa ulwazi ngemali eziinkozo/ engumwangalala nengamaphepha yebhanki yaseMzantsi Afrika.	• Qaphela uze ufundise ngemali eziinkozo yaseMzantsi Afrika (i-5c, i-10c, i-20c, i-50c, i-R1, i-R2, i-R5) kunye nemali engamaphepha eyi-R10 nama-R20. • Sombulula iingxaki zemali eziquka iitotali netshintshi ye-R20 kunye neesenti ukuya kuma-20c.	• Qaphela uze ufundise ngemali eziinkozo yaseMzantsi Afrika (i-5c, i-10c, i-20c, i-50c, i-R1, i-R2, i-R5) kunye nemali engamaphepha eyi-R10, i-R20 nama-R50. • Sombulula iingxaki zezemali eziquka iitotali netshintshi ye-R99 kunye neesenti ukuya kuma-90c.	• Qaphela uze ufundise ngemali eziinkozo yaseMzantsi Afrika kunye nemali engamaphepha. • Sombulula iingxaki ezingemali eziquka iitotali netshintshi ngokweerandi okanye iisenti. • Guqula phakathi kweerandi neesenti.
IZIBALO EZINGALAWULWA-MEKO				
1.12 **Ubuchule bokubala** **(lindela)**		Sebenzisa iindlela ngeendlela ezilandelayo zokubala xa usenza izibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Sebenzisa iindlela ngeendlela ezilandelayo zokubala xa usenza izibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Sebenzisa iindlela ngeendlela ezilandelayo zokubala xa usenza izibalo: • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani. • Ukuwelisa inani kumashumi.
1.13 **Ukudibanisa nokuthabatha.**	Sombulula iingxaki zokudibanisa nokuthabatha ngomlomo nezisombululo ukuya kutsho kwi-10.	• Dibanisa ukuya kuma-20. • Thabatha ukusuka kuma-20. • Sebenzisa iisimboli ezifanelekileyo (+, –, =, □) • Qhelanisa iibhondi zamanani ukuya kwi-10.	• Dibanisa ukuya kuma-99. • Thabatha ukusuka kuma-99. • Sebenzisa iisimboli ezifanelekileyo (+, –, =, □). • Qhelanisa iibhondi zamanani ukuya kuma-20.	• Dibanisa ukuya kuma-999. • Thabatha ukusuka kuma-999. • Sebenzisa iisimboli ezifanelekileyo (+, –, =, □). • Qhelanisa iibhondi zamanani ukuya kuma-30.

ISIHLOKO	IBANGA LABAQALAYO	IBANGA LOKU-1	IBANGA LESI-2	IBANGA LESI-3
1.14 Ukudibanisa ngokuphinda phindiweyo okukhokelela kuphindaphindo lwamanani.		• Dibanisa inani elinye ngokuphinda phindiweyo ukuya kutsho kuma-20. • Sebenzisa iisimboli ezifanelekileyo (+, =, □).	• Phindaphinda amanani ngo-1 ukuya kwi-10 ngo-2, 5, 3 kunye no-4 kwitotali engama-50. • Sebenzisa iisimboli ezifanelekileyo (+, –, =, □).	• Phindaphinda ngalo naliphi inani ngo-2, 3, 4, 5, 10 ukuya kwitotali eli-100. • Sebenzisa iisimboli ezifanelekileyo (x, □).
1.15 Ukwahlulahlula.				• Hlulahlula amanani ukuya kuma-99 ngo-2, 3, 4, 5, 10. • Sebenzisa iisimboli ezifanelekileyo (÷, =, □).

ISIHLOKO	IBANGA LABAQALAYO	IBANGA LOKU-1	IBANGA LESI-2	IBANGA LESI-3
1.16 **Izibalo zentloko.**		**Ingqiqo ngamanani: Uluhlu lwama-20.** • Xela inani phambi nasemva kwenani elinikiweyo. • Cwangcisa iseti enikiweyo yamanani akhethiweyo. • Thelekisa amanani ukuya kutsho kuma-20 uze uxele ukuba u-1 kunye no-2 ungaphantsi okanye ungaphezulu.	**Ingqiqo ngamanani: Uluhlu lwama-99.** • Cwangcisa iseti enikiweyo yamanani akhethiweyo. • Thelekisa amanani ukuya kutsho kuma-99 uze uxele ukuba u-1, 2, 3, 4, 5 kunye no-10 ungaphantsi okanye ungaphezulu.	**Ingqiqo ngamanani: Uluhlu lwama-999.** • Cwangcisa iseti enikiweyo yamanani akhethiweyo. • Thelekisa amanani ukuya kutsho kuma-999 uze uxele ukuba u-1, 2, 3, 4, 5 kunye ne-10 ungaphantsi okanye ungaphezulu.
		Ukukhumbula ngokukhawuleza: • Izinto eziyinyaniso ngokudibanisa nokuthabatha ukuya kwi-10 •	**Ukukhumbula ngokukhawuleza:** • Izinto eziyinyaniso ngokudibanisa nokuthabatha ukuya kuma-20. • Dibanisa okanye uthabathe izininzi ze-10 ukusuka kwi-0 ukuya kwi-100. •	**Ukukhumbula ngokukhawuleza:** • Khumbuza ngezinto eziyinyaniso ngokudibanisa nokuthabatha ukuya kuma-20. • Dibanisa okanye uthabathe izininzi zika-10 ukusuka kwi-0 ukuya kwi-100. • Izinto eziyinyaniso ngophindaphindo: - 2 Iithaymtheyibhile ka-2 eneempendulo ukuya kutsho kuma-20. - 10 iithayimtheyibhile ze-10 eneempendulo ukuya kutsho kwi-100 • Izinto eziyinyaniso ngokwahlulahlula amanani: - Ukuya kutsho kuma-20 kohlulwe ngo-2 - Ukuya kutsho kwi-100 kohlulwe nge-10

ISIHLOKO	IBANGA LABAQALAYO	IBANGA LOKU-1	IBANGA LESI-2	IBANGA LESI-3
		lindlela zokubala • Sebenzisa iindlela zokubala ukudibanisa nokuthabatha ngokukuko: • Beka inani elikhudlwana kuqala ukuze ubale ukuya phambili okanye ngasemva. • Umgca-manani. • Ukuphindaphinda nokwahlulahlula amanani. • Ukwakha nokucazulula amanani.	**lindlela zokubala** • Sebenzisa iindlela zokubala ukudibanisa nokuthabatha ngokukuko: • Beka inani elikhudlwana kuqala ukuze ubale ukuya phambili okanye ngasemva. • Umgca-manani. • Ukuphindaphinda nokwahlulahlula amanani. • Ukwakha nokucazulula amanani. • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha.	**lindlela zokubala** • Sebenzisa iindlela zokubala ezilandelayo: • Beka inani elikhudlwana kuqala ukuze ubale ukuya phambili okanye ubuya umva. • Umgca-manani. • Ukuphindaphinda nokwahlulahlula amanani. • Ukwakha nokucazulula amanani. • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha. • Sebenzisa ulwalamano phakathi kokuphindaphinda nokwahlulahlula.
1.17 **Amaqhezu.**			• Sebenzisa uze uxele amaqhezu e-unitary (unitary fractions) ngokwemixholo eqhelekileyo kuquka iziqingatha, iikota, izithathu nezine. • Qaphela amaqhezu ngokodidi lomzobi. • Bhala amaqhezu njengesiqingatha esi-1.	• Sebenzisa uze uxele amaqhezu e-unitary (unitary fractions) ngokwemixholo eqhelekileyo kuquka iziqingatha, iikota, izibhozo, izithandathu, izihlanu, izithathu nezine. • Qaphela amaqhezu ngokodidi lomzobo. • Qala ukuqaphela ukuba iziqingatha ezibini okanye ezithathu zezithathu zenza enye epheleleyo kunye nesiqingatha esinye kunye neekota ezimbini ziyalingana. • Bhala amaqhezu njengesiqingatha esi-1, nezithathu ezi-2.

AMAGQABANTSHINTSHI ESIGABA ESISISEKO

2. IIPATENI, ISIPHUMO SENTSEBENZISWAMO YAMANANI / IFANKSHINI NE-ALJIBRA

Inkqubela-phambili kwiipateni, iifankshini/ ifankshini ne-aljibra.

- Kwiipateni, kwiifankshini ne-aljibra, sinika abafundi amathuba:
  - Okugqibezela nokwandisa iipateni ezimelwe ziimo ezahlukeneyo.
  - ukukhetha nokuchaza iipateni.
- Ukuchaza iipateni sisiseko sabafundi kwisiGaba esiPhakathi ukuchaza imithetho ngeepateni. Oku kwenziwa ngokuseSikweni kumsebenzi we-aljibra kwisiGaba esiPhezulu.

ISIHLOKO	IBANGA LABAQALAYO	IBANGA LOKU-1	IBANGA LESI-2	IBANGA LESI-3
2.1 **Iipateni zejiyometri**	**Ukukhuphela nokwandisa** • Ukukhuphela nokwandisa iipateni ezilula usebenzisa izinto nemizobo (umzekelo, ukusebenzisa imibala neemilo).	**Ukukhuphela, ukwandisa nokuchaza.** • Ukukhuphela, ukwandisa nokuchaza amagama. • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwa ngemizobo yemigca, iimilo okanye izinto. **Ukuyila iipateni zakho.** • Ukuyila iipateni zakho zejiyometri. • Ngezinto eziphathekayo. • Ngokuzoba imigca, iimilo okanye izinto. **Iipateni ezisirhangqileyo** Ukukhetha, ukuchaza ngamagama nokukhuphela iipateni zejiyometri • Kwindalo, • Kubomi bemihla ngemihla, • Kwimveli yethu yenkcubeko.	**Ukukhuphela, ukwandisa nokuchaza.** • Ukukhuphela, ukwandisa nokuchaza amagama. • Iipateni ezinzima ezenziwe ngezinto eziphathekayo. • Iipateni ezinzima ezenziwa ngemizobo yemigca, iimilo okanye izinto. **Ukuyila nokuchaza iipateni zakho.** • Ngezinto eziphathekayo. • Ngokuzoba imigca, iimilo okanye izinto. **Iipateni ezisirhangqileyo** Ukukhetha, ukuchaza ngamagama nokukhuphela iipateni zejiyometri • Kwindalo, • Kubomi bemihla ngemihla, • Kwimveli yethu yenkcubeko.	**Ukukhuphela, ukwandisa nokuchaza.** • Ukukhuphela, ukwandisa nokuchaza amagama. • Iipateni ezinzima ezenziwe ngezinto eziphathekayo. • Iipateni ezinzima ezenziwa ngemizobo yemigca, iimilo okanye izinto. **Ukuyila nokuchaza iipateni zakho.** • Ngezinto eziphathekayo. • Ngokuzoba imigca, iimilo okanye izinto. **Iipateni ezisirhangqileyo** Ukukhetha, ukuchaza ngamagama nokukhuphela iipateni zejiyometri. • Kwindalo, • Kubomi bemihla ngemihla, • Kwimveli yethu yenkcubeko.
2.2 **Iipateni zamanani**		**Ukukopa, ukwandisa nokuchaza.** Ukukopa, ukwandisa nokuchaza ulandelelwano lwamanani olulula ukuya kutsho kwi-100. **Ukuyila nokuchaza iipateni zakho.**	**Ukukopa, ukwandisa nokuchaza.** Ukukopa, ukwandisa nokuchaza ulandelelwano lwamanani olulula ukuya kutsho kuma-200. **Ukuyila nokuchaza iipateni zakho.**	**Ukukopa, ukwandisa nokuchaza.** Ukuopa, ukwandisa nokuchaza ulandelelwano lwamanani olulula ukuya kutsho kuma-999. **Ukuyila nokuchaza iipateni zakho.**

AMAGQABANTSHINTSHI ESIGABA ESISISEKO

3. ISITHUBA NEMILO (IJIYOMETRI)

Ukuqhubeka kwindawo nemo

Undoqo wokuqhubeka kwindawo nemo kungaphunyezwa ngoku:

- bethelela kwiipropati neempawu zemo nezinto kwiBanga ngalinye; kunye
- nokusuka efundeni kolwimi lwendawo nokudityaniswa kwezimvo ezahlukeneyo kwangalaa nto ekufundeni nasekulandeni indlela kwiimephu ezingekho seSikweni.

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
3.1 **Indawo-bume, ukufumana indawo nembonakalo**	**Ulwimi lwendawo** Chaza indawo yento malunga nenye umz. ngaphezulu kwenye, ngaphambili, ngasemva, ekunene, ekhohlo, phantsi, phezulu, ecaleni **Indawo -bume nesalathiso** Landela izalathiso ukuhamba-hamba eklasini	**Ulwimi lwendawo** Chaza indawo yento malunga nenye umz. ngaphezulu kwenye, ngaphambili, ngasemva, ekuneene, ekhohlo, phantsi, phezulu, ecaleni **Indawo-bume nembonakalo** • Qonda ze udibanise iimbonakalo ezahlukeneyo ngezinto ezifanayo yonke imihla **Indawo nesalathiso** • Landela izalathiso ukuhamba-hamba eklasini • Landela imiyalelo ukubeka into enye ngokuhambelana nenye umz. ukubeka ipensile emva kwebhokisi	**Ulwimi lwendawo** Chaza indawo yento malunga nenye umz. ngaphezulu kwenye, ngaphambili, ngasemva, ekunene, ekhohlo, phantsi, phezulu, ecaleni **Indawo-bume nembonakalo** • Qonda ze udibanise iimbonkalo ezahlukeneyo ngezinto ezifanayo yonke imihla **Indawo nesalathiso** • Landela izalathiso ukuhamba-hamba eklasini	**Indawo-bume nembonakalo** • Qonda ze udibanise izimvo ezahlukeneyo ngezinto ezifanayo yonke imihla • Xela into yemihla ngemihla njengoko kuboniswe ubume bayo obungaqhelekanga • Funda, tolika, ze uzobe iimephu ezingekho seSikweni okanye izimvo eziphezulu zengqokelela yezinto. • Khangela izinto kwimephu **Indawo nesalathiso** • Landela izalathiso ukuhamba-hamba eklasini nasesikolweni . • Nika izalathiso zokuhamba-hamba eklasini nasesikolweni. • Landela izalathiso ukusuka kwenye indawo uye kwenye kwimephu engekho seSikweni

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
3.2 **Izinto ezinokwakheka kuka 3-D**	**Uludwe/ uluhlu lwezinto** Khumbula ze uxele izinto ezinokwakheka kuka 3-D eklasini • Iimilo ezibubhola, • Iimilo ezibubhokisi **impawu zezinto** Chaza, hlela uze uthelekise izinto eznokwakheka kuka 3-D malunga: • nobungakanani • umbala • izinto eziqengqelekayo • izinto ezitshibilikayo **Imisebenzi yokubethelela** • sebenzisa izinto ezinokwakheka kuka 3-D ezifana neebhloko zokwakha, ukuvuselela ngokutsha, njalo njalo ukwakha amalungu ezinto umz iithawa, iibhulorho, njalo njalo.	**Uludwe/ uluhlu lwezinto** Khumbula ze uxele izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Iimilo ezibubhola (into engqukuva eqinileyo • Iimilo ezibubhokisi **Iimpawu zezinto** Chaza,hlela uze uthelekise izinto ezinokwakheka kuka 3-D malunga: • nobungakanani • umbala • izinto eziqengqelekayo • izinto ezitshibilikayo **Imisebenzi yokubethelela** • Qaphela ze wakhe izinto ezinokwakheka kuka 3-D ozinikiweyo usebenzisa imathiriyeli ephathekayo efana neebhloko zokwakha, ukuvuselela neekiti zokwakha	**Uludwe/ uluhlu lwezinto** Khumbula ze uxele izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Iimilo ezibubhola (into engqukuva eqinileyo • Iimilo ezibubhokisi (into ebonakala ngokufanayo) • Iisilinda / imibhobho **Iimpawu zezinto** Chaza,hlela uze uthelekise izinto ezinokwakheka kuka 3-D malunga: • nobungakanani • izinto eziqengqelekayo • izinto ezitshibilikayo **Imisebenzi yokubethelela** • Qaphela ze wakhe izinto eziyi -3-D ozinikiweyo usebenzisa imathiriyeli ephathekayo efana nemisikwa ezinokwakheka kuka 2-D, iibhloko zokwakha, ukuvuselela, iikiti zokwakha nezinye izinto ezinokwakheka kuka 3-D ezinemigca neembombo -	**Uludwe/ uluhlu lwezinto** Khumbula ze uxele izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Imilo ezibubhola (into engqukuva eqinileyo • Iimilo ezibhokisi (into ebonakala ngokufanayo) • Iisilinda / imibhobho • iiphiramidi • iikhowuni **Iimpawu zezinto** Chaza, hlela uze uthelekise izinto ezinokwakheka kuka 3-D malunga • Iimilo ezinokwakheka kuka 2-D ezenza iimbuso zezinto ezinokwakheka kuka 3-D • Izinto ezisicaba nezigosogoso **Imisebenzi egxininiswayo** • Qaphela ze wakhe izinto ezinokwakheka kuka 3-D ozinikiweyo usebenzisa imathiriyeli ephathekayo efana nemisikwa ezinokwakheka kuka 2-D, udongwe, micinga yokuvungula, imicinga yokusela (izitro) nezinye izinto ze 3-D ezinemigca nembobo

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
3.3 **Imilo enokwakheka kuka** **2-D**	**Uluhlu lweemilo** Chaza, hlela ze uthelekise iimilo ezinokwakheka kuka 2-D/ imifanekiso ngokwezi zinto: • Ubungakanani • Umbala • Imilo eyimigca nembombo	**Uluhlu lweemilo** Qonda/khumbula ze uxele iimilo ezinokwakheka kuka 2-D • Izangqa • oonxantathu • izikwere **limpawu zemilo** Chaza, hlela ze uthelekise iimilo ezinokwakheka kuka 2-D malunga: • nobungakanani • umbala • amacala athe ngqo • izangqa	**Uluhlu lweemilo** Qonda/khumbula ze uxele iimilo ezinokwakheka kuka 2-D • Izangqa • oonxantathu • izikwere • iingxande **limpawu zemilo** Chaza, hlela ze uthelekise iimilo ei 2-D malunga: • nobungakanani • milo • amacala athe ngqo • izangqa	**Uluhlu lweemilo** Qonda/khumbula ze uxele iimilo ezinokwakheka kuka 2-D • Izangqa • oonxantathu • izikwere • iingxande **limpawu zemilo** Chaza, hlela ze uthelekise iimilo eyi 2-D malunga: • nemilo • amacala athe ngqo • izangqa **Ukuzoba imilo** • Izangqa • oonxantathu • izikwere • iingxande
3.4 **Ulingano-macala (isimetri) (isimetri)**	**Ulingano-macala (Isimetri)** • Ukukhumbula isimetri emzimbeni wakho	**Ulingano-macala (Isimetri)** • khumbula isimetri emzimbeni wakho • khumbula ze wakhe umgca wesimetri kwiimilo ezinokwakheka kuka 2-D enemigca neembombo nengenayo	**Ulingano-macala (Isimetri)** • khumbula ze wakhe umgca wesimetri kwimilo ezinokwakheka kuka 2-D enemigca neembombo nengenayo	**Ulingano-macala (Isimetri)** • khumbula ze wakhe umgca wesimetri kwiimilo ezinokwakheka kuka 2-D enemigca neembombo nengenayo • Yenza umgca wesimetri ngephepha elisongiweyo

AMAGQABANTSHINTSHI ESIGABA ESISISEKO

4. UMLINGANISELO

Ukuqhuba noMlinganiselo

- Undoqo wokuqhuba nomlinganiselo kumaBanga jikelele ungaphunyezwa ngokuqalwa kwe:
  - Milo/ iifomu ezintsha zomlinganiselo
  - Izixhobo ezitsha zomlinganiselo, ukuqala ngezixhobo ezingekho seSikweni ze udlulele kwezo ziseSikweni kubaBanga lesi- 2 nelesi-3
  - Iiyunithi ezintsha zomlinganiselo ngakumbi kumaBanga elesi -2 nelesi-3.
- Ubalo nokusombulula iingxaki ngomlinganiselo makuthabathele ingqalelo ubungakanani bomsebenzi osele wenziwe.

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
4.1 **Ixesha**	**Ukuqingqa ixesha** Ukuthetha malunga nokudlula kwexesha • Ukuthetha ngezinto ezenzeke emini nezo zenzeka ebusuku • Abafundi balandelelanisa iziganeko ezenzeke ngexesha lasemini • Ukulandelelanisa iziganeko ezenzeka rhoqo ebomini babo.	**Ukuqingqa ixesha** Ukuthetha malunga nokudlula kwexesha • Ukulandelelanisa iziganeko ezenzeka rhoqo ebomini babo. • Ukuthelekisa ubude bexesha usebenzisa ulwimi umz. ende, emifutshane, ekhawulezayo necothayo. • Ukulandelelanisa iziganeko usebenzisa ulwimi umz. izolo, namhlanje, ngomso.		

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
4.1 **Ixesha**		**Ukuxela ixesha** • Chaza ukuba into yenzeke xesha nini umz. kusasa, emva kwemini, ebusuku, kwangoko/ngethuba, kade • Xela ze ulandelelanise iintsuku zeveki neenyanga zonyaka • Bhala iintsuku zokuzalwa kwikhalenda	**Ukuxela ixesha** • Xela ze ulandelelanise iintsuku zeveki neenyanga zonyaka • Bhala iintsuku zokuzalwa, iminyhadala yenkolo, iintsuku zeholide, iziganeko zembali, iziganeko zesikolo ngokwekhalenda • Ixesha ngosuku, ngeziqendu zeeyure, umkhono weyure **Bala ubude bexeha nokuhamba kwalo** • Sebenzisa ikhalenda ukubala nokuchaza ixesha: - ngosuku, - ngeeveki • Ukusebenzisa iwotshi ukubala ubude bexesha: - Iiyure - Iziqendu zeyure	**Ukuxela ixesha** • Funda imihla yekhalenda • Bhala iintsuku zokuzalwa, iminyhadala yenkolo, iintsuku zeholide, iziganeko zembali, iziganeko zesikolo ngokwekhalenda • Xela ixesha ngokosuku - Iiyure - Iziqendu zeyure - Umkhono weyure - Imizuzu • iwotshi yosiba newotshi edanyazayo, umz. Ixesha leselula **Bala ubude bexeha nokuhamba kwalo** • Sebenzisa ikhalenda ukubala nokuchaza ixesha: - ngosuku, - ngeeveki - neenyanga • Sebenzisa iwotshi ukubala ubude bexesha: - Iiyure - Iziqendu zeyure - Umkhono weeyure.

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
4.2 **Ubude**	**Umlinganiselo ongekho seSikweni** • Thelekisa ze ulandelelanise ubude, umphakamo okanye ububanzi bezinto ezimbini nangaphezulu ngokuzibeka zibe calanye. Sebenzisa ulwimi ukuthetha malunga nokuthelekisa umz ende, emfutshane, nebanzi	**Umlinganiselo ongekho seSikweni** • Thelekisa ze ulandelelanise ubude, umphakamo okanye ububanzi bezinto ezimbini nangaphezulu ngokuzibeka zibe calanye. Sebenzisa ulwimi ukuthetha malunga nokuthelekisa umz ende, emfutshane, nebanzi • Qikelela, thatha umlinganiselo, thelekelela, landelelanisa ze urekhodishe ubude usebenzisa imilinganiselo engekho seSikweni umz umlinganiselo ngesandla, izantya, ubude bepensile nekhawunta. • Chaza ubude bezinto ngokubala nokuxela ubude beeyunithi ezingekho seSikweni	**Umlinganiselo ongekho seSikweni** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa, ze urekhodishe ubude usebenizisa imilinganiselo engekho seSikweni umz umlinganiselo ngesandla, izantya, ubude bepensile nekhawunta. • Chaza ubude bezinto ngokubala nokuxela ubude beeyunithi ezingekho seSikweni **Ukwazisa umlinganiselo oseSikweni** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa ze urekhode ubude usebenzisa iimitha (usenokusebenzisa izinti okanye imisonto) njengeeyunithi zobude eziseSikweni.	**Umlinganiselo ongekho seSikweni** • Qikelela, thatha umlinganiselo, thelekelela, landelelanisa ze urekhode ubude usebenzisa imilinganiselo engekho seSikweni umz umlinganiselo ngesandla, izantya, ubude bepensile nekhawunta • Chaza ubude bezinto ngokubala nokuxela ukuba zingaphi iiyunithi ezingekho seSikweni nobude bazo **Ukwazisa umlinganiselo oseSikweni** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa ze urekhodishe ubude usebenzisa iimitha (usenokusebenzisa izinti okanye imisonto) njengeeyunithi zobude eziseSikweni. • Qikelela ze ulinganisele ubude ngeesentimitha usebenzisa irula. Akukho nguqulelo zifunekayo phakathi kweemitha neesentimitha

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
4.3 **Umthamo**	**Umlinganiselo ongekho seSikweni** • Thelekisa ze ulandelelanise ubude bezinto ezimbini nangaphezulu ngokuziva ngesandla okanye usebenzise isikali sokulungelelanisa • **Sebenzisa ulwimi** ukuthetha malunga nothelekiso umz ilula, inzima, ilulana, inzinyana	**Umlinganiselo ongekho seSikweni** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa, ze urekhodishe ubuninzi usebenzisa isikali nemilinganiselo engekho seSikweni umz iibloksi, izitena • Chaza ubude bezinto ngokubala nokuxela ubude beeyunithi ezingekho seSikweni • **Sebenzisa ulwimi** ukuthetha malunga nothelekiso umz ilula, inzima, ilulana, inzinyana	**Umlinganiselo ongekho seSikweni** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa, ze urekhodishe ubuninzi usebenzisa isikali nemilinganiselo engekho seSikweni umz iibloksi, izitena • Chaza ubude bezinto ngokubala nokuxela ubude beeyunithi ezingekho seSikweni • **Sebenzisa ulwimi** ukuthetha malunga nothelekiso umz ilula, inzima, ilulana, inzinyana **Ukwazisa umlinganiselo oseSikweni** • Thelekisa, ulandelelanise ze urekhodishe ubuninzi bezinto ezilungiselelwe intengiso ezinobunzima obuxelwe ngekhilogrem kuphela umz u2 kg werayisi no1kg womgubo • Thatha umlinganiselo umlinganiselo wobubanzi babo ngeekhilogram usebenzisa isikali sendlu yokuhlambela	**Umlinganiselo ongekho seSikweni** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa ze urekhodishe ubuninzi usebenzisa isikali nemilinganiselo engekho seSikweni umz iibloksi, izitena. • Chaza ubude bezinto ngokubala nokuxela ubude beeyunithi ezingekho seSikweni • **Sebenzisa ulwimi** ukuthetha malunga nothelekiso umz ilula, inzima, ilulana, inzinyana • **Ukwazisa umlinganiselo oseSikweni** • Thelekisa, landelelanisa, ze urekhodishe ubuninzi bezinto ezilungiselelwe iintengiso ezinobunzima obuxewe ngeekhilogrem: • u2 kg werayisi no1kg womgubo • Iigrem umz. 500 grems yetyuwa • Thatha umlinganiselo umlinganiselo wobubanzi babo ngeekhilogram usebenzisa isikali sendlu yokuhlambela • Akukho nguqulelo phakathi kweegrem nekhilogrem
	Umlinganiselo ongekho seSikweni • Thelekisa ze ulandelelanise umlinganiselo wobubanzi (ubuninzi ngokomthamo) kwizikhongozeli ezibini ezibekwe ngokusondeleleneyo. Abafunda bajonga ngokugalela kwisikhongozeli sesithathu xa kuyimfuneko. • Thelekisa ze ulandelelanise umlinganiselo wokubanzi onokuthwalwa zizikhongozeli ezimbini xa zigcwalisiwe. (ubuninzi)	**Umlinganiselo ongekho seSikweni** • Thelekisa ze ulandelelanise umlinganiselo wokubanzi (ubuninzi ngokomthamo) kwizikhongozeli ezimbini ezibekwe ngokusondeleneyo. Abafundi bajonga ngokugalela kwisikhongozeli sesithathu xa kuyimfuneko. • Thelekisa ze ulandelelanise umlinganiselo wokubanzi onokuthwalwa zizikhongozeli ezimbini xa zigcwalisiwe. (ubuninzi)	**Umlinganiselo ongekho seSikweni**	**Umlinganiselo ongekho seSikweni**

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
4.4 **Umthamo/ Ivolumu/Ivolumu**	• Sebenzisa ulwimi ukuthetha malunga nokuthelekisa izinto umz ngaphezulu, kancinci, izele, ayinanto	• Sebenzisa ulwimi ukuthetha malunga nokuthelekisa izinto umz ngaphezulu, kancinci, izele, ayinanto • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa, ze urekhodishe ubude usebenzisa imilinganiselo engekho seSikweni umz amacephe neekomityi • Chaza ubuninzi besikhongozeli ngokubala nokuxela ukuba zingaphi iiyunithi ezingekho seSikweni ukugcwalisa isikhongozeli umz ibhotile inobuninzi beekomityi ezine	• Qikelela, thatha umlinganiselo, thelekisa, landelelanisa, ze urekhodishe ubuninzi bomthamo wezikhongozeli (ubuninzi bomthamo wesikhongozeli xa ugcwalisiwe) ngokusebenzisa imilinganiselo engekho seSikweni umz amacephe neekomityi • Chaza ubuninzi besikhongozeli ngokubala nokuxela ukuba zingaphi iiyunithi ezingekho seSikweni ukugcwalisa isikhongozeli, umz. ibhotile inobuninzi beekomityi ezine. • **Umlinganiselo ongekhoseSikweni** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa, ze urekhodishe ubuninzi bezinto ngomlinganiselo weelitha • Thelekisa, ulandelelanise ze urekhodishe ubuninzi bezinto ezilungiselelwe iintengiso ezinobunziba obuxelwe ngeelitha umz iilitha ezimbini zobisi, ilitha enye yesiselo esibandayo, iilitha ezintlanu zepeyinti	• Qikelela, thatha umlinganiselo, thelekisa, landelelanisa, ze urekhodlshe ubuninzi bomthamo wezikhongozeli (ubuninzi bomthamo wesikhongozeli xa ugcwalisiwe) ngokusebenzisa imilinganiselo engekho seSikweni umz amacephe neekomityi • Chaza ubuninzi besikhongozeli ngokubala nokuxela ukuba zingaphi iiyunithi ezingekho seSikweni ukugcwalisa isikhongozeli umz ibhotile inobuninzi beekomityi ezine. • **Umlinganiselo ongekhoseSikweni** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa, ze urekhodishe ubuninzi bezinto ngomlinganiselo weelitha • lihafu zelitha neekota zelitha • Thelekisa, ulandelelanise ze urekhodishe ubuninzi bezinto ezilungiselelwe iintengiso ezinobunziba obuxelwe ngeelitha Akukho nguqulelo phakathi kweegrem nekhilogrem, iimililitha neelitha
4.5 **Umjikelezo nommandla**				**Umjikelezo nommandla** Phanda ngomgama ophakathi kweemilo ezinokwakheka kuka 2-D neyi-3-D usebenzisa uthelekiso okanye iiyunithi ezingekho seSikweni. **Ummandla** Phanda i-eriya usebenzisa uthayilisho

AMAGQABANTSHINTSHI ESIGABA ESISISEKO

5. INDLELA YOKUSEBENZA NGOLWAZI OLUQOKELELWEYO

Ukuqhubeka kwindlela yokusebenza ngolwazi oluqokelelweyo

- Undoqo wokuqhubeka kwendlela yokusebenza ngolwazi oluqokelelweyo kumaBanga jikelele lungaphunyezwa ngoku:
- Ukuqhubela phambili ngokuSebenza ngoLwazi oluQokeleleweyo (ulwazi) kuwo onke amaBanga okufezekiswa ngolu hlobo:
  - Ukusuka ekusebenziseni kwento uye kusebenzisa ulwazi / ulwazi; kunye
  - Nokusebenza neefom ezintsha zomelo-lwazi lwedatha.
- Abafundi mabasebenze umjikelo opheleleyo wedatha ubuncinane kanye ngonyaka – oku kuquka ukuqokelelwa nokulungisa ulwazi, ukumela ulwazi, ukuhlahlela/ukucalula, ukutolika nokunika ingxelo ngedatha.
- Ezinye zezi nkangeleko zingentla zedatha zingenziwa njengemisebenzi ekhethekileyo.

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
5.1 **Qokelela ze uhlele izinto**	**Ukuqokelela nokulungisa izinto** Qokelela ze uhlele izinto eziphathekayo zemihla ngemihla	**Ukuqokelela nokulungisa izinto** Qokelela ze uhlele izinto eziphathekayo zemihla ngemihla		
5.2 **Ukumela/ ukubonakalisa ingqokelela ehleliweyo yezinto**	**Ukumela/ukubonakalisa ingqokelela ehleliweyo yezinto** Zoba umfanekiso wengqokelela yezinto (ipictograph)	**Ukumela/ukubonakalisa ingqokelela ehleliweyo yezinto** Zoba umfanekiso wengqokelela yezinto		
5.3 **Ukuxoxa nokunika ingxelo ngengqokelela ehleliweyo yezinto**	**Ukuxoxa nokunika ingxelo ngengqokelela ehleliweyo yezinto** Ukuphendula imibuzo emalunga: • Nokuba ingqokelela ihlelwe njani • Ukuzoba ingqokelela	**Ukuxoxa nokunika ingxelo ngengqokelela ehleliweyo yezinto** • Nika izizathu zokuba ingqokelela ihlelwe njani • Ukuphendula imibuzo emalunga - Nokuba uhlelo lwenziwe njani (inkqubo) - Ibonakala njani le ngqokelela ihleliweyo(imveliso) • Chaza ingqokelela okanye/ umzobo • Cacisa ukuba le ngqokelela ihlelwe njani		

ISIHLOKO	IBANGA R	IBANGA 1	IBANGA 2	IBANGA 3
5.4 **Ukuqokelela nokulungisa ulwazi**		**Ukuqokelelo nokulungisa ulwazi** • Qokelela ulwazi emalunga neklasi okanye isikolo ukuphendula imibuzo ebuzwa ngutitshala	**Ukuqokelelo nokulungisa ulwazi** • Qokelela ulwazi emalunga neklasi okanye isikolo ukuphendula imibuzo ebuzwa ngutitshala • Lungiselela ulwazi ngokungqinelana kwazo	**Ukuqokelelo nokulungisa ulwazi** • Qokelela ulwazi emalunga neklasi okanye isikolo ukuphendula imibuzo ebuzwa ngutitshala • Lungiselela ulwazi enikezelwe ngutitshala okanye incwadi yomfundi • Lungiselela ulwazi ngoko - Uluhlu - Ngokungqinelana - kwetheyibhile
5.5 **Ukubonakalisa ulwazi**		**Ukubonakalisa ulwazi** Ukubonakalisa igrafu yemifanekiso (picto graph) ejongene no-1 ukuya ku-1 kuphela	**Ukubonakalisa ulwazi** Ukubonakalisa igrafu yemifanekiso, ejongene no-1 ukuya ku-1 kuphela	**Ukubonakalisa ulwazi** • Lungiselela ulwazi ngokwe - igrafu yemifanekiso, ejongene no-1 ukuya ku-1 kuphela - igrafu yezitena(bar graph)
5.6 **Ukucalula nokutolika ulwazi**		**Ukucalula nokutolika ulwazi** Phendula imibuzo emalunga nedatha yegrafu yemifanekiso ejongene no-1 ukuya ku-1 kuphela	**Ukucalula nokutolika ulwazi** Phendula imibuzo emalunga nedatha yegrafu yemifanekiso ejongene no-1 ukuya ku-1 kuphela	**Ukucalula nokutolika ulwazi** Phendula imibuzo emalunga nolwazi enikezelweyo • igrafu yemifanekiso ejongene no-1 ukuya ku-1 kuphela • igrafu yezitena

3.3 INKCAZELO NGOMXHOLO

Kweli candela lenkcazelo ngomxholo utitshala unikwe oku kulandelayo:

- Amagqabantshintshi ekota eBanga labaQalayo ukuya kwiBanga lesi- 3.
- Ingcebiso ngendlela yokulandelelelanisa izihloko ngokweekota: ayiyiyo yonke imiba yezihloko emayifundiswe kwikota nganye. Eminye imiba yezihloko kufuneka ifundisiwe kuqala phambi kokuba kufundiswe eminye.
- Ingcebiso ngexesha emalithathwe ukufundisa izihloko ezithile apha enyakeni. Ixesha emalithathwe ukufundisa umxholo othile liyohluka - omnye umxholo ufuna ixesha elininzi kunomnye.
- Ingcaciso nemigaqo yokufundisa enemizekelo apho kuyimfuneko.

Ummandla womxholo ngamnye wohlulwe wazizihloko. Yonke imimandla yomxholo kufuneka ifundiswe kwikota nganye. Ukulandelelaniswa kwezihloko ngokweekota kunika uluvo lokuba izihloko zingasasazwa njani kwaye zingahlaziywa njani apha enyakeni. Akuyomfuneko ukuba zifundiswe kwikota nganye zonke izihloko zezithuba, iimilo nomlinganiselo wokusebenza ngolwazi oluqokelelwayo. Kodwa ke zonke ezinye izihloko mazifundiswe unyaka wonke.

Kwisahluko sesi-2 (umhlathi 2.6) indlela yokuthatha umlinganiselo umxholo inikiwe. Xa oku kudityaniswe neeyure zonyaka (jonga kumhlathi we-3.5 ngasezantsi) unokuthi ukwazi ukubala iiyure eziqingqiweyo zommandla womxholo ngamnye.

Ootitshala banokukhetha indlela yokulandelelanisa nexesha emalithathwe kumxholo ngamnye ngendlela eyahlukileyo, oko bekwenza ngokweengcebiso abazifumene kwesi sahluko. Oko kukuthi ootitshala Bangalitshintsha kancinci ixesha ebelicetyisiwe elabelwe isihloko eso kodwa ke makuqatshelwe umlinganiselo neeyure ezimiselweyo zommandla womxholo weMathematika wesiGaba esisisiSeko.

- **IMathematika yeBanga labaQalayo** yimilo yeMathematika yabaQalayo kwaye ke ayohlulwanga ngokwamaxesha esifundo. Utitshala weBanga labaQalayo makadibanise iMathematika kwizifundo zemihla ngemihla kodwa ke ixesha malibekwe bucala apho utitshala aqwalasela ngokukodwa kwimisebenzi yeMathematika. Ukuba akakwenzi oku abafundi abasayi kuye bazazi kwaye bavelise **iingqiqo nezakhono ezinqwenelekayo**.
- Ixesha lamaBanga oku-1 - 3 labiwe ngolu hlobo:
    - **Iiyure ezisixhenxe ngeveki (10 iiveki x 4 iikota x 7 iiyure = 280 iiyure ngonyaka) kufuneka iiyure ezisixhenxe ngeveki zisetyenziselwe iMathematika**)
    - Isifundo ngasinye seMathematika kufuneka sibe **yiyure e-1, imizuzu engama-24 ngosuku kwiBanga loku-1 ukuya kwelesi-3**
    - **Oku kuthetha ukuba kukho ii**kota ezine ezineeveki ezilishumi ezinezifundo ezintlanu (Ukusuka ngomvulo ukuya kutsho ngolwesihlanu) ngeveki.
    - Vumela ithuba elingangeveki ukulungiselela ukuqhelanisa nokuqinisa ukuqala kwekota nganye kuba abantwana abancinci bayakulibala oko bakufundisiweyo ngakumbi ngexesha leholide kwaye bayaphuma kwisingqi sesikolo. Vumela iveki ekupheleni kwekota ukuqinisa iingqiqo. Oku kunika 8 x 4 x 5 = 160 zezifundo.

3.4 UKULANDELELANISA NESANTYA SOMXHOLO

Ezi theybhile zilandelayo zinikiwe kwiBanga ngalinye kwiBanga labaqalayo ukuya kwelesithathu (R-3):

- Isantya sezihloko zonyaka (zibonisa ukusasazwa kwezihloko ngokweekota kwaye zicebisa ngokomlinganiselo wexesha emalichithwe kummandla womxholo.
- Ukulandelelana kwezihloko zonyaka (bonisa ukuba izihloko zabiwe ngokweekota kwaye kukho inkqubela phambili yomxholoi nezakhono kwiikota zonke)
- Ukucaciswa kwamanqaku ngokwesihloko –ezi theyibhile zinika ingcaciso ngomxholo nesikhokelo sokufundisa sesihloko ngasinye njengoko silandelelanisiwe ngokweekota.

Iiplani zezifundo – Ukwabiwa kwexesha ngokwekota

Inani sesona sihloko sibalulekileyo kwimathematika yamaBanga asisiseko. Amaxesha amaninzi kwiveki nganye, kwikota kunye nonyaka kugqaliselwa kumanani,izibalo nolwalamano.Iavareji kukuba nezifundo zeMathematika ezintathu okanye ezininzi kunoku ezigqale kuManani,Izibalo,noLalwamano.Ixesha elishiyekileyo malahlulwe kweminye imimandla yomxholo.Isithuba neSimo noMlinganiselo zifuna ixesha nengqwalaselo kunolwazi olusetyenziselwa ukuhlalutya iiPateni,Iifankshini ne-Aljibra.Itheybhile engezantsi ibonisa inani lezifundo ezabelwe umxholo nezihloko zeBanga ngalinye kwiiPateni,Isiphumo sentsebebnziswano yamanani ne-Aljibra,Isithuba neSimo.uMlinganiselo, ukusebenza ngoLwazi olusetyenziselwa ukuhlalutya:

Ukwabiwa kommandla womxholo nezihloko kwizifundo zeBanga labaqalayo

Njengoko **kwiBanga labaqalayo** imathematiki ikwimo **yemathematika yabaqalayo i**ingcebiso ezilandelayo zokwabiwa kwexesha zinika ugqaliselo kwiziqendu zemathematika nemisebenzi engekho seSikweni ehambelanayo. Oku kukuqinisekisa ukuba zonke iinkalo zomxholo zikhona. Imisebenzi yemathematiki yabaqalayo inokuba kukubala inani lezitya neekomityi zokugalela izimuncumuncu,ukubala imidlalo edlalwa naphandle,imidlalo edlalwa ngaphakathi endlwini umz. Idomino neephazili.Utitshala kufuneka alungise yonke imisebenzi ngokweemfuno zabafundi kunye nezixhobo zokufundisa ezikhoyo egumbini lokufunda.

ISithuba neMilo yimiba ebalulekileyo ekukhuleni kwemathematika kubafundi abancinci kwaye kufuneka isasazwe evekini,kugqalwe kwiziqendu ezithile phantsi kwenkxaso katitshala kunikwe namathuba amaninzi okuba abafundi bakhe izinto,badlale ngesanti namanzi.

Umlinganiselo mawufakwe kwimisebenzi yokubala,umz ukuthelekelela nokubala xa bethatha umlinganiselo umgama ngezandla,ngeenyawo namanqwanqwa.

Irejista yokubhalisa abafundi netshati yemozulu zinika ithuba elininzi lokusebenza **ngolwazi olusetyenziselwa ukuhlalutya.**

Itheyibhile 3.1: Ulwabiwo lwexesha ngeveki ngokommandala womxholo

UMMANDLA WOMXHOLO	ISIHLOKO	Ixesha elinokusetyenziswa
Amanani, Ii-Opareyshini noLwalamano	Ukubala Ukuqaphela amanani Chonga aze achaze amanani azeleyo Ulwazi ngamanani Ukusombulula iingxaki zezibalo	Imizuzu eli -120
IiPateni, iiFankshini ne-Aljibra	Kopa,andise aze ayile iipateni zakhe	Imizuzu engama- 80
Isithuba nemilo (Ijiyomeri)	Nakana, chonga uze axele ukwakheka kweemilo zejiyometri / imifanekiso enokwakheka kuka 2-D. Yakha izinto ezinokwakheka kuka 3-D besebenzisa izixhobo eziphathekayo. Ukuzalana ngokwesithuba Izalathiso	Imizuzu engama- 80
Umlinganiselo	Ixesha Ubude Ubunzima Umthamo	Imizuzu engama- 80
Ukusebenza ngolwazi oluqokelelweyo	Qokelela, hlela, zoba, funda uze abonakalise ulwazi	Imizuzu engama- 60
IIYURE ZIZONKE		Imizuzu engama- 420 Iiyure ezisi -7 ngeveki

- **Ukwabiwa kwenkalo nezihloko kwizifundo zebanga loku-1 ukuya kwelesi-3**

Izifundo ezintathu ubuncicnci ngeveki mazichithwe kufundiswa Amanani,Izibalo,Ukuzalana (umz phakathi kwe 4 ne 4 $\frac{1}{4}$ seeyure). Izifundo ezibini ezishiyekileyo (umz.phakathi 2 $\frac{1}{2}$ ne 3 seeyure) mazahlulwe phakathi kwezihloko zeminye imimmandla yomxholo njengoko kucetyisiwe ngasezantsi.

Itheyibhile 3.2: Inani lezifundo ezicetyiswayo zebanga loku-1 ngekota

UMMANDLA WOMXHOLO	IZIHLOKO	Inani lezifundo				
		Ikota yoku- 1	Ikota yesi- 2	Ikota yei -3	Ikota yesi -4	Iiyure zizonke
Amanani, ii-Opareyshini noLwalamano	Zonke izihloko zaManani,ii-Opareyshini noLwalamano.	22	30	28	25	**105**
IiPateni, iiFankshini ne-Aljibra	Iipateni yamanani	3	3	3	3	**12**
	Iipateni zejiyometri	1	1	1	1	**4**
Isithuba nemilo (IJiyometri))	Iimilo zokwakheka kwe 2-D		3		3	**6**
	Ukwakheka kwezinto kuka 3-D	3		2	1	**6**
	Indawo, fumana indawo apho ikhoyo nembonakalo	2			1	**3**
	Ulingano macala			1	1	**2**
Umlinganiselo	Ixesha	2				**2**
	Ubude	2		2		**4**
	Ubunzima	2			2	**4**
	Umthamo	1	2		1	**4**
Ukusebenza ngolwazi oluqokelelweyo	Ukuqokelela, ukuhlela, abonakalise aze acalule izinto	2	1			**3**
	Umjikelo opheleleyo wolwazi			3		**3**
	Izintlu zomjikelo wolwazi				2	**2**
Izifundo zizonke		**40**	**40**	**40**	**40**	**160**

Itheyibhile 3.3: Inani lezifundo ezicetyiswayo zebanga lesi-2 ngekota

UMMANDLA WOMXHOLO	IZIHLOKO	Inani lezifundo				
		Ikota yoku- 1	Ikota yesi- 2	Ikota yei -3	Ikota yesi -4	Ilyure zizonke
Amanani, ii-Opareyshini noLwalamano	Zonke izihloko zaManani, ii-Opareyshini noLwalamano	24	25	24	26	**99**
IPateni, iiFankshini neAljibra	Iipateni yamanani	3	3	3	3	**12**
	Iipateni zejiyometri	1	1	1	1	**4**
Isithuba nemilo (IJiyometri)	Iimilo zokwakheka kuka 2-D		3		3	**6**
	Ukwakheka kwezinto kuka 3-D	3		2	1	**6**
	Indawo, fumana indawo apho ikhoyo nembonakalo		2	1		**3**
	Ulingano-macala		1		1	**2**
Umlinganiselo	Ixesha	3	1	3	1	**8**
	Ubude	3			1	**4**
	Ubunzima		3		1	**4**
	Umthamo			3	1	**4**
Ukusebenza ngolwazi oluqokelelweyo	Umjikelo opheleleyo wolwazi	3		3		**6**
	Izintlu zomjikelo wolwazi		1		1	**2**
Izifundo zizonke		**40**	**40**	**40**	**40**	**160**

Itheyibhile 3.4: Inani lezifundo ezicetyiswayo zebanga lesi-3 ngekota

UMMANDLA WOMXHOLO	IZIHLOKO	Inani lezifundo				
		Ikota yoku- 1	Ikota yesi- 2	Ikota yei -3	Ikota yesi -4	Ilyure zizonke
Amanani, ii-Opareyshini noLwalamano	Zonke izihloko zaManani, ii-Opareyshini noLwalamano	26	22	19	27	**94**
IiPateni, iiFankshini ne-Aljibra	Iipateni yamanani	3	3	3	3	**12**
	Iipateni zejiyometri	1	1	1	1	**4**
Isithuba nemilo (IJiyometri)	Iimilo zokwakheka kuka 2-D	2		2		**4**
	Iimilo zokwakheka kuka 3-D		3	3	1	**7**
	Indawo, fumana indawo apho ikhoyo nembonakalo		2	3		**5**
	Ulingano-macala		2		1	**3**
Umlinganiselo	Ixesha	3	2	3	2	**10**
	Ubude		2	2		**4**
	Ubunzima		2		1	**3**
	Umthamo	2			1	**3**
	Umjikelo			1		**1**
	I-eriya				2	**2**
Ukusebenza ngolwazi oluqokelelweyo	Umjikelo opheleleyo wolwazi	3		3		**6**
	Izintlu zomjikelo wolwazi		1		1	**2**
Izifundo zizonke		**40**	**40**	**40**	**40**	**160**

3.4.1 Amagqabantshintshi ebanga loku-1ngekota

IBANGA 1 AMAGQABANTSHINTSHI 1. AMANANI, II-OPAREYSHINI NOLWALAMANO				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
UKHULISO LWENGQIQO NGAMANANI:Ukubala ngamanani apheleleyo				
1.1 **Bala izinto**	• Bala izinto eziphathekayo ukuya kuma kwi-10 • Ukunika uqikelelo olufanelekileyo lwamanani ezinto olunokuhlolwa ngokubala	• Bala ngokukhwaza ukungokuthemebekileyo ukuya kuma-20 • Ukunika uqikelelo olufanelekileyo lwamanani ezinto olunokuhlolwa ngokubala • Ukubala ngokuhlanganisa kuyakhuthazwa.	• Bala ngokukhwaza ukungokuthemebekileyo ukuya kuma-40 • Ukunika uqikelelo olufanelekileyo lwamanani ezinto olunokuhlolwa ngokubala • Ukubala ngokuhlanganisa kuyakhuthazwa	• Bala ngokukhwaza ukungokuthemebekileyo ukuya kuma-50 • Ukunika uqikelelo olufanelekileyo lwamanani ezinto olunokuhlolwa ngokubala Ukubala ngokuhlanganisa kuyakhuthazwa
1.2 **Bala usiya phambili, ubale ubuya umva.**	**Ukubala usiya phambili nokubala ubuya umva:** • *ngezinye* ukusuka nakuliphi inani phakathi kwe -1 ukuya kuma-20	**Ukubala usiya phambili nokubala ubuya umva:** • *ngezinye* ukusuka nakuliphi inani phakathi kwe -0-ukuya kuma-50 Bala usiya phambili ; • Ngamashumi ukusuka kuso nasiphi na isiphindaphindwa se-10 phakathi kwe-0 nama-50 • Ngoo-5 ukusuka kuso nasiphi na isiphindaphindwa sika-5 phakathi kwe- 0 nama-50 • Ngoo-2 ukusuka kuso nasiphi na isiphindaphindwa sika-5 phakathi kwe-0 nama-20	**Ukubala usiya phambili nokubala ubuya umva:** • *ngezinye* ukusuka nakuliphi inani phakathi kwe -0 ukuya kuma-80 Bala usiya phambili ; • Ngamashumi ukusuka kuso nasiphi na isiphindaphindwa se-10 phakathi kwe-0 nama-80 • Ngoo-5 ukusuka kuso nasiphi na isiphindaphindwa sika-5 phakathi kwe-0 nama-80 • Ngoo-2 ukusuka kuso nasiphi na isiphindaphindwa sika-5 phakathi kwe-0 nama-80	**Bala usiya phambili nokubala ubuya umva:** • *ngezinye* ukusuka nakuliphi inani phakathi kwe -0 ukuya kwi-100 Bala usiya phambili ; • Ngamashumi ukusuka kuso nasiphi na isiphindaphindwa se-10 phakathi kwe-0 ne-100 • Ngoo-5 ukusuka kuso nasiphi na isiphindaphindwa sika-5 phakathi kwe-0 ne-100 • Ngoo-2 ukusuka kuso nasiphi na isiphindaphindwa sika-5 phakathi kwe-0 ne-100

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
UKHULISO LWENGQIQO NGAMANANI:ukubonisa amanani apheleleyo				
1.3 **Iisimboli zamanani, namagama amanani.**	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwi-1 ukuya kuma-20 • Ukubhala iisimboli zenani ukusuka kwi-1 ukuya ku-5 • Nakana,chonga uze ufunde amagama amanani ukusuka ku-1ukuya ku-5 • Ukubhala amagama enani ukusuka kwi-0 ukuya ku-5	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwi-1 ukuya kuma-50 • Ukubhala iisimboli zenani ukusuka kwi-1 ukuya kwi-10 • Nakana,chonga uze ufunde amagama amanani ukusuka ku-1ukuya kwi-10 • Ukubhala amagama enani ukusuka kwi-0 ukuya kwi-10	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwi-1 ukuya kuma-80 • Ukubhala iisimboli zenani ukusuka kwi-1 ukuya kuma-20 • Nakana,chonga uze ufunde amagama amanani ukusuka ku-1ukuya kwi-10 Ukubhala amagama enani ukusuka kwi-0 ukuya kwi-10	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwi-1 ukuya kwi-100 • Ukubhala iisimboli zenani ukusuka kwi-1 ukuya ku-20 • Nakana,chonga uze ufunde amagama amanani ukusuka ku-1ukuya kwi-10 • Ukubhala amagama enani ukusuka kwi-0 ukuya kwi-10
UKHULISO LWENGQIQO NGAMANANI: Ukuchaza, ukuthelekisa nokulandelelanisa amanani apheleleyo				
1.4 **Chaza, thelekisa uze ucwangcise amanani azeleyo.**	**Ukuchaza, ukuthelekisa nokulandelelanisa izinto ukuya kuma-5** • Thelekisa ingqokelela yezinto ngoko; ninzi, mbalwa, eyona ininzi, eyona incinci, ngaphezulu kwe, ngaphantsi kune, lingana ne, ninzi njenge, ahlukileyo. • Landelelanisa /Cwangcisa izinto ukusuka kweyona ininzi ukuya kweyona incinci ukusuka kweyona ininzi ukuya kweyona ininzi. **Chaza, thelekisa, uze ulandelanise okanye ucwagcise amanani ukuya kwisihlanu** • Chaza uthelekise amanani azeleyo ngoko, ncinci kuno, nkulu kune, ngaphezulu kune, ngaphantsi kune, lingana ne.	**Ukuchaza, ukuthelekisa nokulandelelanisa izinto ukuya kwi-10** • Thelekisa ingqokelela yezinto ngoko; ninzi, mbalwa, eyona ininzi, eyona incinci, ngaphezulu kwe, ngaphantsi kune, lingana ne, ninzi njenge, ahlukileyo. • Landelelanisa /Cwangcisa izinto ukusuka kweyona ininzi ukuya kweyona incinci ukusuka kweyona ininzi ukuya kweyona ininzi. **Chaza, thelekisa, uze ulandelanise okanye ucwagcise amanani ukuya ku-5** • Chaza uthelekise amanani azeleyo ngoko, ncinci kuno, nkulu kune, ngaphezulu kune, ngaphantsi kune, lingana ne.	**Ukuchaza, ukuthelekisa nokulandelelanisa izinto ukuya kwi-15** • Thelekisa ingqokelela yezinto ngoko; ninzi, mbalwa, eyona ininzi, eyona incinci, ngaphezulu kwe, ngaphantsi kune, lingana ne, ninzi njenge, ahlukileyo. • Landelelanisa /Cwangcisa izinto ukusuka kweyona ininzi ukuya kweyona incinci ukusuka kweyona ininzi ukuya kweyona ininzi. **Chaza, thelekisa, uze ulandelanise okanye ucwagcise amanani ukuya ku-5** • Chaza uthelekise amanani azeleyo ngoko, ncinci kuno, nkulu kune, ngaphezulu kune, ngaphantsi kune, lingana ne.	**Ukuchaza, ukuthelekisa nokulandelelanisa izinto ukuya kwi-20** • Thelekisa ingqokelela yezinto ngoko; ninzi, mbalwa, eyona ininzi, eyona incinci, ngaphezulu kwe, ngaphantsi kune, lingana ne, ninzi njenge, ahlukileyo. • Landelelanisa /Cwangcisa izinto ukusuka kweyona ininzi ukuya kweyona incinci ukusuka kweyona ininzi ukuya kweyona ininzi. **Chaza, thelekisa, uze ulandelanise okanye ucwagcise amanani ukuya ku-5** • Chaza uthelekise amanani azeleyo ngoko, ncinci kuno, nkulu kune, ngaphezulu kune, ngaphantsi kune, lingana ne.

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.4 **Chaza, thelekisa uze ucwangcise amanani azeleyo.**	• **Chaza ulandelelanise amanani** - ukusuka kwelona lincinci ukuya kwelona likhulu - nokusuka kwelona likhulu ukuya kwelona lincinci - sebenzisa umgca amananai ukusuka ku1 ukuuya ku-5	• **Chaza ulandelelanise amanani** - ukusuka kwelona lincinci ukuya kwelona likhulu - nokusuka kwelona likhulu ukuya kwelona lincinci - sebenzisa umgca amananai ukusuka ku-0 ukuuya ku-10	• **Chaza ulandelelanise amanani** - ukusuka kwelona lincinci ukuya kwelona likhulu - nokusuka kwelona likhulu ukuya kwelona lincinci - sebenzisa umgca amananai ukusuka ku-0 ukuuya ku-15	• **Chaza ulandelelanise amanani** - ukusuka kwelona lincinci ukuya kwelona likhulu - nokusuka kwelona likhulu ukuya kwelona lincinci - sebenzisa umgca amananai ukusuka ku-0 ukuya ku-20. **Sebenzisa amanani olandelelwano ukubonisa ulandelelwano kanendawo bume** . • **Beka** izinto ngoklandelelana kulmqolo ukusuka kweyokuqala ukuya kweyeshumi okanye kweyokugqibela. Umz. eyokuqala, eyesibini, eysithathu, eyeshumi, eyokugqibela. • **Indawo** elihleli kuyo inani kwisethi kummandla wenani lokuqala ukuya kwishumi.
UKHULISO LWENGQIKELELO-MANANI Ixabiso lendawo				
1.5 **Ixabiso lendawo elimi kuyo inani.**			Ukunakana ixabiso lendawo kumanani 11 ukuya ku 15 • Ukwahlula amanani amalungu mabini abe ngamashumi nemivo umzekelo i- 12 li 10 nei 2	Ukunakana ixabiso lendawo kumanani i-11 ukuya kwi- 19. • Ukwahlula amanani amalungu mabini abe ngamashumi nemivo umzekelo i- 18 li 10 ne 8
UKUSOMBULULA IZIBALO ZEMALI NGOKWEMEKO				
1.6 **lindlela ngeendlela kusombulula iingxaki zezibalo**	Sebenzisa obu buchule bulandelayo xa usombulula izibalo zemali uze uchaze indlela ozisombulule ngayo: • Izixhobo eziphathekayo umzekeko: izixhobo zokubala • Imifanekiso ukuzoba isibalo samazwi • Imigca manani exhaswe zizixhobo eziphathekayo umzekelo: amaso okubala	Sebenzisa obu buchule bulandelayo xa usombulula izibalo zemali uze uchaze indlela ozisombulule ngayo: • Izixhobo eziphathekayo umzekeko: izixhobo zokubala • Imifanekiso ukuzoba isibalo samazwi • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulingana • Imigca- manani exhaswe zizixhobo eziphathekayo umzekelo: amaso okubala	Sebenzisa obu buchule bulandelayo xa usombulula izibalo zemali uze uchaze indlela ozisombulule ngayo: • Izixhobo eziphathekayo umzekeko: izixhobo zokubala • Imifanekiso ukuzoba isibalo samazwi • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulingana • Imigca- manani exhaswe zizixhobo eziphathekayo umzekelo: amaso okubala	Sebenzisa obu buchule bulandelayo xa usombulula iingxaki uze uchaze indlela ozisombulule ngayo: • Izixhobo eziphathekayo umzekeko: izixhobo zokubala • Imifanekiso ukuzoba isibalo samazwi • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulingana • Imigca manani exhaswe zizixhobo eziphathekayo umzekelo: amaso okubala

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.7 **Ukudibanisa okuthabatha.**	Ukusombulula izibalo zemali zamazwi ngokwenza ngokwemeko leyo uze uchaze indlela osombulule ngayo ubandakanya ukudibanisa nokuthabatha, iimpendulo zingedluli kwinani isi- 5.	Ukusombulula izibalo zemali zamazwi ngokwenza ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya ukudibanisa nokuthabatha, iimpendulo zingedluli kwi- 10.	Ukusombulula izibalo zemali zamazwi ngokwenza ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya ukudibanisa nokuthabatha, iimpendulo zingedluli kwi- 15.	Ukusombulula izibalo zemali zamazwi ngokwenza ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya ukudibanisa nokuthabatha, iimpendulo zingedluli kuma- 20.
1.8 **Ukudibanisa okuphindiweyo okukhokelela kuphindaphindo lwamanani.**		Ukusombulula izibalo zemali zamazwi ngokwenza ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa oluziphumo zingadluli kwi- 10.	Ukusombulula izibalo zemali zamazwi ngokwenza ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa oluziphumo zingadluli kwi- 15.	Ukusombulula izibalo zemali zamazwi ngokwenza ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa oluziphumo zingadluli kwi- 20.
1.9 **Ukwahlula ngokwamaqela nokwaba ngokulinga okukhokelela kulwahlulwa-hlulo.**	Ukusombulula izibalo zemali zamazwi ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya ukwahlula ngokulinganayo nangokwamaqela amanani apheleleyo ukuya kwi- 5, neempendulo ezinokuba nentsalela.	Ukusombulula izibalo zemali zamazwi ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya ukwahlula ngokulinganayo nangokwamaqela amanani apheleleyo ukuya kwi- 10, neempendulo ezinokuba nentsalela.	Ukusombulula Izibalo zamazwi ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya ukwahlula ngokulinganayo nangokwamaqela amanani apheleleyo ukuya kwi- 15, neempendulo ezinokuba nentsalela.	Ukusombulula izibalo zemali zamazwi ngokwemeko leyo, uze uchaze indlela osombulule ngayo ubandakanya ukwahlula ngokulinganayo nangokwamaqela amanani apheleleyo ukuya kuma- 20, neempendulo ezinokuba nentsalela.
1.11 **Imali**		• Ukunakana aze achonge imali esetyenzisa eMzantsi Afrika 5c, 10c, 20, 50c, R1, R2; R5 • Ukusombulula izibalo zemali ubandakanya iitotali nokutshintshela kwi - R10 nakwiisenti ukuya kwii- 20c	• Ukunakana aze achonge imali esetyenzisa eMzantsi Afrika 5c, 10c, 20, 50c, R1, R2; R5 • Ukusombulula izibalo zemali ubandakanya iitotali nokutshintshela kwi- R20 nakwiisenti ukuya kwii- 20c.	• Ukunakana nokuchonga imali esetyenziswa eMzantsi Afrika - Imali eziinkozo 5c, 10c, 20, 50c, R1, R2;R5 - Imali engamaphepha R10 ne R20 • Ukusombulula izibalo zemali ubandakanya iitotali nokutshintshela kwi- R20 nakwiisenti ukuya kwii- 20c.

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
IZIBALO EZINGASETYENZISWANGA NGOKOMXHOLO				
1.12 **Ubuchule bokubala** **(lindela)**	Sebenzisa obu buchule bulandelayo xa usenza izibalo • Izixhobo eziphathekayo umzekeko: izixhobo zokubala • Zoba imifanekiso • Imigca manani exhaswe zizixhobo eziphathekayo umzekelo: amaso okubala	Sebenzisa obu buchule bulandelayo xa usenza izibalo: • Izixhobo eziphathekayo umzekeko: izixhobo zokubala • Zoba imifanekiso • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulingana • Imigca manani exhaswe zizixhobo eziphathekayo umzekelo: amaso okubala	Sebenzisa obu buchule bulandelayo xa usenza izibalo: • Izixhobo eziphathekayo umzekeko: izixhobo zokubala • Zoba imifanekiso • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulingana • Imigca manani exhaswe zizixhobo eziphathekayo umzekelo: amaso okubala	Sebenzisa obu buchule bulandelayo xa usenza izibalo: • Izixhobo eziphathekayo umzekeko: izixhobo zokubala • Zoba imifanekiso • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulingana • Imigca manani exhaswe zizixhobo eziphathekayo umzekelo: amaso okubala
1.13 **Ukudibanisa nokuthabatha**	**Udweliso lwamanani: 1 - 5** • Udibaniso ukuya ku- 5 • Ukuthabatha ku - 5 • Ziqhelise udibaniso manani ukwenza u- 5	**Udweliso lwamanani: 1 - 10** • Ukudibanisa amanani ukwenza i- 10 • Ukuthabatha ku - 10 • Ukusebenzisa iisimboli ezifanelekileyo (+, –, =, □) • Ziqhelise udibaniso manani ukwenza u- 7	**Udweliso lwamanani: 1 - 15** • Ukudibanisa amanani ukwenza i- 15 • Ukuthabatha ku - 15 • Ukusebenzisa iisimboli ezifanelekileyo (+, –, =, □) • Ziqhelise udibaniso manani ukwenza u- 9	**Udweliso lwamanani: 1 - 20** • Ukudibanisa amanani ukwenza i- 20 • Ukuthabatha ku - 20 • Ukusebenzisa iisimboli ezifanelekileyo (+, –, =, □) • Ziqhelise udibaniso manani ukwenza u- 10
1.14 **Ukudibanisa okuphinda-phindiweyo olukhekelela kuphinda-phindo**		• Uphinda-phindo lokudibanisa (inani elinye elifanayo) ukuya kwi- 10 • Ukusebenzisa iisimboli ezifanelekileyo (+, –, =, □)	• Uphinda-phindo lokudibanisa (inani elinye elifanayo) ukuya kwi- 15 • Ukusebenzisa iisimboli ezifanelekileyo (+, –, =, □)	• Uphinda-phindo lokudibanisa (inani elinye elifanayo) ukuya kuma- 20 • Ukusebenzisa iisimboli ezifanelekileyo (+, –, =, □)

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.16 **Izibalo zentloko**	**Ingqiqo ngamanani: Ukusetyenziswa kwamanani ukuya kwi- 5** • Ingqokelela yamanani akhethiweyo. • Thelekisa amanani ukuya kwi- 5 uze utsho ukuba liliphi 1 neli 2 ngaphezulu okanye ngaphantsi	**Ingqiqo ngamanani: Ukusetyenziswa kwamanani ukuya kwi- 10** • Ingqokelela yamanani akhethiweyo. • Thelekisa amanani ukuya kwi- 10 uze utsho ukuba liliphi 1 neli 2 ngaphezulu okanye ngaphantsi	**Ingqiqo ngamanani: Ulandelelwano nodibaniso manani ukuya kwi- 15** • Ingqokelela yamanani akhethiweyo. • Thelekisa amanani ukuya kwi- 15 uze utsho ukuba liliphi 1 neli 2 ngaphezulu okanye ngaphantsi **Khumbula ngokukhawulezileyo:** • Ukudibanisa amanani ukwenza u- 5 • Khumbula udibaniso nothabatho lwezinto ukuya ku- 5 **Imigaqo elandelwayo yokubala** Ukusebenzisa imigaqo yokubala, ukudibanisa nokuthabatha ngokufanelekileyo: • Ukubeka inani elikhulu, uqala kulo xa ubala okanye usuke kulo ubuye umva. • Umgca -manani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Ukwakha nokwahlukanisa amanani	**Ingqiqo ngamanani: ukuya kuma ku - 20** • Ingqokelela yamanani akhethiweyo. • Thelekisa amanani ukuya kwi- 20 uze utsho ukuba liliphi 1 neli 2 ngaphezulu okanye ngaphantsi **Khumbula ngokukhawuleza:** • Ukudibanisa amanani ukwenza u- 10 • Khumbula udibaniso nothabatho lwezinto ukuya ku- 10 **Iindlela ezilandelwayo zokubala ngengqondo** Ukusebenzisa imigaqo yokubala, ukudibanisa nokuthabatha ngokufanelekileyo: • Ukubeka inani elikhulu, uqala kulo xa ubala okanye usuke kulo ubuye umva. • Umgca -manani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Ukwakha nokwahlukanisa amanani

IMATHEMATIKA YESIGABA ESISISISEKO R-3

Uhlobo lweengxaki zezibalo Ibanga 1

Le yimizekelo yohlobo lweengaxi ezibalulekileyo ootitshala ekufuneka bezenzise abafundi rhoqo eklasini.Xa utitshala esebenza neqela elincinci kufuneka azenze ezi ngxaki zezibalo ngomlomo.Xa abafundi bekwazi ukufunda unokubanika kwakhona umsebenzi obhaliweyo wezi ngxaki kodwa kufuneka ekwazenze ngomlomo.

Ingxaki zezibalo kwimeko ethile zinokuqukwa kuxwebhu lokusebenza (*worksheet)* kodwa kufuneka zibe mfutshane,zigqale zibe ziingxaki eziqhelekileyo kwaye utitshala kufuneka aqinisekise ukuba abafundi bayaziqonda.

Ukwahlula ngokwamaqela

Ukwahlula ngokwamaqela,ushiya intsalela

UStella uthengisa ama-apile ngeebhegi kwaye ebhegini nganye kukho ama-apile amathathu.Unama-apile ali-14. Ingaba unokwenza iibhegi ezingaphi zama-apile xa enokufaka ama-apile amathathu kwibhegi nganye.

Ukwahlula ngokwamaqela,Ufakela intsalela kwisiphumo

U-Bonga ufuna ukuthatha amaqanda ali-15 awase kumakhulu wakhe.Ingaba zingaphi ibhokisi zamaqanda ezinokuthatha amaqanda ama-6 ibhokisi inye ekufuneka enazo ukuze abe nokupakisha onke amaqanda akhe ?

Ukwaba ngokulinganayo

Ukwaba ngokulinganayo, ulahle intsalela

Yahlulela abahlobo abathathu iilekese ezili-14 ukuze bafumane inani elilinganayo leelekese .

Ukudibanisa okuphinda-pdindiweyo

Ingaba ibhayisekile ezine z inamavili amangaphi?

Ukudibanisa nokuthabatha

Kukho iindidi ezintathu ezisisiseko zeengxaki zezibalo zokudibanisa nokuthabatha kwaye uhlobo ngalunye lungabuzwa ngeendlela ezininzi.Ezi ntlobo zezi :

Tshintsha

UNoluthando ebenama-apile ama-5.USilo umnike ama-apile asibhozo.Ingaba unama-apile amangaphi ngoku ?

Dibanisa

UNosisi unamabhastile amahlanu aluhlaza namabastile asibhozo amhlophe.Ingaba unamabhastile amangaphi ngoku ?

UNosisi unamabhastile ali-13.Amahlanu aluhlaza aze amanye abemhlophe.Ingaba uNosisi unamabhastile amhlophe amangaphi ?

Thelekisa

UNosisi unamabhanana ali-13.UThemba yena unamabhanana amahlanu.Ingaba uNosisi unamabhanana amangaphi kunoThemba

Ukubuza ingxaki nganye ngeendlela ezahlukileyo

Iingxaki zibuzwe ngeendlela ezahlukileyo, umz. zombini ezi ngxaki ziingxaki zotshintsho kodwa “okungaziwayo” kusezindaweni ezahlukileyo kwingxaki yezibalo.

UNoluthando unenani lama-apile elithile.USilo umnike ama-apile asi-8 ngaphezulu.UNoluthando ngoku unama-apile ali-13.Ingaba uNoluthando ebenama-apile amangaphi kuqala.

U-Noluthando ubenama-apile amahlanu.USilo umnike inani lama-apile elithile.Ngoku unama-apile ali-13.Ingaba uSilo umnike ama-apile amangaphi.

Iimeko zengxaki zezibalo ezinolalwamano lweefankshini ezahlukileyo

U-Nomsa uthengisa amaqebengwana ngeR4 lilinye.Yenza itheyibhile ukumnceda ukufumana ixabiso lamaqebengwana asixhenxe.

Inani lamaqebengwana	1	2	3	4	5	6	7
Ixabiso ngokweerandi	4						

Sebenzisa letheyibhile ukufumana ixabiso lamaqebengwana asi-7

Ezi ntlobo zeengxaki zinikwa utitshala njengesikhokelo.Abafundi mabangaxakekiswa ngamagama eentlobo zezi ngxaki.Qaphela ukuba abafundi amaxesha amaninzi basebenzisa iindlela ezahlukileyo ukusombulula ezi ngxaki ezinokungabi koko kulindelwe ngutitshala.

AMAGQABANTSHINTSHI EBANGA 1 2. IIPATENI, II-FANKSHINI NE-ALJIBRA				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
2.1 **Iipateni zejiyometri**	**Khuphela wandise** Khuphela wandise iipateni ezilula usebenzisa • Izinto eziphathekayo • Imizobo (umzekelo: imibala neemilo) **Ukulandelelaniswa komsebenzi ocetyiswayo** tQala ngokukhuphela wandise iipateni usebenzisa izinto eziphathwayo. Abafundi bakuqhela ukusebenzisa iikhrayoni okanye iipensile baqala bakhuphele bandise iipateni ngokuzizoba.	**Khuphela, wandise ze uchaze** Khuphela, wandise, uze uchaze ngamagama. • Iipateni ezilula ezenziwa ngezinto eziphathekayo. • Iipateni ezilula ezenziwa ngemizobo, imigca, iimilo nezinye izinto **Ukuyila nokuchaza iipateni zakhe.** • Ukuyila iipateni zakhe zejiyometri. - Ngezinto eziphathekayo. - ngokuzoba imigca, iimilo okanye izinto eziphathekayo. • Ukuchaza iipateni zakhe.	**Khuphela, wandise ze uchaze** Khuphela, wandise uze uchaze ngamagama. • Iipateni ezilula ezenziwa ngezinto eziphathekayo. • Iipateni ezilula ezenziwa ngemizobo, imigca, iimilo nezinye izinto **Ukuyila nokuchaza iipateni zakhe.** • Ukuyila iipateni zakhe zejiyometri. - Ngezinto eziphathekayo. - ngokuzoba imigca, iimilo okanye izinto eziphathekayo. • Ukuchaza iipateni zakhe.	**Iipateni ezisingqongileyo** IUkuchonga, uchaze ngamazwi, uze ukhuphele iipateni zejiyometri • Kwindalo • Kubomi bala maxesha bemihla ngemihla • Kwimbali ngenkcubeko yethu **Ukuyila nokuchaza iipateni zakhe.** • Ukuyila iipateni zakhe zejiyometri. - Ngezinto eziphathekayo. - ngokuzoba imigca, iimilo okanye izinto eziphathekayo. • Ukuchaza iipateni zakhe.

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
2.2 **Iipateni zamanani**	**Khuphela, wandise ze uchaze** Ukukhuphela, wandise uze uchaze ulandelelwano olulula lwamanani ukuya kuma - 20 Ulandelelwano malubonise ukubala uya phambili nokubuya umva kwi: • Ulandelelwano oluvela nakwiliphi inani phakathi kwesi-1 nama- 20	**Khuphela, wandise ze uchaze** Ukukhuphela, wandise uze uchaze ulandelelwano olulula lwamanani ukuya kuma - 50 Ulandelelwano lwamanani ma lubonise ukubala usiya phambili nokubuya umva • 1 naliphi inani phakathi kwe -1 nama -50 Ukubala usiya phambili nga- • 10 kwisiphindwa se -10 phakathi kwe -0 nama - 50 • 5 kwisiphindwa sika -5 phakathi kwe - 0 nama - 50 • 2 kwisiphindwa sika -2 phakathi kwe - 0 nama - 50 **Ukuyila nokuchaza iipateni zakhe.** • Ukuyila aze achaze iipateni zakhe zamanani	**Khuphela, wandise ze uchaze** Ukukhuphela, wandise uze uchaze ulandelelwano olulula lwamanani ukuya kuma - 80 Ulandelelwano lwamanani ma lubonise ukubala usiya phambili nokubuya umva • 1 ukususka nakweliphi inani phakathi kwesi - 1 nama – 80 Ukubala usiya phambili nga- • 10 kwisiphindwa se -10 phakathi kwe -0 nama - 80 • 5 kwisiphindwa sika -5 phakathi kwe - 0 nama - 80 • 2 kwisiphindwa sika -2 phakathi kwe - 0 nama - 80 **Ukuyila nokuchaza iipateni zakhe.** • Ukuyila nokuchaza iipateni zabo zamanani	**Khuphela, wandise ze uchaze** Ukukhuphela, wandise uze uchaze ulandelelwano olulula lwamanani ukuya kuma - 100 Ulandelelwano lwamanani ma lubonise ukubala usiya phambili nokubuya umva • 1 ukususka nakweliphi inani phakathi kwesi - 1 nama – 100 Ukubala usiya phambili nga- • 10 kwisiphindwa se -10 phakathi kwe -0 nama - 100 • 5 kwisiphindwa sika -5 phakathi kwe - 0 nama - 100 • 2 kwisiphindwa sika -2 phakathi kwe - 0 nama - 100 **Ukuyila nokuchaza iipateni zakhe.** • Ukuyila aze achaze iipateni zakhe zamanani

AMAGQABANTSHINTSHI EBANGA LOKU-1 3. ISITHUBA NEMILO (IJIYOMETRI)				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
3.1 **Indawo-bume, ukufumana indawo nembonakalo**	**Ulwimi lwendawo-bumilo** Ukuchaza indawo-bumilo yento ngokunxulumene nenye umzekelo: ngaphezu kwe-, ngaphambi kwe-, ngemva, ekhohlo, ekunene, phezulu, phantsi, kufuphi ne-. **Indawo-bumilo, nezalathiso** • Ukulandela izalathiso ukujikeleza iklasi • Ukulandela imiyalelo ukubeka into ngokunxulumene nenye umzekelo: beka ipensile ebhokisini **Ugxininiso olucetyiswayo, ulandelelaniso lomsebenzi wekota yoku - 1** • Ulwimi lwendawo-bumilo maluqaliswe ngemisebenzi eyenziwayo ebandakanya abafundi kwintshukumo yomzimba • Oku kungaqiniswa ngokurekhodisha phantsi njengo mzobo, ukufaka umbala okanye ukutshatisa imizobo namagama • Sebenzisa ulwimi lwendawo-bumilo xa ulandela izalathisi. • Mabaziqhelanise nezalathiso ngemisebenzi eyenziwayo apho Abafundi bahamba okanye bahambise izinto ngokwemiyalelo.			**Ulwimi lwendawo-bumilo** Ukuchaza indawo-bumilo yento ngokunxulumene nenye umzekelo: ngaphezu kwe-, ngaphambi kwe-, ngemva, ekhohlo, ekunene, phezulu, phantsi, kufuphi ne-. **Indawo -bumilo, nezalathiso** • Ukulandela izalathiso ukujikeleza iklasi • Ukulandela imiyalelo ukubeka into ngokunxulumene nenye umzekelo: beka ipensile ebhokisini **Ugxininiso olucetyiswayo nolandelelwaniso lomsebenzi wekota yesi- 4** • Umsebenzi wendawo-bumilo nesalathiso ungaqiniswa ngokurekhodisha phantsi njengakwi: mizobo, ukufaka imibala nokutshatisa imizobo namagama. • Naluphi ulwimi olutsha lwendawo-bumilo maluqaliswe ngemisebenzi eyenziwayo ebandakanya Abafundi kwintshukumo yomzimba. • Mabaziqhelanise nezalathiso ngemisebenzi eyenziwayo apho abafundi bahamba okanye bahambise izinto ngokwemiyalelo. **Indawo- bumilo nemibono** • Ukutshatisa izimvo ezahlukeneyo ngezinto zemihla ngemihla.

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
3.2 **Izinto ezinokwakheka kuka 3-D**	**Udweliso lwezinto** Ukunakana ubize izinto ezinokwakheka kuka 3-D eklasini nakwimifanekiso. • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjenge bhokisi (iiprizimu) **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D ngokwe: • Ubungakanani • Umbala **Imisebenzi ekugqaliswe kuyo** Qaphela uze wakhe izinto ezinokwakheka kuka 3-D usebenzisa izixhobo eziphathekayo ezinjengee bhloko zokwakha, izixhobo ezinokuphinda zisetyenziswe, iikiti zokwakha.		**Udweliso lwezinto** Ukunakana ubize izinto ezinokwakheka kuka 3-D eklasini nakwimifanekiso. • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjenge bhokisi (iiprizimu) **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D ngokwe: • Ubungakanani • Umbala • Izinto eziqengqelekayo • Izinto ezitshibilizayo	**Udweliso lwezinto** Ukunakana ubize izinto ezinokwakheka kuka 3-D eklasini nakwimifanekiso. • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjenge bhokisi (iiprizimu) **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D ngokwe: • Ubungakanani • Umbala • Izinto eziqengqelekayo • Izinto ezitshibilizayo **Umgqaliso ocetyiswayo lweKota yesi - 4:** Umsebenzi uqiniswa ngokubhalwa phantsi

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
3.2 **Izinto ezinokwakheka kuka 3-D**	**Umgqaliso ocetyiswayo nolandelelwano lwemisebenzi yeKota yoku- 1** • Ukudlala ngokukhululekileyo ngeentlobo zezinto ezimbonakalo imacala mathathu (3-D). Ukwakha izinto abazikhethelayo besebenzisa iibhloko zokwakha, iikiti zokwakha okanye izixhobo ezinokuphinda zisetyenziswe. Le nto ingenziwa ngexesha labo elilodwa. • Kopa imodeli yento utitshala ayibonisayo. Le nto ingenziwa ngexesha labo elilodwa. • Thelekisa ubungakanani yezinto ezibufana umzekelo: khetha ibhola enkulu kunenye • Thetha ngemibala yezinto uze uzihlele ngokwemibala yazo • Chonga uze uchaze izinto eziyijiyometri nezibonwa yonke imihla ngokutsho ukuba zimile njengebhola okanye njengebhokisi. • Umsebenzi uqiniswa ngokubhalwa phantsi		**Umgqaliso ocetyiswayo nolandelelwano lwemisebenzi yeKota yoku- 3** • Ukusebenza ngeebhola nezinto ezimile njengeebhola, kunye neentlobo zeebhokisi nezinye izinto ezimile njenge prizimu ezibuxande nezizityhubhu. Phanda ukuba ziziphi izinto ezinokuqengqeleka, ezitshibilizayo, nezinokuba yingqokelela. • Chonga uze uchaze izinto eziyijiyometri nezibonwa yonke imihla ngokutsho ukuba zimile njenge bhola okanye ibhokisi. • Umsebenzi uqiniswa ngokubhalwa phantsi	

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
3.3 **limilo ezinokwakheka kuka 2-D**		**Uluhlu lweemilo** Ukunakana nokubiza iimilo ezinokwakheka kuka 2-D • Izangqa • Oonxantathu • Iingxande **limpawu zeemilo** Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • Ubungakanani • umbala • amacala angqalileyo • amacala angqukuva		**Uluhlu lweemilo** Ukunakana nokubiza iimilo ezinokwakheka kuka 2-D • Izangqa • Oonxantathu • Iingxande **limpawu zeemilo** Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • Ubungakanani • umbala • amacala angqalileyo • amacala angqukuva

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
3.3 **Iimilo ezinokwakheka kuka 2-D**		**Umgqaliso ocetyiswayo nolandelelwano lwemisebenzi yeKota yoku- 2** • Qala ngokubadlalisa ngokukhululekileyo ngeentlobo zeemilo ubandakanya ukwakha imifanekiso ngokusika iimilo zejiyometri. Le nto ingenziwa ngexesha labo elilodwa. This can also be done during Life Skills lessons • Kopa umfanekiso owenziwe ngeemilo zejiyometri. Le nto ingenziwa ngexesha labo elilodwa. • Thelekisa ubungakanani yezinto ezibufana umzekelo: landelelanisa iingxande ukusuka kolona luncinane ukuya kolona lukhulu uze usebenzise ulwimi lwesayizi ukuchaza iimilo. • Thetha ngemibala yeemilo uze uhlele iimilo ngokwemibala • Sebenza ngezangqa neengxande zeesayizi ngeesayizi, noonxantathu abakwiimeko ngeemeko. Ukuhlela ngokwamacala angqalileyo okanye angqukuva • Ukuhlela ubeke ngamaqela iimilo ezingoonxantathu, iingxande okanye izangqa. • Umsebenzi uqiniswa ngokubhalwa phantsi		**Umgqaliso ocetyiswayo nolandelelwano lwemisebenzi yeKota yoku- 4** • Ukusebenza ngezangqa neengxande zeesayizi ezahlukeneyo neentlobo ezahlukeneyo zoonxantathu Ukuhlela iimilo ngokuba zinamacala angqalileyo okanye angqukuva • Ukuhlela abeke ngokwamaqela iimilo ngokoonxantathu, iingxande okanye izangqa. • Umsebenzi uqiniswa ngokubhalwa phantsi

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
3.4 **Ulingano-macala (isimetri)**			**Ulingano-macala** • Ukunakana ulingano-macala kumzimba wakhe. • Anakane aze azobe ulingano-macala kwiimilo zejiyometri nezo zingezizo ezejiyometri (2-D). **Umgqaliso wemisebenzi ecetyiswayo lweKota yesi- 3** • Khangela ulingano-macala kwizinto eziphathekayo nakwimifanekiso. • Imisebenzi ebhalwayo ma ingasoloko isithi “ zoba ekhohlo okanye ekunene” kodwa bakhe babhale kumgca wolingano-macala.	**Ulingano-macala** • Ukunakana uze uzobe umgca wolingano-macala kwiimilo ezinokwakheka kuka 2-D (2-D) kwezejiyometri nezingezizo ezejiyometri. **Umgqaliso wemisebenzi ecetyiswayo lweKota yesi- 4** Imisebenzi ebhalwayo ma ibandakanye imizekelo apho umgca wolingano-macala ingenguwo umgca omi nkqo kuphela

AMAGQABANTSHINTSHI EBANGA LOKU- 1 4. UMLINGANISELO				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
4.1 **Ixesha**	**Ukudlula kwxesha** Thetha ngokudlula kwexesha • Landelelanisa iziganeko ezenzeka rhoqo kubomi babo. • Thelekisa ubude bexesha usebenzisa ulwimi: lide, lifutshane, ngokukhawuleza, kancinane • Landelelanisa iziganeko usebenzisa ulwimi olunjengo: izolo, namhlanje, ngomso **Xela ixesha** • Chaza ixesha eyenzeka ngalo into usebenzisa ulwimi umzekelo: kusasa, emalanga, ebusuku, kwangoko, kade • Xela uze ulandelelanise iintsuku zeveki neenyanga zonyaka. • Ukubeka iimini zokuzalwa kwikhalenda.	Kusetyenzwa ngexesha rhoqo ngethuba lokufundisa iklasi yonke.	Kusetyenzwa ngexesha rhoqo ngethuba lokufundisa iklasi yonke.	Kusetyenzwa ngexesha rhoqo ngethuba lokufundisa iklasi yonke.

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.2 **Ubude**	**Umlinganiselo ongekho seSikweni.** • Thelekisa uze ulandelelanise ubude, umphakamo okanye ububanzi bezinto ezimbini nangaphezulu ngokuzilungelelanisa. • Ukusebenzisa ulwimi ukuthetha ngokuthelekisa umzekelo: inde kunenye, imfutshane kunenye, inde kunenye, indala kunenye. • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe usebenzisa imilinganiselo engekho seSikweni umzekelo: umlinganiselo wesandla, isantya, ubude bepensile, izixhobo zokubala njalo njalo.		**Umlinganiselo ongekho seSikweni.** • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe usebenzisa imilinganiselo engekho seSikweni umzekelo: umlinganiselo wesandla, isantya, ubude bepensile, izixhobo zokubala njalo njalo.	
4.3 **Umthamo**	**Umlinganiselo ongekho sesikweni.** • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe ubunzima usebenzisa isikali sokulungelelanisa nemilinganiselo engekho seSikweni umzekelo: iibhloko, izitena njalo njalo. • Ukusebenzisa ulwimi ukuthetha ngothelekiso umzekelo: ilula, inzima, ilula kunenye, inzima kunenye			**Umlinganiselo ongekho sesikweni.** • Qikelela, yenza umlinganiselo, thelekisa, landelelanisa uze urekhodishe ubunzima usebenzise imilinganiselo engekho seSikweni nesikali sokulungelelanisa umzekelo: iibhloko, izitena njalo njalo. • Ukusebenzisa ulwimi ukuthetha ngothelekiso umzekelo: ilula, inzima, ilula kunenye, inzima kunenye

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho sesikweni.** • Thelekisa uze ulandelelanise umthamo wento engamanzi (liquid) ifakwe kwizikhongozeli ezibini zalungelelaniswa abafundi baqwalasela ngokugalela kwisiqulatho sesithathu xa kukho imfuneko.	**Umlinganiselo ongekho sesikweni.** • Thelekisa uze ulandelelanise ubungakanani bento engamanzi enokuphathwa zizikhongozeli ezibini(umthamo) • Sebenzisa ulwimi ukuthetha ngothelekiso umzekelo: ngaphezu kwe-, ngaphantsi kwe-, izele, ize • Ukuqikelela, ukwenza umlinganiselo, ukuthelekisa, ukulandelelanisa nokurekhodisha umthamo okwizikhongozeli ngokusebenzisa imilinganiselo engekho sesikweni umzekelo: amacephe neekomityi.		**Umlinganiselo ongekho sesikweni.** • Ukuqikelela, ukwenza umlinganiselo, ukuthelekisa, ukulandelelanisa nokurekhodisha umthamo okwizikhongozeli ngokusebenzisa imilinganiselo engekho seSikweni umzekelo: amacephe neekomityi.

IBANGA 1 AMAGQABANTSHINTSHI uKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
ISIHLOKO	**IKOTA YOKU 1**	**IKOTA YESI 2**	**IKOTA YESI 3**	**IKOTA YESI 4**
5.1 Qokelela ze uhlele izinto **5.2 Ukumela/ ukubonakalisa ingqokelela ehleliweyo yezinto** **5.3 Ukuxoxa nokunika ingxelo ngengqokelela ehleliweyo yezinto**	Qokelela uhlele izinto eziphathekayo ezisetyenziswa imihla ngemihla Zoba umfanekiso wezinto ezihleliweyo. • Nika izizathu zendlela ehlelwe ngayo ingqokelela • Phendula imibuzo malunga: - Nendlela uhlelo olwenziwe ngayo (inkqubo) - Nembonakalo yengqokelela ehleliweyo (imveliso) • Chaza ingqokelela ehleliweyo	Qokelela uhlele izinto eziphathekayo ezisetyenziswa imihla ngemihla Zoba umfanekiso wezinto ezihleliweyo. • Nika izizathu zendlela ehlelwe ngayo ingqokelela Phendula imibuzo malunga: - Nendlela uhlelo olwenziwe ngayo (inkqubo) - Nembonakalo yengqokelela ehleliweyo (imveliso) • Chaza ingqokelela ehleliweyo		
5.4 Ukuqokelela nokulungisa ulwazi **5.5 Ukubonakalisa ulwazi** **5.6 Ukucalula nokutolika ulwazi**			**Into enokwenziwa:** Ingqokelela yedatha yonke ukwenza umfanekiso – ntsingiselo weklasi • Qokelela ulungise ulwazi oluqokelelweyo - malunga neklasi okanye isikolo - iimpendulo kwimibuzo ebuzwa ngutitshala • Bonisa ulwazi oluqokelelweyo kumfanekiso – ntsingiselo. • Phendula imibuzo malunga nedatha ekumfanekiso – ntsingiselo	Calula ulwazi oluqokelelweyo kwinkcazelo enikeziweyo. Into enokwenziwa:ebuncinaneni imifanekiso- ntsingiselo emibini

3.4.2 Amagqabantshintshi eBanga lesi -2 ngekota

AMAGQABANTSHINTSHI EBANGA LESI-2 1. AMANANI, II-OPAREYSHINI NOLWALAMANO				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
UKHULISO LWENGQIQO NGAMANANI:Ukubala ngamanani apheleleyo				
1.1 **Bala izinto**	• Ukubala izinto ezili-100 yonke imihla ngokuthembekileyo • Ukunika uqikelelo olufanelekileyo lwamanani ezinto olunokuhlolwa ngokubala • Imigaqo yokwahlula ngokwamaqela iyakhuthazwa	• Ukubala izinto ezili-150 yonke imihla ngokuthembekileyo • Ukunika uqikelelo olufanelekileyo lwamanani ezinto olunokuhlolwa ngokubala • Imigaqo yokwahlula ngokwamaqela iyakhuthazwa	• Ukubala izinto ezili-180 yonke imihla ngokuthembekileyo • Ukunika uqikelelo olufanelekileyo lwamanani ezinto olunokuhlolwa ngokubala • Imigaqo yokwahlula ngokwamaqela iyakhuthazwa	• Bala izinto ezingama-200 yonke imihla ngokuthembekileyo • Nika uqikelelo olufanelekileyo lwamanani ezinto olunokuhlolwa ngokubala • Imigaqo yokwahlula ngokwamaqela iyakhuthazwa
1.2 **Ukubala ukuya phambili nokubuya umva**	**Ukubala ukuya phambili nokubuya umva:** • ngezinye ukusuka nakuliphi inani phakathi kwe -0 ne- 100 • ngezishumi ukusuka nakwesiphi isiphindo seshumi phakathi kwe-0 ne-100 • ngezihlanu ukusuka nakwesiphi isiphindo sesihlanu phakathi kwe-0 ne-100 • ngezibini ukusuka nakwesiphi isiphindo sesibini phakathi kwe-0 ne-100	**Ukubala ukuya phambili nokubuya umva:** • ngezinye ukusuka nakuliphi inani phakathi kwe -0 ne- 150 • ngezishumi ukusuka nakwesiphi isiphindo seshumi phakathi kwe-0 ne-150 • ngezihlanu ukusuka nakwesiphi isiphindo sesihlanu phakathi kwe-0 ne-150 • ngezibini ukusuka nakwesiphi isiphindo sesibini phakathi kwe-0 ne-150 • ngezithatu ukusuka nakwesiphi isiphindo sesithathu phakathi kwe-0 nama- 99 • ngezine ukusuka nakwesiphi isiphindo sesine phakathi kwe-0 ne-100	**Ukubala ukuya phambili nokubuya umva:** • ngezinye ukusuka nakuliphi inani phakathi kwe -0 ne- 180 • ngezishumi ukusuka nakwesiphi isiphindo seshumi phakathi kwe-0 ne-180 • ngezihlanu ukusuka nakwesiphi isiphindo sesihlanu phakathi kwe-0 ne-180 • ngezibini ukusuka nakwesiphi isiphindo sesibini phakathi kwe-0 ne-180 • ngezithatu ukusuka nakwesiphi isiphindo sesithathu phakathi kwe-0 nama- 180 • ngezine ukusuka nakwesiphi isiphindo sesine phakathi kwe-0 ne-180	**Bala ukuya phambili nokubuya umva:** • ngezinye ukusuka nakuliphi inani phakathi kwe -0 nama- 200 • ngezishumi ukusuka nakwesiphi isiphindo seshumi phakathi kwe-0 nama-200 • ngezihlanu ukusuka nakwesiphi isiphindo sesihlanu phakathi kwe-0 nama-200 • ngezibini ukusuka nakwesiphi isiphindo sesibini phakathi kwe-0 nama-200 • ngezithatu ukusuka nakwesiphi isiphindo sesithathu phakathi kwe-0 nama- 200 • ngezine ukusuka nakwesiphi isiphindo sesine phakathi kwe-0 nama-200

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
UKHULISO LWENGQIQO NGAMANANI:ukubonisa amanani apheleleyo				
1.3 **Amagama neesimboli zenani**	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwi-0 ukuya kwi-100 • Ukubhala iisimboli zenani ukusuka kwi-0 ukuya kwi-100 • Ukuchonga, ukunakana nokufunda amagama enani ukusuka kwi-0 ukuya kuma-25 • Ukubhala amagama enani ukusuka kwi-0 ukuya kuma-25	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwi-0 ukuya kwi-150 • Ukubhala iisimboli zenani ukusuka kwi-0 ukuya kwi-150 • Ukuchonga, ukunakana nokufunda amagama enani ukusuka kwi-0 ukuya kuma-50 • Ukubhala amagama enani ukusuka kwi-0 ukuya kuma-50	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwi-0 ukuya kwi-180 • Ukubhala iisimboli zenani ukusuka kwi-0 ukuya kwi-180 • Ukuchonga, ukunakana nokufunda amagama enani ukusuka kwi-0 ukuya kuma-75 • Ukubhala amagama enani ukusuka kwi-0 ukuya kuma-75	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwi-0 ukuya kuma-200 • Ukubhala iisimboli zenani ukusuka kwi-0 ukuya kuma-200 • Ukuchonga, ukunakana nokufunda amagama enani ukusuka kwi-0 ukuya kwi-100 • Ukubhala amagama enani ukusuka kwi-0 ukuya kwi-100
UKHULISO LWENGQIQO NGAMANANI: Ukuchaza, ukuthelekisa nokulandelelanisa amanani apheleleyo				
1.4 **Ukuchaza, ukuthelekisa nokulandelelanisa amanani**	**Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma-25** • Ukuthelekisa amanani apheleleyo usebenzisa encinci kune, ngaphezulu kwe, ngaphantsi kune nozilingana. • Ukulandelelanisa amanani apheleleyo ukusuka kwelona lincinane ukuya kwelona likhulu, nokusuka kwelona likhulu ukuya kwelona lincinane	**Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma-50** • Ukuthelekisa amanani apheleleyo usebenzisa encinci kune, ngaphezulu kwe, ngaphantsi kune nozilingana. • Ukulandelelanisa amanani apheleleyo ukusuka kwelona lincinane ukuya kwelona likhulu, nokusuka kwelona likhulu ukuya kwelona lincinane	**Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma-75** • Ukuthelekisa amanani apheleleyo usebenzisa encinci kune, ngaphezulu kwe, ngaphantsi kune nozilingana. • Ukulandelelanisa amanani apheleleyo ukusuka kwelona lincinane ukuya kwelona likhulu, nokusuka kwelona likhulu ukuya kwelona lincinane **Ukusebenzisa amanani olandelelwano ukubonakalisa ulandelelwano, indawo okanye indawo bume** • Ukubeka izinto ngokobume emgceni ukusuka ekuqaleni ukuya kumashumi amabini okanye ukusuka ekuqaleni ukuya ekugqibeleni umz. kuqala, sibini, sithathu…. ishumi	**Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma - 99** • Ukuthelekisa amanani apheleleyo ukuya kuma-99 usebenzisa encinci kune, ngaphezulu kwe, ngaphantsi kune nozilingana. • Ukulandelelanisa amanani apheleleyo ukusuka kwelona lincinane ukuya kwelona likhulu, nokusuka **Ukusebenzisa amanani olandelelwano ukubonakalisa ulandelelwano, indawo okanye indawo bume** • Ukubeka izinto ngokobume emgceni ukusuka ekuqaleni ukuya kumashumi amabini okanye ukusuka ekuqaleni ukuya ekugqibeleni umz.kuqala, sibini, sithathu ukuya kumashumi amabini

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
UKHULISO LWENGQIQO NGAMANANI: Ixabiso lendawo				
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Ukunakana ixabiso lendawo lamanani i-11 ukuya kuma-25** • Ukwahlula ngamacandelo amanani amalungu mabini abe ziziphindwa zeshumi nemivo/ oonye • Ukuchonga nokuxela ixabiso lomvo ngamnye	**Ukunakana ixabiso lendawo lamanani i-11 ukuya kuma-50** • Ukwahlula ngamacandelo amanani amalungu mabini abe ziziphindwa zeshumi nemivo/ oonye • Ukuchonga nokuxela ixabiso lomvo ngamnye	**Ukunakana ixabiso lendawo lamanani i-11 ukuya kuma-75** • Ukwahlula ngamacandelo amanani amalungu mabini abe ziziphindwa zeshumi nemivo/ oonye • Ukuchonga nokuxela ixabiso lomvo ngamnye	**Ukunakana ixabiso lendawo lamanani i-11 ukuya kuma-99** • Ukwahlula ngamacandelo amanani amalungu mabini abe ziziphindwa zeshumi kunye nononye/ imivo • Ukuchonga nokuxela ixabiso lomvo ngamnye
UKUSOMBULULA IINGXAKI KWIMEKO ETHILE				
1.6 **Ubuchule bokusombulula iingxaki zezibalo**	Ukusebenzisa ubuchule obulandelayo ukusombulula izibalo zamanani nokucacisa indlela osombulule ngayo: • Imizobo okanye izixhobo eziphathekayo umz. Isixhobo sokubala • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani exhaswa zizixhobo eziphathekayo	Ukusebenzisa ubuchule obulandelayo ukusombulula izibalo zamanani nokucacisa indlela osombulule ngayo: • Imizobo okanye izixhobo eziphathekayo umz. Isixhobo sokubala • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani exhaswa zizixhobo eziphathekayo	Ukusebenzisa ubuchule obulandelayo ukusombulula izibalo zamanani nokucacisa indlela osombulule ngayo: • Imizobo okanye izixhobo eziphathekayo umz. Isixhobo sokubala • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani exhaswa zizixhobo eziphathekayo	Ukusebenzisa ubuchule obulandelayo ukusombulula iingxaki nokucacisa indlela osombulule ngayo: • Imizobo okanye izixhobo eziphathekayo umz. Isixhobo sokubala • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani
1.7 **Ukudibanisa okuthabatha.**	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanyaukudibanisa nokuthabatha iimpendulo zingedluli kuma-20	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukudibanisa nokuthabatha iimpendulo zingedluli kuma-50	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukudibanisa nokuthabatha iimpendulo zingedluli kuma-50	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukudibanisa nokuthabatha iimpendulo zingedluli kuma-99.
1.8 **Ukudibanisa okuphindaphin diweyo okukhokelela kuphinda-phindo**	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa olukhokelela kuphinda-phindo iimpendulo zingedluli kuma-20	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa olukhokelela kuphinda-phindo iimpendulo zingedluli kuma-30	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa olukhokelela kuphinda-phindo iimpendulo zingedluli kuma-40	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa olukhokelela kuphinda-phindo iimpendulo zingedluli kuma-50

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.9 **Ukwahlula ngokwangama qela nokwaba ngokulinganayo okukhokelela kulahlulo-hlulo**	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukwahlula ngokwamaqela nangokulinganayo iimpendulo zingedluli kuma-20 ezinokuquka iintsalela	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukwahlula ngokwamaqela nangokulinganayo iimpendulo zingedluli kuma-30 ezinokuquka iintsalela	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukwahlula ngokwamaqela nangokulinganayo iimpendulo zingedluli kuma-40 ezinokuquka iintsalela	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukwahlula ngokwamaqela nangokulinganayo iimpendulo zingedluli kuma-50 ezinokuquka iintsalela.
1.10 **Ukwahlula ngokulinganayo okukhokelela kumaqhezu**		Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukwahlula ngokulinganayo okukhokelela kwiimpendulo ezinokuquka amaqhezu (*unitary fractions*) Umz. $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}, \frac{1}{5}$ .njl.	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukwahlula ngokulinganayo okukhokelela kwiimpendulo ezinokuquka amaqhezu (*unitary fractions*) Umz. $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}, \frac{1}{5}$ .njl.	Ukusombulula izibalo zamazwi kwimeko ethile nokucacisa indlela osombulule ngayo ubandakanya ukwahlula ngokulinganayo okukhokelela kwiimpendulo ezinokuquka amaqhezu (*unitary fractions*) Umz. $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}, \frac{1}{5}$ .njl.
1.11 **Imali**	• Ukunakana nokuchonga imali ezinkozo yaseMzantsi Afrika 5c, 10c, 20c, 50c, R1, R2, R5, nemali engamaphepha R10, R20, R50 • Ukusombulula izibalo zemali ezibandakanya itotali netshintshi ngeesenti zingedluli kwiisenti ezingama-50 neerandi ezingama-20	• Ukunakana nokuchonga imali ezinkozo yaseMzantsi Afrika 5c, 10c, 20c, 50c, R1, R2, R5, nemali engamaphepha R10, R20, R50 • Ukusombulula izibalo zemali ezibandakanya itotali netshintshi ngeesenti zingedluli kwiisenti ezingama-75 neerandi ezingama-50	• Ukunakana nokuchonga imali ezinkozo yaseMzantsi Afrika 5c, 10c, 20c, 50c, R1, R2, R5, nemali engamaphepha R10, R20, R50 • Ukusombulula izibalo zemali ezibandakanya itotali netshintshi ngeesenti zingedluli kwiisenti ezingama-50 neerandi ezingama-75	• Ukunakana nokuchonga imali ezinkozo yaseMzantsi Afrika 5c, 10c, 20c, 50c, R1, R2, R5, nemali engamaphepha R10, R20, R50 • Ukusombulula izibalo zemali ezibandakanya itotali netshintshi ngeesenti zingedluli kwiisenti ezingama-90 neerandi ezingama-99
IZIBALO EZINGALAWULWA MEKO				
1.12 **Ubuchule** **(iindlela)**	Ukusebenzisa ubuchule obulandelayo ukwenza izibalo usombulula izibalo zamanani: • Imizobo okanye izixhobo eziphathekayo umz. Isixhobo sokubala • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani exhaswa zizixhobo eziphathekayo	Ukusebenzisa ubuchule obulandelayo ukwenza izibalo usombulula izibalo zamanani • Imizobo okanye izixhobo eziphathekayo umz. Isixhobo sokubala • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani exhaswa zizixhobo eziphathekayo	Ukusebenzisa ubuchule obulandelayo ukwenza izibalo usombulula izibalo zamanani • Imizobo okanye izixhobo eziphathekayo umz. Isixhobo sokubala • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani	Ukusebenzisa ubuchule obulandelayo ukwenza izibalo usombulula izibalo zamanani • Imizobo okanye izixhobo eziphathekayo umz. Isixhobo sokubala • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.13 **Ukudibanisa nokuthabatha**	• Ukongeza kuma-20 • Ukuthabatha kuma-20 • Ukusebenzisa iisimboli ezichanekileyo (+, –, =, □) • Ukuziqhelisa neebhondi zamanani ukuya kwii-10	• Ukongeza kuma-50 • Ukuthabatha kuma-50 • Ukusebenzisa iisimboli ezichanekileyo (+, –, =, □) • Ukuziqhelisa neebhondi zamanani ukuya kwii -15	• Ukongeza kuma-75 • Ukuthabatha kuma-75 • Ukusebenzisa iisimboli ezichanekileyo (+, –, =, □) • Ukuziqhelisa neebhondi zamanani ukuya kuma -20	• Ukongeza kuma-99 • Ukuthabatha kuma-99 • Ukusebenzisa iisimboli ezichanekileyo (+, –, =, □) • Ukuziqhelisa neebhondi zamanani ukuya kwii -20
1.14 **Ukudibanisa okuphinda phindiweyo** **okukhokelela kuphinda-phindo**	• Ukudibanisa inani elinye elifanayo ngokuphinda-phindayo ukuya kuma-20 • Ukuphinda-phinda amanani u-1 ukuya kwi-10 ngo-2 • Ukusebenzisa iisimboli ezichanekileyo (+, –, =, □)	• Ukuphinda-phinda amanani u-1 ukuya kwi -10 ngo-2 no-5 • Ukusebenzisa iisimboli ezichanekileyo (+, –, =, □)	• Ukuphinda-phinda amanani u-1 ukuya kwi -10 ngo-2, 5 no-4 • Ukusebenzisa iisimboli ezichanekileyo (+, –, =, □)	• Ukuphinda-phinda amanani u-1 ukuya kwi -10 ngo-2, 5,3 no-4 • Ukusebenzisa iisimboli ezichanekileyo (+, –, =, □)

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.16 **Izibalo zentloko (imentali)**	**Ingqiqo ngamanani: ukusetyenziswa kwamanani ukuya kuma- 25** • Landelelanisa ingqokelela yamanani akhethiweyo. • Thelekisa amanani ukuya kuma-25 utsho ukuba leliphi: - Elingaphezulu ngo-1 okanye elingaphantsi ngo-1 - Elingaphezulu ngo-2 okanye elingaphantsi ngo-2 - Elingaphezulu okanye ngaphantsi nge-10 **Ukukhumbula ngokukhawulezileyo:** • Ukukhumbula ukudibanisa nokuthabatha imiba ukuya kwi-10	**Ingqiqo ngamanani: ukusetyenziswa kwamanani ukuya kuma- 50** • Landelelanisa ingqokelela yamanani akhethiweyo • Thelekisa amanani ukuya kuma-50 utsho ukuba leliphi: - Elingaphezulu ngo-1 okanye elingaphantsi ngo-1 - Elingaphezulu ngo-2 okanye elingaphantsi ngo-2 - Elingaphezulu ngo-3 okanye elingaphantsi ngo-3 - Elingaphezulu ngo-4 okanye elingaphantsi ngo-4 - Elingaphezulu ngo-5 okanye elingaphantsi ngo-5 - Elingaphezulu ngo-10 okanye elingaphantsi ngo-10 **Ukukhumbula ngokukhawulezileyo:** • Ukukhumbula ukudibanisa nokuthabatha imiba ukuya kwi-10	**Ingqiqo ngamanani: ukusetyenziswa kwamanani ukuya kuma- 75** • Landelelanisa ingqokelela yamanani akhethiweyo • Thelekisa amanani ukuya kuma-75 utsho ukuba leliphi: - Elingaphezulu ngo-1 okanye elingaphantsi ngo-1 - Elingaphezulu ngo-2 okanye elingaphantsi ngo-2 - Elingaphezulu ngo-3 okanye elingaphantsi ngo-3 - Elingaphezulu ngo-4 okanye elingaphantsi ngo-4 - Elingaphezulu ngo-5 okanye elingaphantsi ngo-5 - Elingaphezulu okanye ngaphantsi nge-10 **Ukukhumbula ngokukhawulezileyo:** • Ukukhumbula ukudibanisa nokuthabatha imiba ukuya kwi-15 • Ukudibanisa okanye ukuthabatha iziphindwa ze-10 ukusuka kwi-0 ukuya kuma-50	**Ingqiqo ngamanani: ukusetyenziswa kwamanani ukuya kuma- 99** • Landelelanisa ingqokelela yamanani akhethiweyo • Thelekisa amanani ukuya kuma-75 utsho ukuba leliphi: - Elingaphezulu ngo-1 okanye elingaphantsi ngo-1 - Elingaphezulu ngo-2 okanye elingaphantsi ngo-2 - Elingaphezulu ngo-3 okanye elingaphantsi ngo-3 - Elingaphezulu ngo-4 okanye elingaphantsi ngo-4 - Elingaphezulu ngo-5 okanye elingaphantsi ngo-5 - Elingaphezulu okanye ngaphantsi nge-10 **Ukukhumbula ngokukhawulezileyo:** • Ukukhumbula ukudibanisa nokuthabatha imiba ukuya kuma-20 • Ukudibanisa okanye ukuthabatha iziphindwa ze-10 ukusuka kwi-10 ukuya kuma-100

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.16 **Izibalo zentloko (imentali)**	**lindlela zokubala** Ukusebenzisa iindlela zokubala ukudibanisa nokuthabatha ngobuchule • Ukubeka inani elikhulu kuqala ukuze ubale usuka kulo okanye ubuya umva kulo • Umgca manani wengqondo • Ukuphinda-phinda kabini nokwahlula kabini ngokulingana • Ukwakha nokwahlula amanani • Ukusebenzisa ulwalamano phakathi kokudibanisa nokuthabatha	**lindlela zokubala** Ukusebenzisa iindlela zokubala ukudibanisa nokuthabatha ngobuchule • Ukubeka inani elikhulu kuqala ukuze ubale usuka kulo okanye ubuya umva kulo • Umgca manani wengqondo • Ukuphinda-phinda kabini nokwahlula kabini ngokulingana • Ukwakha nokwahlula amanani • Ukusebenzisa ulwalamano phakathi kokudibanisa nokuthabatha	**lindlela zokubala** Ukusebenzisa iindlela zokubala ukudibanisa nokuthabatha ngobuchule • Ukubeka inani elikhulu kuqala ukuze ubale usuka kulo okanye ubuya umva kulo • Umgca manani wengqondo • Ukuphinda-phinda kabini nokwahlula kabini ngokulingana • Ukwakha nokwahlula amanani • Ukusebenzisa ulwalamano phakathi kokudibanisa nokuthabatha	**lindlela zokubala** Ukusebenzisa iindlela zokubala ukudibanisa nokuthabatha ngobuchule • Ukubeka inani elikhulu kuqala ukuze ubale usuka kulo okanye ubuya umva kulo • Umgca manani wengqondo • Ukuphinda-phinda kabini nokwahlula kabini ngokulingana • Ukwakha nokwahlula amanani • Ukusebenzisa ulwalamano phakathi kokudibanisa nokuthabatha
1.17 **Amaqhezu**		• Ukusebenzisa nokubiza amaqhezu abandakanya iziqingatha, iziqingatha phambi, isinye esithathwini nesinye esihlanwini • Ukunakana amaqhezu akwimo yomzobo • Ukubhala amaqhezu njengesiqingqtha esi-1, izinye esithathwini ezi-2	• Ukusebenzisa nokubiza amaqhezu abandakanya iziqingatha, iziqingatha phambi, isinye esithathwini nesinye esihlanwini • Ukunakana amaqhezu akwimo yomzobo • Ukubhala amaqhezu njengesiqingqtha esi-1,izinye esithathwini ezi-2	• Ukusebenzisa nokubiza amaqhezu abandakanya iziqingatha, iziqingatha phambi, isinye esithathwini nesinye esihlanwini • Ukunakana amaqhezu akwimo yomzobo • Ukubhala amaqhezu njengesiqingqtha esi-1,izinye esithathwini ezi-2

Iintlobo zeengxaki zezibalo zamazwi zeBanga lesi - 2

Ezi ntlobo yimizekelo yeengxaki yezibali zamazwi ebalulekileyo ekufuneka utitshala ayinikezele futhi kwiklasi yakhe. Xa utitshala esebenza neqela elincinane, makabuze isibalo samanani ngomlomo.Xa Abafundi benako ukufunda, makabanike naso isibalo samanani esibhaliweyo, kodwa makabuze isibalo samanani ngomlomo.

Izibalo zamanani zamazwi ezisemxholweni singabandakanywa kumaphepha okusebenzela, kodwa sibe sifutshane, sicace siqhelele, notitshala aqinisekise ukuba bonke abafundi bayaziqonda.

Ukwahlula ngamaqela

Ukwahlula ngamaqela, uze ulahle intsalela

UStella uthengisa ii-apile kwiingxowa ezinee-apile ezili-10 inye. Unee-apile ezingama- 81.Zingaphi iingxowa anokuzenza zee-apile ezili-10 kwingxowa nganye?

Ukwahlula ngamaqela, uze ubandakanye intsalela kwisiphumo

Umfuyi unamaqanda angama-47.Zingaphi iibhokisi zamaqanda azifunayo ezinokuthatha amaqanda amathandathu inye ukuze pakishe onke amaqanda ?

Ukwahlula ngokulinganayo

Ukwahlula ngokulinganayo, uze ulahle intsalela

Yahlula ngokulingana iilekese ezingama – 54 phakathi kwabahlobo abasixhenxe ukuze bonke bafumane isabelo esilinganayo

Ukwahlula ngokulinganayo, kukhokelela kumaqhezu

Yahlula ngokulinganayo isixwexwe setshokolethi phakathi kwabahlobo abane ukuze bonke bafumane izixwexwe zetshokolethi ezilinganayo kungabikho nto ishiyekayo.

Iqhezu lengqokelela

Umakhulu unika uKiki ii-orenji ezili-12. UKiki wenza incindi ngesinye esithathwini (1/3). Zingaphi ii0orenji azisebenzisileyo?

Le ntlobo yesibalo samanani samazwi mayibuzwe kuphela emva kokuba Abafundi besombulule izibalo zamanani ezine okanye ezihlanu zokwahlula ngokulinganayo, zikhokelela kuhlobo lwamaqhezu nokwazi amagama amaqhekeza eqhezu.

Ukuhlanganisa amaqhezu

Umqhelisi webhola yomnyazi unika umdlali ngamnye isiqingatha/ ihafu ye- orenji.Abadlali bali-14.Zingaphi ii-orenji azifunayo?

Le ntlobo yesibalo samanani samazwi mayibuzwe kuphela emva kokuba Abafundi besombulule izibalo zamanani ezine okanye ezihlanu zokwahlula ngokulinganayo, zikhokelela kuhlobo lwamaqhezu nokwazi amagama amaqhekeza eqhezu.

Udibaniso oluphinda-phindiweyo lwenani elinye

Mangaphi amavili eebhayisekile ezingama- 20?

Ukuhlela

UThami uhamba iibhloko ezintandathu ngemini. Zingaphi iibhloko azihamba ngeveki?

Iigridi

UMnu.Khumalo utyala imiqolo esixhenxe yekhaphetshu.Umqolo ngamnye unamagaqa ekhaphetshu asixhenxe. Mangaphi amagaqa ekhaphetshu ewonke?

Ukudibanisa nokuthabatha

Ebuncinaneni kukho iintlobo ezintathu ezisisiseko zokudibanisa nokuthabatha nelungabuzwa neendlela ezahlukilelyo uhlobo ngalunye.:

Utshintsho

UNoluthando ube neelekese ezingama- 25.Unike uSilo iilekese ezili-18.Zingaphi iilekese anazo? uNoluthando?

UNoluthando ube neelekese ezingama -53.Unike uSilo ezingama -32 .Zingaphi iilekese anazo?

Ukudibanisa

Iklasi yebanga lesi-2 inoonxantathu abaluhlaza abangama- 37 kunye noonxantathu abablowu abali-19. Bangaphi oonxantathu bebonke?

Banezangqa ezingama- 63; ezingama- 27 ziluhlaza ezinye ziblowu.Zingaphi izangqa eziblowu abanazo?

Ukuthelekisa

UNosisi uneebanana ezili-13 .UThemba uneebanana ezintlanu. Zingaphi iibhanana uNosisi anazo ngaphezu kukaThemba?

Ukubuza isibalo samanani ngasinye ngeendlela ezahlukeneyo

Izibalo zamanani kufuneka zibuzwe ngeendlela ezahlukeneyo. Umzekelo, zombini ezi zizibalo zotshintsho zamanani, kodwa “ezingaziwayo” zikwindawo ezahlukeneyo kwisibalo samanani samazwi.

UNoluthando ubeneelekese. Unike uSilo ezili-18 ngaphezulu.Ngoku uneelekese ezingama-43 .Zingaphi iilekese ebenazo uNoluthando ekuqaleni?

UNoluthando ubenee-apile ezingama- 25. USilo umnike ezinye.Unee-apili ezingama-43 ngoku. Unikwe ii-apile ezingaphi nguSilo?

Iimeko zezibalo zamanani zamazwi nokuzalana okusetyenziswayo okwahlukeneyo

UHeila uthengisa iisoseji ezihlohlwe emaqebengwaneni ngee-R4 inye. Yenza itheyibhile ukumncedisa afumane ixabiso lee-odolo ezinkulu.sells

Inani leesoseji ezihlohlwe emaqebengwaneni	1	2	3	4	5	6	7	8	9	10
Indleko ngeeRandi	4	8								

Sebenzisa itheyibhile ukufumana ixabiso leesoseji ezihlohlwe emaqebengwaneni ezisixhenxe kunye neesoseji ezihlohlwe emaqebengwaneni ezili-15.

USedick ugcina abafundi. Uhlawulisa ii- R20 zeendleko yokuhamba, nee-R5 ngeyure yokugcina abafundi. Mgqibezelele le theyibhile.

Inani leeyure	1	2	3	4	5	10
Indleko ngeeRandi	25	30				

Qaphela ukuba izibalo zamanani zamazwi zika Heila noSedick zisebenza ngokwahlukileyo.

Izibalo zamanani zamazwi ezingasentla zinikwa ukukhokela utitshala. Abafundi mabangathwaliswa uxanduva ngentlobo zamagama.Qaphela ukuba abafundi basebenzisa rhoqo iindlela ezahlukeneyo zokusombulula izibalo zamanani zamazwi ezingenakulindelwa ngutitshala. Umzekelo,isahlulo sesibalo samanani samazwi singasonjululwa ngokuphindaphinda ukuthabatha, ukudibanisa, nokuphindaphinda. Iindlela zokubala zabafundi zakutshintsha ekuhambeni konyaka ngokuya kukhula ukuqonda nokuziqhelanisaneentlobo zezibalo zamanani zamazwi nangokuya kukhula ingqiqo manani yabo.

AMAGQABANTSHINTSHI EBANGA LESI – 2 2. IIPATENI, IIFANKSHINI NE-ALJIBRA				
ISIHLOKO	**KOTA 1**	**KOTA 2**	**KOTA 3**	**KOTA 4**
2.1 Iipateni zejiyometri	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezillula ezenziwe ngokukrwela imigca ukwenza imilo okanye into **Uludwe lweepateni**: Ipateni ezilula apho iimilo, okanye amaqela eemilo aphindwayo ngendlela efanayo. **Ukuyila nokuchaza iipateni zakho** • Ukuyila ezakho iipateni - Nezinto ezibonwayo - Ngokukrwela imigca, iimilo okanye izinto • Ukuchaza ezakho iipateni	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezillula ezenziwe ngokukrwela imigca ukwenza imilo okanye into **Uludwe lweepateni**: Ipateni ezilula apho iimilo, okanye amaqela eemilo aphindwayo ngendlela efanayo. Iipateni apho inani okanye ubungakanani beemilo kwinqanaba ngalinye litshintsha ngendlela yokuqikelela oko kuthi iipateni ezanda rhoqo. **Ukuyila nokuchaza iipateni zakho** • Ukuyila ezakho iipateni - Nezinto ezibonwayo - Ngokukrwela imigca, iimilo okanye izinto • Ukuchaza ezakho iipateni	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezillula ezenziwe ngokukrwela imigca ukwenza imilo okanye into **Uludwe lweepateni**: Iipateni apho inani okanye ubungakanani beemilo kwinqanaba ngalinye litshintsha ngendlela yokuqikelela oko kuthi iipateni ezanda rhoqo. **Ukuyila nokuchaza iipateni zakho** • Ukuyila ezakho iipateni - Nezinto ezibonwayo - Ngokukrwela imigca, iimilo okanye izinto • Ukuchaza ezakho iipateni	**Iipateni ezisingqongileyo** Ukuchonga, ukuchaza ngamagama nokukopa iipateni zejiyometri • kwindalo • kwimpilo yangoku yemihla ngemihla • kwimbali ngenkcubeko yethu

ISIHLOKO	KOTA 1	KOTA 2	KOTA 3	KOTA 4
2.2 Iipateni zamanani	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kwi-100 Ulandelelwano malubonakalise ukubala usiya phambili nokubuya umva. • kono-1 ukususka kulo naliphi na inani phakathi kwe-0 ne-100 • kuma-10 ukususka kuso nasiphi naisiphindwa se-10 phakathi kwe-0 ne-100 • kwisi-5 ukususka kuso nasiphi na isiphindwa se-5 phakathi kwe-10 ne- 100 • Kwisi-2 ukususka kuso nasiphi na isiphindwa sesi-2 phakathi kwe-0 ne-100	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kwi-150 Ulandelelwano malubonakalise ukubala usiya phambili nokubuya umva: • kono-1 ukususka kulo naliphi na inani phakathi kwe-0 ne-150 • kuma-10 ukususka kuso nasiphi na isiphindwa se-10 phakathi kwe-0 ne-150 • kwisi-5 ukususka kuso nasiphi na isiphindwa se-5 phakathi kwe-10 ne-150 • Kwisi-2 ukususka kuso nasiphi na isiphindwa sesi-2 phakathi kwe-0 ne-150 • Kwisi-3 ukususka kuso nasiphi na isiphindwa sesi-3 phakathi kwe-0 ne-150 • Kwisi-4 ukususka kuso nasiphi na isiphindwa sesi-4 phakathi kwe-0 ne-150	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kwi-180 Ulandelelwano malubonakalise ukubala usiya phambili nokubuya umva: • kono-1 ukususka kulo naliphi na inani phakathi kwe-0 ne-180 • kuma-10 ukususka kuso nasiphi na isiphindwa se-10 phakathi kwe-0 ne-180 • kwisi-5 ukususka kuso nasiphi na isiphindwa se-5 phakathi kwe-10 ne-180 • Kwisi-2 ukususka kuso nasiphi na isiphindwa sesi-2 phakathi kwe-0 ne-180 • Kwisi-3 ukususka kuso nasiphi na isiphindwa sesi-3 phakathi kwe-0 ne-180 • Kwisi-4 ukususka kuso nasiphi na isiphindwa sesi-4 phakathi kwe-0 ne-180 **Yila ezakho iipateni zamanani**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kwi-200 Ulandelelwano malubonakalise ukubala usiya phambili nokubuya umva: • kono-1 ukususka kulo naliphi na inani phakathi kwe-0 nama-200 • kuma-10 ukususka kuso nasiphi na isiphindwa se-10 phakathi kwe-0 nama-200 • kwisi-5 ukususka kuso nasiphi na isiphindwa se-5 phakathi kwe-10 ne-200 • Kwisi-2 ukususka kuso nasiphi na isiphindwa sesi-2 phakathi kwe-0 nama-200 • Kwisi-3 ukususka kuso nasiphi na isiphindwa sesi-3 phakathi kwe-0 nama-200 • Kwisi-4 ukususka kuso nasiphi na isiphindwa sesi-4 phakathi kwe-0 nama-200 **Yila ezakho iipateni zamanani**

AMAGQABANTSHINTSHI EBANGA LESI -2 3. ISITHUBA KUNYE NEMILO(IJIYOMETRI)				
IZIHLOKO	**KOTA 1**	**KOTA2**	**KOTA 3**	**KOTA 4**
3.1 **Indawo-bumilo, ukukhangela indawo apho ikhoyo, nembonakalo**		**Ulwimi indawo -bumilo** • Ukuchaza indawo-bumilo yento ngokunxulumene nenye umz. Ngaphezulu kwe, ngaphambi kwe, emva, ekhohlo, ekunene, nasentla, ngasezantsi, ecaleni kwe **Indawo – bumilo nezalathiso** • Ukulandela izalathisi ujikeleza iklasi	**Indawo – bumilo nezimvo** • Ukutshatisa izimvo ezahlukeneyo zezinto zemihla ngemihla **Indawo-bume nezalathisi** Ukulandela izalathisi ujikeleza iklasi	

IZIHLOKO	KOTA 1	KOTA2	KOTA 3	KOTA 4
3.2 **Izinto ezinokwakheka kuka 3-D**	**Uluhlu lwezinto** Ukunakana nokubiza ngamagama izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjengebhokisi (iprizimu) **limpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • ubungakanani • izinto eziqengqelekayo • izinto ezitshibilizayo **Imisebenzi ekugqaliswe kuyo** • Ukubukela nokwakha izinto ezinikiweyo ezinokwakheka kuka 3-D usebenzisa izixhobo eziphathekayo ezinje ngokusika izinto ezinokwakheka kuka 2-D(2-D shapes), ibhloko zokwakha, izinto eziphinda zisetyenziswe, iikiti zokwakha, nezinye izinto ezinokwakheka kuka 3-D		**Uluhlu lwezinto** Ukunakana nokubiza ngamagama izinto ezinukwakheka kuka 3-D eklasini nasemifanekisweni • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjengebhokis (iprizimu) • Iisilinda **limpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • ubungakanani • izinto eziqengqelekayo • izinto ezitshibilizayo	**Uluhlu lwezinto** Ukunakana nokubiza ngamagama izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjengebhokis (iprizimu) • Iisilinda **limpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwaqkheka kuka 3-D ngoko: • ubungakanani • izinto eziqengqelekayo • izinto ezitshibilizayo

IZIHLOKO	KOTA 1	KOTA2	KOTA 3	KOTA 4
3.2 **Izinto ezinokwakheka kuka 3-D**	**Umgqaliso ocetyisweyo nokulandelelanisa imisebenzi yeKota 1** • Ukukopa imodeli elungiselelwe ngutitshala.Imodeli okanye izinto ezakhiweyo zingenziwa kusetyenziswa iibhloko zokwakha, izinto eziphinda zisetyenziswe, iikiti zokwakha, nezinye izinto ezinokwakheka kuka 3-D, kusikwe izinto ezinokwakheka kuka 2-D. Le nto inokwenziwa ngexesha lakhe elilodwa. • Ukuthelekisa nokuchaza ubungakanani bezinto ezfanayo umz. Ingqokelela yeebhokisi ukususka kweyona inkulu ukuya kweyona incinane Ukusebenza • Ngeebhola nezinto ezimile njengebhola • Ngeentlobo zeebhokisi nezinto ezimile njengeprizimu ezibuxande okanye ityhubhu Ukuphanda ukuba ziziphi izinto ezingaqengqeleka, ezingatshibiliza, ezingayingqokelela. Chonga uchaze izinto zeijiyometri nezemihla ngemihla ngokuxela ukuba zimile njengebhola, njengebhokisi, njengesilinda. Umsebenzi uqiniswa ngokunika imisebenzi ebhalwayo.		**Umgqaliso oucetyisweyo nokulandelelanisa imisebenzi yeKota 3** Ukusebenza • ngeebhola nezinto ezimile njengebhola s • ngeesilinda nezinto ezimile njengesilinda • ngeebhokisi ezahlukileyo nezinto ezimile njengeprizimu ezibuxande okanye ityhubhu Ukuphanda ukuba ziziphi izinto ezingaqengqeleka, ezingatshibiliza, ezingayingqokelela. Chonga uchaze izinto zeijiyometri nezemihla ngemihla ngokuxela ukuba zimile njengebhola, njengebhokisi, njengesilinda. Umsebenzi uqiniswa ngokunika imisebenzi ebhalwayo.	**Umgqaliso ousetyenzisweyo lokulandelelanisa imisebenzi yeKota 4** Umsebenzi ubethelelwa ngokunika imisebenzi ebhalwayo.

IZIHLOKO	KOTA 1	KOTA2	KOTA 3	KOTA 4
3.3 **Iimilo ezinokwakheka kuka -2-D**		**Uludwe lweemilo** Ukuqaphela abize iimilo ezinokwakheka kuka- 2-D • isangqa • unxantathu • isikwere • ixande **limpawu zeemilo** Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka - 2-D in ngokwe/ ko • ubungakanani • mbala • milo • macala angqalileyo (straight) • macala angqukuva (round)		**Uludwe lweemilo** Ukuqaphela abize iimilo ezinokwakheka kuka- 2-D • isangqa • unxantathu • isikwere • ixande **limpawu zeemilo** Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka - 2-D in ngokwe/ ko • ubungakanani • mbala • milo • macala angqalileyo (straight) • macala angqukuva (round)

IZIHLOKO	KOTA 1	KOTA2	KOTA 3	KOTA 4
3.3 **Iimilo ezinokwakheka kuka -2-D**		**Imisebenzsi ecetyiswayo nelandelelanayo yeKota 2** • Ukudlala ngokukhululekileyo ngeemilo esenza nemifanekiso esika imilo ze. • Oku bangakwenza ngexesha labo. • Ukukhuphela umfanekiso owenziwe ngemilo yejiyometri. Oku bangakwenza ngexesha labo. • Ukuthelekisa ubungakanani yeemilo ezifanayo, umz. ukulandelelanisa iingxande uqala ngelincinane ukuya kwelikhulu, usebenzisa ulwimi lwesayizi ukuchaza imilo. • Ukuthetha ngemibala yeemilo, azihlele ngeemilo ezo. • Ukuhlela iimilo ngokwamacala angqalileyo nangqukuva. Ukusebenza ngezangqa nezikwere zesayizi ezahlukeneyo, noonxantathu neengxande. • Ukuhlela abeke iimilo ngokwamaqela azo, umz. ngezangqa nezikwere zesayizi ezahlukeneyo, noonxantathu neengxande. • Umsebenzi ushwankathelwa ngokuwubhala.		**Imisebenzsi ecetyiswayo nelandelelanayo yeKota 4** Ukuhlela iimilo ngokungqalileyo okanye okungqukuva. Ukusebenza ngezangqa nezikwere zesayizi ezahlukeneyo, nonxantathu neemilo zeengxande ezahlukeneyo. • Abafundi bahlela babeke ngokweemilo yezangqa nezikwere zesayizi ezahlukeneyo, noonxantathu neengxande. Umsebenzi ushwankathelwa ngokuwubhala

IZIHLOKO	KOTA 1	KOTA2	KOTA 3	KOTA 4
3.4 **Ulingano-macala (isimetri)**		**Ulingano-macala** Ukunakana azobe umgca ngokolingano-macala kwimilo zejiyometri nezingeyiyo ijiyometri enokwakheka kuka -2-D. **Imisebenzi ecetyiswaqyo yeKota 2** • Imigca yolingano-macala yezinto eziphathekayo nemifanekiso • Imisebenzi ebhalwayo mayiquke imizekelo apho umgca wolingano-macala ungaqali phezulu uye ezantsi		**Ulingano-macala** Ukunakana azobe umgca ngokolingano-macala kwimilo zejiyometri nezingeyiyo ijiyometri enokwakheka kuka -2-D. **Imisebenzi ecetyiswaqyo yeKota 4** • Imigca yolingano-macala yezinto eziphathekayo nemifanekiso • Imisebenzi ebhalwayo mayiquke imizekelo apho umgca wolingano-macala ungaqali phezulu uye ezantsi

AMAGQABANTSHINTSHI EBANGA LESI - 2 4. UMLINGANISELO				
ISIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
4.1 **Ixesha**	**Ukuxela ixesha** • Ukubiza nokulandelelanisa iintsuku zeveki • Ukubiza nokulandelelanisa iinyanga zonyaka • Ukubeka imihla yokuzalwa,iminyhadala yezenkolo,iiholide zikawonke-wonke, iziganeko, iziganeko zezikolo kwikhalenda • Ukuxela ixesha leeyure ezili- 12 ngeeyure neziqingatha usebenzisa iwotshi yosiba **Ukubala ubude bexesha nelo lidlulileyo** • Usebenzisa iwotshi ukubala ubude bexesha ngeeyure nangamacala eyure	**Ukuxela ixesha** • Ukuxela ixesha leeyure ezili-12 ngeeyure neziqingatha usebenzisa iwotshi yosiba **Ukubala ubude bexesha nelo lidlulileyo** • Usebenzisa iwotshi ukubala ubude bexesha ngeeyure nangamacala eyure	**Ukuxela ixesha** • Ukubiza nokulandelelanisa iintsuku zeveki • Ukubiza nokulandelelanisa iinyanga zonyaka • Ukubeka imihla yokuzalwa,iminyhadala yezenkolo,iiholide zikawonke-wonke, iziganeko, iziganeko zezikolo kwikhalenda • Ukuxela ixesha leeyure ezili-12 ngeeyure neziqingatha usebenzisa iwotshi yosiba **Ukubala ubude bexesha nelo lidlulileyo** • Usebenzisa iwotshi yosiba ukubala ubude bexesha ngeeyure ngamacala nekota yeyure • Ukusebenzisa iikhalenda ukubala nokuchaza ubude bexesha ngeeyure okanye amacala eeyure	**Ukuxela ixesha** • Ukuxela ixesha leeyure ezili- 12 ngeeyure,iziqingatha neekota zeyure usebenzisa iwotshi yosiba **Ukubala ubude bexesha nelo lidlulileyo** • Usebenzisa iwotshi yosiba ukubala ubude bexesha ngeeyure, ngamacala nekota yeyure

ISIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.2 **Ubude**	**Umlinganiselo ongekhoseSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude usebenzisa umlinganiselo ongekhoseSikweni, umz. imilinganiselo ngesandla, izantya, ubude bepensile nezixhobo zokubala njl. • Ukuchaza ubude bezinto uzibala, ungekhoseSikweni • Ukusebenzisa ulwimi olusulungekileyo ethelekisa, umz. mde kunomnye,mfutshane kunomnye njl. **Ukwazisa umlinganiselo oseSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude esebenzisa iimitha(intonga elingana nemitha, umtya olingana nemitha) njengomlinganiselo wobude			**Ukwazisa umlinganiselo oseSikweni o** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude esebenzisa iimitha ((intonga elingana nemitha, umtya olingana nemitha) njengomlinganiselo wobude

ISIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.3 **Umthamo**		**Umlinganiselo ongekho seSikweni** • Ukuqikelela, ukuthatha umlinganiselo, ukuthelekisa, ukulandelelanisa nokurekhoda ubunzima, esebenzisa isikali nemilinganiselo engekho seSikweni, umz. izitena, iibhloko. • Ukuchaza ubunzima bezinto ngokubala okungekho seSikweni • Ukusebenzisa ulwimi olusulungekileyo ethelekisa, umz. ilula, inzima,ilula kunenye, inzima kunenye **Ukufundisa umlinganiselo oseSikweni** • Ukuthelekisa, ukulandelelanisa nokurekhoda ubunzima bezinto ezithengiswayo, umz. 2 kg irayisi, 1 kg umngqusho • Xa kukho isikala mabalinganise ubunzima babo. • Kulindeleke ukuba umntwana ngamnye afunde ubunzima • Bachaza ubunzima babo, umz, ndilingana/ ndingamfumana/ ndiphantse ndingaphantsi/ ndingaphezulu, banike olonaqikelelo balufumenae kwisikali		**Ukwazisa umlinganiselo oseSikweni** • Abafundi babhala imisebenzi ukuqinisa oku kulandelayo, nofundo lwemifanekiso • Lyezinto ezibhalwe ubunzima kuzo, umz. izikali ezinosiba okanye inaliti ekhombe kwinani eliboni sa ubunzima

ISIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.4 **Umthamo/ Ivolumu**			**Umlinganiselo ongekho seSikweni** • Ukuqikelela, ukuthatha umlinganiselo, ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezikhongozeli (umthamo onokuthwalwa zizikhongozeli) esebenzisa imilinganiselo enjengamacephe nekomityi • Ukuchaza umthamo wento ngokubala ukuba zingaphi izinto ezingekho seSikweni ezingenza umthamo wento ethile, umz. ibhotile inomthamo weekomityi ezine **Ukufundisa umlinganiselo oseSikweni** • Ukuqikelela, ukuthatha umlinganiselo, ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezikhongozeli ngeelitha - iibhotile ngomthamo welitha enye - umlinganiselo wejagi okwilitha enye • Ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezinto ezithengiswayo, umz. iilitha ezi-2 zobisi ilitha e-1 yesiselo esibandayo iilitha ezi-5 zepeyinti	**Ukufundisa umlinganiselo oseSikweni** Imisebenzi ebhalwayo ukubethelela oku kulandelayo, kubandakanya ukufunda imifanekiso ye: • Izinto ezithengwayo ezi nemithamo yayo ebhalwe kuyo ukubonisa ulandelelwano • mifanekiso yejagi apho umthamo okumyinge welitha enye okanye ezi-2 • yokufunda umgca womthamo kweso sixhobo sibonisa umthamo, uchaze umthamo wenjenje, ibulingana/ iphantse/ ingaphezulu/ingaphantsi/ iyalingana nelitha leyo

AMAGQABANTSHINTSHI EBANGA LESI - 2 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
5.4 **Ukuqokelela nokulungisa ulwazi** **5.5** **Ukubonisa ulwazi** **5.6** **Ukucalula nokutolika ulwazi**	**Okucetyiswayo:** Umjikelo wonke wolwazi ukwenza umfanekiso weklasi ngokutshatisa izinto • Ukuqokeleela ulwazi malunga neklasi, isikolo ukuphendula imibuzo katitshala. • Ukunikezela iinkcukacha ngokutshatisa imifanekiso • Ukuphendula imibuzo malunga nolwazi znkutshatisa imifanekiso.	Ukucalula ulwazi kokunikiweyo. **Okucetyiswayo:** • Umfanekiso omnye otshatisiweyo	**Okucetyiswayo:** Yenza umfanekiso omnye otshatisiweyo yemifanekiso kulwazi olukiweyo kwitheyibhile. • Ukuqokeleela ulwazi malunga neklasi, isikolo ukuphendula imibuzo katitshala. • Ukubonisa ulwazi usebenzisa imifanekiso etshatisiweyo • Ukuphendula imibuzo malunga nolwazi zokutshatisa imifanekiso.	Ukuhlela ulwazi kokunikiweyo. **Okucetyiswayo:** • Umfanekiso omnye otshatisiweyo

3.4.3 Amagqabantshintshi eBanga lesi -3 ngekota

AMAGQABANTSHINTSHI EBANGA LESI - 3 1. AMANANI, II-OPAREYSHINI NOLWALAMANO				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
INGQIQO YAMANANI: Ukubala ngamanani				
1.1 **Bala izinto**	Beka izinto ngokwamaqela ezingama-200 ukuqikelela ukuba babala ngokufanelekileyo. Nika uqikelelo olululo lwamanani ezinto ezibalekayo. Buyakhuthazwa ubuchule bokubeka ngokwamaqela.	Beka izinto ngokwamaqela ezingama-500 ukuqikelela ukuba babala ngokufanelekileyo. Nika uqikelelo olululo lwamanani ezinto ezibalekayo. Buyakhuthazwa ubuchule bokubeka ngokwamaqela.	Beka izinto ngokwamaqela ezingama-700 ukuqikelela ukuba babala ngokufanelekileyo. Nika uqikelelo olululo lwamanani ezinto ezibalekayo. Buyakhuthazwa ubuchule bokubeka ngokwamaqela.	Beka izinto ngokwamaqela ezingama- 1000 ukuqikelela ukuba babala ngokufanelekileyo. Nika uqikelelo olululo lwamanani ezinto ezibalekayo. Buyakhuthazwa ubuchule bokubeka ngokwamaqela.
1.2 **Ukubala usiya phambili, nokubala ubuya umva**	Ukubala usiya phambili, ubuya umva ngo: • 1 ukususka nakweliphina inani phakathi ko-0 nama- 200 • 10 ukususka nakwesiphina isiphindi se-10 phakathi ko-0 nama- 200 • 5 ukususka nakwesiphina isiphindwa sezi- 5 phakathi ko-0 nama-200 • 2 ukususka nakwesiphina isiphindwa sezi- 2 phakathi ko- 0 nama-200 • 3 ukususka nakwesiphina isiphindwa sezi- 3 phakathi ko- 0 nama-200 • 42 ukususka nakwesiphina isiphindwa sezi- 4 phakathi ko-0 nama- 200 • 100 ukya kuma- 500	Ukubala usiya phambili, ubuya umva ngo: • 1 ukususka nakweliphina inani phakathi ko- 0 nama- 500 • 10 ukususka nakwesiphina isiphindi se-10 phakathi ko- 0 nama- 500 • 5 ukususka nakwesiphina isiphindwa sezi- 5 phakathi ko-0 nama-500 • 2 ukususka nakwesiphina isiphindwa sezi- 2 phakathi ko- 0 nama- 500 • 3 ukususka nakwesiphina isiphindwa sezi- 3 phakathi ko- 0 nama- 500 • 4 ukususka nakwesiphina isiphindwa sezi- 4 phakathi ko- 0 nama-500 • 50,100 ukuya kwi- 1 000	Ukubala usiya phambili, ubuya umva ngo: • 1 ukususka nakweliphina inani phakathi ko- 0 nama- 700 • 10 ukususka nakwesiphina isiphindi se-10 phakathi ko- 0 nama 700 • 5 ukususka nakwesiphina isiphindwa sezi- 5 phakathi ko- 0 nama- 700 • 2 ukususka nakwesiphina isiphindwa sezi- 2 phakathi ko- 0 nama- 700 • 3 ukususka nakwesiphina isiphindwa sezi- 3 phakathi ko- 0 nama- 700 • 4 ukususka nakwesiphina isiphindwa sezi- 4 phakathi ko- 0 nama-500 • 4 ukususka nakwesiphina isiphindwa sezi- 4 phakathi ko- 0 nama-700 • 20,25, 50,100 ukuya kwi- 1 000	Ukubala usiya phambili, ubuya umva ngo: • 1 ukususka nakweliphina inani phakathi ko- 0 ne-1000 • 10 ukususka nakwesiphina isiphindi se-10 phakathi ko- 0 ne-1000 • 5 ukususka nakwesiphina isiphindwa sezi- 5 phakathi ko- 0 ne-1000 • 2 ukususka nakwesiphina isiphindwa sezi- 2 phakathi ko- 0 ne-1000 • 3 ukususka nakwesiphina isiphindwa sezi- 3 phakathi ko- 0 ne-1000 • 4 ukususka nakwesiphina isiphindwa sezi- 3 phakathi ko- 0 ne-1000 • 20,25, 50,100 ukuya kwi-1 000

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
INGQIQO YAMANANI: Bonisa amanani				
1.3 **Iisimboli namagama amanani**	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zamanani ukusuka ku- 0 ukuya kuma-500 • Ukubhala iisimboli zamanani ukusuka ku- 0 ukuya kuma-500 • Ukuchonga, ukunakana nokufunda amagama amanani ukusuka ku-0 ukuya kuma-250 • Ukubhala amagama amanani ukusuka ku- 0 ukuya kwi-100	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zamanani ukusuka ku- 0 ukuya kwi-1 000 • Ukubhala iisimboli zamanani ukusuka ku- 0 ukuya kwi-1 000 • Ukuchonga, ukunakana nokufunda amagama amanani ukusuka ku-0 ukuya kuma-250 • Ukubhala amagama amanani ukusuka ku- 0 ukuya kuma-250	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zamanani ukusuka ku- 0 ukuya kwi-1 000 • Ukubhala iisimboli zamanani ukusuka ku- 0 ukuya kwi-1 000 • Ukuchonga, ukunakana nokufunda amagama amanani ukusuka ku-0 ukuya kuma-500 • Ukubhala amagama amanani ukusuka ku- 0 ukuya kuma-500	**Ukuchonga, ukunakana nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zamanani ukusuka ku- 0 ukuya kwi-1 000 • Ukubhala iisimboli zamanani ukusuka ku- 0 ukuya kwi-1 000 • Ukuchonga, ukunakana nokufunda amagama amanani ukusuka ku-0 ukuya kwi-1 000 • Ukubhala amagama amanani ukusuka ku- 0 ukuya kwi-1 000
INGQIQO YAMANANI: Ukuchaza, ukuthelekisa nokulandelelanisa onke amanani				
1.4 **Ukuchaza, ukuthelekisa nokulandelelanisa amanani**	Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma- 99. • Ukuthelekisa onke amanani ukuya kuma- 99 esebenzisa ungaphantsi kuno,ngaphezulu kuno, ngaphantsi kuno, ilingana no • Ukulandelelanisa onke amanani ukuya kuma- 99 ukusuka kwencinci ukya kwenkulu, nakwenkulu ukuya kwencinci	Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma-500. • Ukuthelekisa onke amanani ukuya kuma- 500 esebenzisa ungaphantsi kuno,ngaphezulu kuno, ngaphantsi kuno, ilingana no • Ukulandelelanisa onke amanani ukuya kuma- 500 ukusuka kwencinci ukya kwenkulu, nakwenkulu ukuya kwencinci	Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma-700. • Ukuthelekisa onke amanani ukuya kuma- 700 esebenzisa ungaphantsi kuno,ngaphezulu kuno, ngaphantsi kuno, ilingana no • Ukulandelelanisa onke amanani ukuya kuma- 700 ukusuka kwencinci ukya kwenkulu, nakwenkulu ukuya kwencinci **Sebenzisa amanani olandelelwano ukubonisa ulandelelwano, indawo okanye indawo-bumilo** • Ukusebenzisa, ukufunda nokubhala amanani olandelelwano,kunye noshunqulelo ukuya kuma-31	Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma-999. • Ukuthelekisa onke amanani ukuya kuma- 999 esebenzisa ungaphantsi kuno,ngaphezulu kuno, ngaphantsi kuno, ilingana no • Ukulandelelanisa onke amanani ukuya kuma- 999 ukusuka kwencinci ukya kwenkulu, nakwenkulu ukuya kwencinci

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
INGQIQO YAMANANI: ixabiso lendawo				
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Ukunakana ixabiso lendawo yamanani ukuya kuma-99** • Ukwazi okumelwe linani ngalinye • Ukwahlula amanani angamashumi ukuya kuma-99 kwiziphindwa zamashumi kunye neyunithi • Ukuchonga nokuchaza ixabiso lenani ngalinye	**Ukunakana ixabiso lendawo yamanani ukuya kuma-500** • Ukwazi okumelwe linani ngalinye • Ukwahlula amanani angamashumi ukuya kuma-500 kwiziphindwa zamashumi kunye neyunithi • Ukuchonga nokuchaza ixabiso lenani ngalinye	**Ukunakana ixabiso lendawo yamanani ukuya kuma-750** • Ukwazi okumelwe linani ngalinye • Ukwahlula amanani angamashumi ukuya kuma-750 kwiziphindwa zamashumi kunye neyunithi • Ukuchonga nokuchaza ixabiso lenani ngalinye	**Ukunakana ixabiso lendawo yamanani ukuya kuma- 999** • Ukwazi okumelwe linani ngalinye • Ukwahlula amanani angamashumi ukuya kuma-999 kwiziphindwa zamashumi kunye neyunithi • Ukuchonga nokuchaza ixabiso lenani ngalinye
UKUSOMBULULA IZIBALO ZAMANANI NGOKWEMEKO LEYO				
1.6 **Ubuchule bokusombulula izibalo zamanani zamazwi**	Sebenzisa obu buchule bulandelayo xa usombulula izibalo zamanani, zamazwi: • Ukwakha nokuqhekeza amanani • Uphinda-phindo nokohlula ngokulinganayo • Imigca manani	Sebenzisa obu buchule bulandelayo xa usombulula izibalo zamanani, zamazwi: • Ukwakha nokuqhekeza amanani • Uphinda-phindo nokohlula ngokulinganayo • Imigca manani • Ukusa kwizishumi	Sebenzisa obu buchule bulandelayo xa usombulula izibalo zamanani, zamazwi: • Ukwakha nokuqhekeza amanani • Uphinda-phindo nokohlula ngokulinganayo d • Imigca manani • Ukusa kwizishumi	Sebenzisa obu buchule bulandelayo xa usombulula izibalo zamanani, zamazwi: • Ukwakha nokuqhekeza amanani • Uphinda-phindo nokohlula ngokulinganayo • Imigca manani • Ukusuka kwizishumi
1.7 **Ukudibanisa okuthabatha.**	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombulubo ebandakanya udibaniso nokuthabatha amanani ukuya kuma- 99.	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombulubo ebandakanya udibaniso nokuthabatha amanani ukuya kuma- 400	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombulubo ebandakanya udibaniso nokuthabatha amanani ukuya kuma- 800.	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombulubo ebandakanya udibaniso nokuthabatha amanani ukuya kuma- 999.
1.8 **Udibaniso oluphinda-phindwayo lukhokelela kuphinda-phindo**	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya uphinda-phindo nempendulo ukuya kuma- 50.	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya uphinda-phindo nempendulo ukuya kuma- 75.	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya uphinda-phindo nempendulo ukuya kuma- 75.	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya uphinda-phindo nempendulo ukuya kuma- 100.

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.9 **Ukwahlula ngokwang amaqela nokwaba ngokulinga nayo okukhokelela kilahlulo-hlulo**	Ukusombululaiingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya ukwaba ngokulinganayo nokubeka ngamaqela ukuya kuma- 50 neempendulo eziquka iintsalela.	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya ukwaba ngokulinganayo nokubeka ngamaqela ukuya kuma- 75 neempendulo eziquka iintsalela.	Ukusombululaiingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya ukwaba ngokulinganayo nokubeka ngamaqela ukuya kuma- 75 neempendulo eziquka iintsalela.	
1.10 **Ukwaba ngamaqhezu aphambili**	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya ukwaba ngokulinganayo okukhokelela kwizisombululo zamaqhezu apheleleyo nangaphelelanga, umz. $\frac{1}{2}, \frac{1}{4}, \frac{2}{3}$ .njl.	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya ukwaba ngokulinganayo okukhokelela kwizisombululo zamaqhezu apheleleyo nangaphelelanga, umz.. $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{2}{5}$ njl.	Ukusombulula iiingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya ukwaba ngokulinganayo okukhokelela kwizisombululo zamaqhezu apheleleyo nangaphelelanga, umz. $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{2}{5}$ njl..	Ukusombulula iingxaki zezibalo zamanani ngokwemeko leyo, nokuchaza izisombululo ebandakanya ukwaba ngokulinganayo okukhokelela kwizisombululo zamaqhezu apheleleyo nangaphelelanga, umz. $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{2}{5}$ njl.
1.11 **Imali**	• Ukunakana nokuchonga imali eziinkozo nengamaphepha yeloMzantsi Afrka • Ukusombulula iingxaki zezibalo zemali ngokuqaphela imali epheleleyo nentsalela kwiiRanti neesenti	• Ukunakana nokuchonga imalai eziinkozo nengamaphepha yeloMzantsi Afrka • Ukusombulula iingxaki zezibalo zemali ngokuqaphela imali epheleleyo nentsalela kwiiRanti neesenti	• Ukunakana nokuchonga imalai eziinkozo nengamaphepha yeloMzantsi Afrka • Ukusombulula iingxaki zezibalo zemali ngokuqaphela imali epheleleyo nentsalela kwiiRanti neesenti • Ukutshintsha iiRanti neesenti	• Ukunakana nokuchonga imalai eziinkozo nengamaphepha yeloMzantsi Afrka • Ukusombulula iingxaki zezibalo zemali ngokuqaphela imali epheleleyo nentsalela kwiiRanti neesenti • Ukutshintsha iiRanti neesenti
IZIBALO EZI NGALAWULWA – MEKO				
1.12 **Ubuchule iindlela**	Sebenzisa obu buchule bulandelayo xa ubala: • Ukwakha nokuqhekeza amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo • Imigca manani	Sebenzisa obu buchule bulandelayo xa ubala: • Ukwakha nokuqhekeza amanani • Ukuphinda phinda kabini nokwahlula kabi ngokulinganayo • Imigca manani • Ukusondeza inani kumashumi	Sebenzisa obu buchule bulandelayo xa ubala: • Ukwakha nokuqhekeza amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo • Imigca manani • Ukusondeza inani kumashumi	Sebenzisa obu buchule bulandelayo xa ubala: • Ukwakha nokuqhekeza amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo • Imigca manani • Ukusondeza inani kumashumi

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kum a- 99 • Thabatha usuka kuma - 99 • Sebenzisa iisimboli ezifanelekileyo (+, –, =, □) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- 20	• Dibanisa ukuya kuma - 400 • Thabatha usuka kuma - 400 • SSebenzisa iisimboli ezifanelekileyo (+, –, =, □) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- 30	• Dibanisa ukuya kuma - 800 • Thabatha usuka kuma - 800 • SSebenzisa iisimboli ezifanelekileyo (+, –, =, □) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- 30	• Dibanisa ukuya kuma - 999 • Thabatha usuka kuma - 999 • SSebenzisa iisimboli ezifanelekileyo (+, –, =, □) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- 30
1.14 **Ukudibanisa okuphinda-phindiweyo kukhokelela kuphinda-phindo**	• Amanani ophinda – phindoukuya kwi- 10 ngo 2, 5, 3, 4 • Sebenzisa iisimboli ezifanelekileyo (x, =, □)	• Phinda-phinda 2, 4, 5, 1, 3 ukuya kuma- 50 • Sebenzisa iisimboli ezifanelekileyo (x, =, □)	• Phinda-phinda 2, 3 4, 5, 10, ukuya kwi- 100 • Sebenzisa iisimboli ezifanelekileyo (x, =, □)	• Phinda-phinda 2, 4, 5, 10, ukuya kwi- 100 • Sebenzisa iisimboli ezifanelekileyo (x, =, □)
1.15 **Ukohlula-hlula**	• Yohlula amanani ukuya kuma- 50 ngo 2, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, □)	• Yohlula amanani ukuya kuma- 50 ngo 2, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, □)	• Yohlula amanani ukuya kuma- 50 ngo 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, □)	• Yohlula amanani ukuya kuma- 99 ngo 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, □)

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.16 **Izibalo zengqondo/ ntloko**	**Ingqiqo yenani: Uluhlu lwama - 200** • Landelelanisa iseti yamanani ekhethiweyo oyinikiweyo. Uluhlu lwama -200 • Thelekisa amanani ukuya kuma – 200 uchaza elo lina: - 1 ngaphezulu okanye 1 ngaphantsi - 2 ngaphezulu okanye 2 ngaphantsi - 3 ngaphezulu okanye 3 ngaphantsi - 4 ngaphezulu okanye 4 ngaphantsi - 5 ngaphezulu okanye 5 ngaphantsi - 10 ngaphezulu okanye ngaphantsi **Ukukhumbula ngokukhawuleza:** • Khumbula ukudibanisa nokuthabatha ukuya kuma - 20 • Dibanisa uthabathe iziphindwa ze-10 ukusuka ku- 0 ukuya kwi - 100	**Ingqiqo yenani: Uluhlu lwama - 500** • Landelelanisa iseti yamanani ekhethiweyo oyinikiweyo. Uluhlu lwama -500 • Thelekisa amanani ukuya kuma – 500 uchaza elo lina: - 1 ngaphezulu okanye 1 ngaphantsi - 2 ngaphezulu okanye 2 ngaphantsi - 3 ngaphezulu okanye 3 ngaphantsi - 4 ngaphezulu okanye 4 ngaphantsi - 5 ngaphezulu okanye 5 ngaphantsi - 10 ngaphezulu okanye ngaphantsi **Ukukhumbula ngokukhawuleza:** • Khumbula ukudibanisa nokuthabatha ukuya kuma - 20 • Dibanisa uthabathe iziphindwa ze-10 ukusuka ku- 0 ukuya kwi - 100	**Ingqiqo yenani: Uluhlu lwama - 750** • Landelelanisa iseti yamanani ekhethiweyo oyinikiweyo. • Thelekisa amanani ukuya kuma – 200 uchaza elo lina: - 1 ngaphezulu okanye 1 ngaphantsi - 2 ngaphezulu okanye 2 ngaphantsi - 3 ngaphezulu okanye 3 ngaphantsi - 4 ngaphezulu okanye 4 ngaphantsi - 5 ngaphezulu okanye 5 ngaphantsi - 10 ngaphezulu okanye ngaphantsi **Ukukhumbula ngokukhawuleza:** • Khumbula ukudibanisa nokuthabatha ukuya kuma - 20 • Dibanisa uthabathe iziphindwa ze-10 ukusuka ku- 0 ukuya kwi - 100	**Ingqiqo yenani: Uluhlu lwama - 999** • Landelelanisa iseti yamanani ekhethiweyo oyinikiweyo. • Thelekisa amanani ukuya kuma – 1 000 uchaza elo lina: - 1 ngaphezulu okanye 1 ngaphantsi - 2 ngaphezulu okanye 2 ngaphantsi - 3 ngaphezulu okanye 3 ngaphantsi - 4 ngaphezulu okanye 4 ngaphantsi - 5 ngaphezulu okanye 5 ngaphantsi - 10 ngaphezulu okanye 10 ngaphantsi **Ukukhumbula ngokukhawuleza:** • Khumbula ukudibanisa nokuthabatha ukuya kuma - 20 • Dibanisa uthabathe iziphindwa ze- 10 ukusuka ku- 0 ukuya kwi - 100 • Uphinda-phindo nokwahlula-hlula izibalo: - Itheyibhile ka-2ukuya ku- - 2 x 10 - Itheyibhile ka – 10 ukuya ku-10 x 10

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
1.16 **Izibalo zengqondo/ ntloko**	**Ubuchule bezibalo ngentloko** Sebenzisa ubuchule bokubala: • Beka inani elikhulu kuqala ngokulandelelana kwawo ubale okanye ubale ubuya umva • Umgca manani • Ukwakha nokwahlula amanani • Sebenzisa ukuzalana phakathi kokudibanisa nokuthabatha	**Ubuchule bezibalo ngentloko** Sebenzisa ubuchule bokubala: • Beka inani elikhulu kuqala ngokulandelelana kwawo ubale okanye ubale ubuya umva • Umgca manani • Ukwakha nokukwahlula amanani • Sebenzisa ukuzalana phakathi kokudibanisa nokuthabatha	**Ubuchule bezibalo ngentloko** Sebenzisa ubuchule bokubala: • Beka inani elikhulu kuqala ngokulandelelana kwawo ubale okanye ubale ubuya umva • Umgca manani • Ukwakha nokwahlula amanani • Sebenzisa ukuzalana phakathi kokudibanisa nokuthabatha • Sebenzisa ukuzalana phakathi kokuphinda-phinda nokwahlula-hlula	**Ubuchule bezibalo ngentloko** Sebenzisa ubuchule bokubala: • Beka inani elikhulu kuqala ngokulandelelana kwawo ubale okanye ubale ubuya umva • Umgca manani • Ukwakha nokwahlula amanani • Sebenzisa ukuzalana phakathi kokudibanisa nokuthabatha • Sebenzisa ukuzalana phakathi kokuphinda-phinda nokwahlula hlula
1.17 **Amaqhezu**	• Sebenzisa ubize amaqhezu (*unitary)* kwizibalo ubandakanya, isiqingatha, wini ikota,isinye esithsth njl. • Ukunakana amaqhezu ngokufanelekileyo • Ukubhala amaqhezu ngokufanelekileyo ($\frac{1}{2}$)	• Sebenzisa ubize amaqhezu (*unitary)* kwizibalo,isiqingatha; ikota, isinye esithathwini, isithandathu, isibhozo njl. • Ukunakana amaqhezu ngokufanelekileyo • Ukubhala amaqhezu ngokufanelekileyo ($\frac{1}{2}$)	• Sebenzisa ubize amaqhezu (*non-unitary ne unitary*) kwizibalo ubandakanya amacala alinganayo, ikota, isinye esithathwini, isithandathu, isibhozo njl. • Ukunakana amaqhezu ngokufanelekileyo • Ukubhala amaqhezu ngokufanelekileyo (1 half, 2 third) • Ukuqala ukunakana ukuba amacala amabini alinganayo enza into epheleleyo	• Sebenzisa ubize amaqhezu (*non-unitary ne unitary*) kwizibalo ubandakanya isiqingatha, ikota, isinye esithathwini, isithandathu, isibhozo njl. • Ukunakana amaqhezu ngokufanelekileyo • Ukubhala amaqhezu ngokufanelekileyo ($\frac{1}{2}$) • Ukuqala ukunakana ukuba amacala amabini alinganayo enza into epheleleyo

Iintlobo zeengxaki zezibalo zamazwi iBanga lesi- 3

Le yimizekelo ebalulekileyo yeentlobo zezibalo zamazwi utitshala ekufuneka azigxininise eklasini. Xa esebenzaneqela elincinci,makabanike ngomlomo. Xa abafundi bekwazi ukufunda, angabanika umsebenzi obhalwayo kodwa makabanike nowomlomo.

Ezi zibalo zingakulo nephepha lokusebenzela, kodwa mazibe mfutshane, zingqale ukanti ziqheleke.Qiniseka ukuba bonke abafundi bayazilandela.

Ukwahlula ngokwamaqela

Ukwahlula ngokwamaqela ushiye intsalela

Ibheyikhari kuthengiswa amaqebengwana ezonka ngeengxowa ezili- 12. Banamaqebengwana ali- 118 ezonka. Zingaphi iingxowa zamaqebengwana ali-12 ezonka ezinokuphuma?

Ukwahlula ngokwamaqela, ibandakanya intsalela kwimpendulo

Umfama unamaqanda angama – 227. Zingaphi iibhokisi zamaqanda ezingathatha amaqanda amathandathu inye, anokuzifuna apakishe onke la maqanda?

Ukwaba ngokulinganayo

Ukwaba, ulahla intsalela

Abahlobo abahlanu babelana ngebhokisi eneeswiti ezingama – 84 ukuze bonke bafumane iiswiti ngokulinganayo.

Ukwaba, kukhokelela kumaqhekeza

Yohlula iitshokolethi ezili-15 phakathi kwezihlobo ezi-6 zifumane ngokulinganayo, kungashiyeki nto..

Iqhezu lengqokelela

Umakhulu upha uKiki imali engange - R12. UKiki ufuna ukugcina isinye esithathwini (a third) sale mali. Angagcina malini?

Lo mzekelo mawenziwe bakugqiba ukusombulula izibalo ezine/ezihlanu zokwabelana, ezikhokelela kwintlobo zamaqhezu, bawazi namagama eziqwenga zamaqhezu.

Ukubeka amaqhezu ndawonye

Umdlali webhola ngamnye uphiwa icala leorenji ngumqeqeshi webhola. Abadlali bali – 14. Zingaphi iiorenji ekufuneka abenazo?

Lo mzekelo mawenziwe bakugqiba ukusombulula izibalo ezine/ezihlanu zokwabelana, ezikhokelela kwintlobo zamaqhezu, bawazi namagama eziqwenga zamaqhezu.

Ukwaba ngokomlinganiselo

UPhila mncinci kuno Vovo. Xa uPhila esitya isilayi esinye sesonka, uVovo yena utya ezibini. Xa uPhila esitya ezibini, uVovo yena utya ezine. Emva kwentsuku nezimbalwa, babasele betye ezili-12 izilayi zezonka. Zingaphi izilayi zezonka ezityiwe nguPhila, zingaphi ezityiwe nguVovo?

UVela no Sindi benza umsebenzi kunye. UVela usebenza iiyure ezine, uSindi usebenza iiyure enye. Babhatalwa imali engama - R60. Bangabelana njani ngale mali?

Ukudibanisa ngokuphindiweyo

Mangaphi amavili eemoto ezingama- 36?

Hlela

UNeli ugcina imali ezisenti ezingama - 35c ngeveki. Yimalini ayigcinayo ngeveki ezisi- 8?

IGridi

Umnu. Khumalo utyala imigca engama - 20 yemithi yeorenji. Ili -12 imithi yeorenji kumgca ngamnye.

Mingaphi imithi yakhe yeorenji iyonke?

Ukudibanisa nokuthabatha

Zintathu iintlobo ezisisiseko zokudibanisa nokuthabatha, uhlobo ngalunye lungenziwa ngendlela-ngendlela.

Nazi ezi ntlobo:

Ukutshintsha

UNoluthando uqokelele izitikha/imicinga yematshisi engama – 234. USilo wamnika ezingama - 80 ukumongeza. Zingaphi izitikha anazo zizonke?

Kukho abakhweli abangama - 500 kuloliwe, abali - 176 behla. Bangaphi abakhweli abashiyeka kuloliwe?

Ukuhlanganisa

UNosisi uqokelela izinto zesikolo ezizakuphindwa ukuze zisetyenziswe. Uqokelele iibhotile zeplastiki ezili - 124 neetoti ezingama - 268. Zingaphi izinto aziqokeleleyo?

Ivenkile ineepakethi zetshiphusi ezingama - 368; ezingama - 82 ziTshiphosi ezishiyekileyo ziZinekhisi. Zingaphi iipakethi zeZinekhisi ezilapho evenkileni?

Ukuthelekisa

IBanga 2 liqokelele imali engange - R446. IBanga 3 liqokelele imali engange - R729. Yimalini eqokelelwe liBanga – 3 engaphezulu kwiBanga – 2?

Ukunika izisombululo zezibalo ngeendlela-ngeendlela

Izisombululo zezibalo mazinikwe ngendlela-ngendlela.

Ivenkile ineepakethi zikamili-mili kwafika ezingama – 55 ngaphezulu. Ngoku kukho iipakethi ezili - 170 zikamili-mili. Zingaphi iipakethi ebezilapho ekuqaleni?

Ivenkile yaye ineepakethi zeswekile ezingama - 500. Zathengiswa ezinye iipakethi zeswekile, kwasala ezingama - 324. Ingaba zingaphi iiswekile ezathengiswayo?

Izisombululo zezibalo ezinokuzalana okwahlukeneyo

UHoza uthengisa amaqebengwana nge - R4 inye. Yenza itheyibhile ukumnceda afumane ixabiso leeodolo ezinkulu.

Inani lamaqebengwana	1	2	3	4	5	10	20
Ixabiso nge R	4	8					

Sebenzisa le theyibhile ukufumana ixabiso lamaqebengwana asi – 7 kunye nangama - 23

USive utshintsha i - R20 yokukhwela, ne - R5 yokuhlala nomntwana ngeyure. Gqibezela le theyibhile ilandelayo ukumnceda:

Inani leeyure	1	2	3	4	5	10
Ixabiso nge R	25	30				

Qaphela ukuba uHoza noSive banezisombululo zezibalo ezahlukeneyo.

Ezi ntlobo zezisombululo zezibalo zinikelwe ukukhokela utitshala. Abafundi basebenzisa iindlela ezingafaniyo ukusombulula izibalo nezingalindelwanga ngutitshala, umz.eyokwahlula-hlula ingasombululwa ngokuphinda ukuthabatha, ukudibanisa, nokuphinda-phinda. Ziyakutshintsha apho enyakeni iindlela zabafundi zokusombulula, xa sele benolwazi olu lulo, nolugqibeleleyo ngengqiqo yamanani.

AMAGQABANTSHINTSHI EBANGA LESI- 3 2. IIPATENI, II-FANKSHINI NE-ALJIBRA				
ISIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
2.1 **Iipateni zejiyometri**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezillula ezenziwe ngokukrwela imigca ukwenza imilo okanye into **Uludwe lweepateni**: Ipateni ezilula apho iimilo, okanye amaqela eemilo aphindwayo ngendlela efanayo. **Ukuyila nokuchaza iipateni zakho** • Ukuyila ezakho iipateni - Nezinto ezibonwayo - Ngokukrwela imigca, iimilo okanye izinto • Ukuchaza ezintsha iipateni	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezillula ezenziwe ngokukrwela imigca ukwenza imilo okanye into **Uludwe lweepateni**: • Ipateni ezilula apho iimilo, okanye amaqela eemilo aphindwayo ngendlela efanayo • Iipateni apho inani okanye ubungakanani beemilo kwinqanaba ngalinye litshintsha ngendlela yokuqikelela oko kuthi iipateni ezanda rhoqo. **Ukuyila nokuchaza iipateni zakho** • Ukuyila ezakho iipateni - Nezinto ezibonwayo - Ngokukrwela imigca, iimilo okanye izinto • Ukuchaza ezakho iipateni	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezillula ezenziwe ngokukrwela imigca ukwenza imilo okanye into **Uludwe lweepateni**: • Iipateni apho inani okanye ubungakanani beemilo kwinqanaba ngalinye litshintsha ngendlela yokuqikelela oko kuthi iipateni ezanda rhoqo. **Ukuyila nokuchaza iipateni zakho** • Ukuyila ezakho iipateni - Nezinto ezibonwayo - Ngokukrwela imigca, iimilo okanye izinto • Ukuchaza ezakho iipateni	**Iipateni ezisingqongileyo** Ukuchonga, ukuchaza ngamagama nokukopa iipateni zejiyometri • kwindalo • kwimpilo yangoku yemihla ngemihla • kwimbali ngenkcubeko yethu
2.2 **Iipateni zamanani**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kuma - 200 Ulandelelwano malubonakalise ukubala usiya phambili nokubuya umva: • Izibalo ezigxininiswe kwiBanga 2 kwandiswe uluhlu lwamanani • kwi-100 ukuya kuma -500	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kuma –500 Ulandelelwano malubonakalise ukubala usiya phambili nokubuya umva: • Izibalo ezigxininiswe kwiBanga 2 kwandiswe uluhlu lwamanani • Kuma – 50, kwi-100 ukuya kuma -1 000	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kuma –750 Ulandelelwano malubonakalise ukubala usiya phambili nokubuya umva: • Izibalo ezigxininiswe kwiBanga 2 kwandiswe uluhlu lwamanani • Kuma - 20, 25, 50 kwi – 100 ukuya kwi - 1 000 **Ukuyila nokuchaza iipateni zakhe**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kuma –1 000 Ulandelelwano malubonakalise ukubala usiya phambili nokubuya umva: • Izibalo ezigxininiswe kwiBanga 2 kwandiswe uluhlu lwamanani • Kuma - 20, 25, 50 kwi – 100 ukuya kwi - 1 000 **Ukuyila nokuchaza iipateni zakhe**

AMAGQABANTSHINTSHI EBANGA LESI- 3 3. ISITHUBA NEMILO (IJIYOMETRI)				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
3.1 **Indawo – bumilo, ukufumana indawo, nembonakalo**		**Ulwimi lwendawo-bumilo** • Ukutshatisa izimvo ezahlukileyo ezenzeka imihla-ngemihla • Ukubiza izinto ezisetyenziswa imihla ngemihla xa beziboniswa zikwindawo engaqhelekanga **Indawo–bumilo nezalathisi** • Ukulandela izalathiso ujikeleza iklasi nesikolo • Ukunika izalathiso ujikeleza iklasi nesikolo	**Ulwimi lwendawo-bumilo** • Ukufunda, ukutolika nokuzoba iimephu ezingacwangcisawnga, okanye imintla yengqokelela yezinto. • Ukufumana izinto kwiimephu **Indawo–bumilo nezalathiso** • Ukulandela izalathisi usuka kwindawo ethile usiya kwenye emephini engacwangciswanga	
3.2 **Izinto ezinokwakheka kuka 3-D**		**Uludwe lwezinto** Ukunakana nokubiza ngamagama izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjengebhokisi (iprizimu) • isilinda **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • izinto ezinokwakheka kuka 2-D ezenza izinto ezinokwakheka kuka 3-D • izinto ezimbaca • izinto ezitshibilizayo	**Uludwe lwezinto** Ukunakana nokubiza ngamagama izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjengebhokis (iprizimu) • Iisilinda • Iphiramidi • ikhowuni **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • izinto ezinokwakheka kuka 3-D • izinto ezimbaca okanye ezinamagophe	**Uludwe lwezinto** Ukunakana nokubiza ngamagama izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjengebhokis (iprizimu) • Iisilinda • Iphiramidi • ikhowuni **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • izinto ezinokwakheka kuka 2-D ezenza izinto ezinokwakheka kuka 3-D • izinto ezimbaca okanye ezinamagophe

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
3.2 **Izinto ezinokwakheka kuka 3-D**		**Imisebenzi ema kugqaliswe kuyo** • Ukuqwalasela nokwakha izinto ezinokwakheka kuka 3-D eklasini usakha izinto usebenzisa izinto eziphathekayo / ezinokwakheka kuka 2-D, umz. umdongwe, imicinga yokuvungula, imicinga yokufunxa, izinto ezinokwakheka kuka 3-D nezinto zejiyometri **Umgqaliso ocetyiswayo nokulandelelanisa imisebenzi yeKota 2** Ukusebenza ngengqukuva, iiprizimu neesilinda njengoko bekunjalo kwiBanga 2; zibize uzibeke nangamaqela azo. Gxininisa kwimilo yento nganye. Ukwahlula izinto ezimbaca okanye ezinegophe. Yenza ibhokisi usebenzisa izikwere ezisikwe kumakhadibhodi. Thetha ngezinto ezimbaca kwiprizimu nakwisilinda, uzichaze ukuba ziyiloo milona, umz. isikwere okanye ixande Sebenzisa imisebenzi ebhalwayo ukushwankathela	**Imisebenzi ema kugqaliswe kuyo** • Ukuqwalasela nokwakha izinto ezinokwakheka kuka 3-D eklasini usakha izinto usebenzisa izinto eziphathekayo / ezinokwakheka kuka 2-D, umz. umdongwe, imicinga yokuvungula, imicinga yokufunxa, izinto ezinokwakheka kuka 3-D nezinto zejiyometri **Umgqaliso ocetyiswayo nokulandelelanisa imisebenzi yeKota 3** Ukusebenza ngengqukuva, iiprizimu neesilinda njengoko bekunjalo kwiBanga 2; zibize uzibeke nangamaqela azo. Gxininisa kwimilo yento nganye. Ukwahlula izinto ezimbaca okanye ezinegophe. Yenza ibhokisi usebenzisa izikwere ezisikwe kumakhadibhodi. Thetha ngezinto ezimbaca kwiprizimu nakwisilinda, uzichaze ukuba ziyiloo milona, umz. isikwere okanye ixande Ukubiza nokuhlela izinto zejiyometriki Ukusebenzisa imicinga yokuvungula, imicinga yokuvungula okanye iphepha elisongiweyo lokwenza iphiramidi. Ukusebenzisa imisebenzi ebhalwayo ukushwankathela	**Umgqaliso ocetyiswayo nokulandelelanisa imisebenzi yeKota 4** Ukusebenzisa imisebenzi ebhalwayo ukushwankathela

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
3.3 izinto ezinokwakheka kuka 2-D	**Uludwe lweemilo** • isangqa • unxantathu • isikwere • iingxande **limpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 2-D ngoko: • imilo • engqalileyo • isangqa **Ugxininiso olucetyiswayo nokulandelelanisa imisebenzi yeKota 1** Ukubiza nokuhlela iimilo Ukugxininisa kuhlobo lwamacala emilo nganye Ukwahlula iimilo ngokuthetha ngamacala azo angqukuva nangqalileyo Ukuzoba izangqa, izikwere, iingxande nonxantathu. Ukusebenzisa imisebenzi ebhalwayo ukushwankathela		**Uludwe lweemilo** • isangqa • unxantathu • isikwere • iingxande **limpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 2-D ngoko: • imilo • engqalileyo • isangqa **Ugxininiso olucetyiswayo nokulandelelanisa imisebenzi yeKota 3** Ukubiza nokuhlela iimilo Ukugxininisa kuhlobo lwamacala emilo nganye Ukwahlula iimilo ngokuthetha ngamacala azo angqukuva nangqalileyo Ukuzoba izangqa, izikwere, iingxande nonxantathu. Ukusebenzisa imisebenzi ebhalwayo ukushwankathela	

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
3.4 **Ulingano-macala (isimetri)**		**Ulingano-macala** • Ukunakana umgca wolingano – macala ngokusonga iphepha. **Ugqaliso lwemisebenzi olucetyiswayo lweKota yesi- 2** Imisebenzi yokusonga iphepha evelisa ukuqonda ulingano-macala, ebandakanya: • Imisebenzi apho ipeyinti emanzi ibekwa ephepheni phambi kokubalisongwe • Imisebenzi apho iphepha lisikwa kumgca wokulisonga		**Ulingano-macala** • Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 2-D (2-D objects) kwijiyometriki nangeyojiyometriki kulingano-macala **Ugxininiso lwemisebenzi olucetyiswayo lweKota yesi- 4** Imisebenzi ebhalwayo mayibandakanye imizekelo apho: • Umgca wolingano-macala awusoloko uthe ngqo • ingaphezu komgca omnye imigca yolingano-macala kwimilo okanye kwizinto

AMAGQABANTSHINTSHI EBANGA LESI- 3 4. UMLINGANISELO				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
4.1 **Ixesha**	**Ukuchaza ixesha** • Ukufunda imihla kwikhalenda • Ukubeka imihla yokuzalwa,iminyhadala yezenkolo,iiholide zikawonke-wonke, iziganeko, iziganeko zezikolo kwikhalenda • Ukuxela ixesha leeyure ezili- 12 usebenzisa: - iiyure - icala leeyure - ikota yeeyure - imizuzu kwiwotshi yosiba, neyamanani nezinye izixhobo zamanani ezibonisa ixesha, umz. iselifoni	**Ukuchaza ixesha** • Ukufunda imihla kwikhalenda • Ukubeka imihla yokuzalwa,iminyhadala yezenkolo,iiholide zikawonke-wonke, iziganeko, iziganeko zezikolo kwikhalenda • Ukuxela ixesha leeyure ezili- 12 usebenzisa: - iiyure - icala leeyure - ikota yeeyure - imizuzu kwiwotshi yosiba, neyamanani nezinye izixhobo zamanani ezibonisa ixesha, umz. iselifoni **Ukubala ubude bexesha nelo lidlulileyo** • Usebenzisa iikhalenda ukubala nokuchaza ubude bexesha ngeentsuku okanye nangamacala eeyure	**Ukuchaza ixesha** • Ukufunda imihla kwikhalenda • Ukubeka imihla yokuzalwa,iminyhadala yezenkolo,iiholide zikawonke-wonke, iziganeko, iziganeko zezikolo kwikhalenda • Ukuxela ixesha leeyure ezili- 12 usebenzisa: - iiyure - icala leeyure - ikota yeeyure - imizuzu kwiwotshi yosiba, neyamanani nezinye izixhobo zamanani ezibonisa ixesha, umz. iselifoni **Ukubala ubude bexesha nelo lidlulileyo** Usebenzisa iikhalenda ukubala nokuchaza ubude bexesha ngeentsuku okanye iivekinokanye iinyanga, ubandakanya: • ukutshintsha phakathi kwentsuku neeveki • ukutshintsha phakathi kweveki neenyanga ukusebenzisa iiwotshi ukubala ubude bexesha ngeeyure, amacala eeyure, nekota yeeyure	**Ukuchaza ixesha** • Ukufunda imihla kwikhalenda • Ukubeka imihla yokuzalwa,iminyhadala yezenkolo,iiholide zikawonke-wonke, iziganeko, iziganeko zezikolo kwikhalenda • Ukuxela ixesha leeyure ezili- 12 usebenzisa: - iiyure - icala leeyure - ikota yeeyure - imizuzu kwiwotshi yosiba, neyamanani nezinye izixhobo zamanani ezibonisa ixesha, umz. iselifoni **Ukubala ubude bexesha nelo lidlulileyo** Usebenzisa iikhalenda ukubala nokuchaza ubude bexesha ngeentsuku okanye iivekinokanye iinyanga, ubandakanya: • ukutshintsha phakathi kwentsuku neeveki • ukutshintsha phakathi kweveki neenyanga ukusebenzisa iiwotshi ukubala ubude bexesha ngeeyure, amacala eeyure, nekota yeeyure

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.2 **Ubude**		**Umlinganiselo ongekho seSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude usebenzisa umlinganiselo ongekho seSikweni, umz. imilinganiselo ngesandla, izantya, ubude bepensile nezixhobo zokubala njl. • Ukuchaza ubude bezinto uzibala, usebenzisa iiyunithi ezingekho seSikweni. • Ukusebenzisa ulwimi olusulungekileyo ethelekisa, umz. mde kunomnye,mfutshane kunomnye njl. **Ukwazisa umlinganiselo oseSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude esebenzisa iimitha(intonga elingana nemitha, umtya olingana nemitha) njengomlinganiselo wobude • Ukuqikelela nokulinganisa ubude kwiisentimitha usebenzisa irula Alukho utshintsho phakathi kwemitha nesentimitha olufunekayo	**Ukwazisa umlinganiselo oseSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude esebenzisa iimitha(intonga elingana nemitha, umtya olingana nemitha) njengomlinganiselo wobude • Ukuqikelela nokulinganisa ubude kwiisentimitha usebenzisa irula	

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.3 **Umthamo**		**Umlinganiselo ongekho seSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubunzima, esebenzisa isikali nemilinganiselo engekho seSikweni, umz. izitena, iibhloko. • Ukusebenzisa ulwimi ethelekisa, umz. ilula, inzima,ilula kunenye, inzima kunenye **Ukwazisa umlinganiselo oseSikweni** • Ukuthelekisa, ukulandelelanisa nokurekhoda ubunzima bezinto ezithengiswayo, umz. 2 kg irayisi 1 kg umngqusho • Xa kukho isikala mabalinganise ubunzima babo. • Kulindeleke ukuba umntwana ngamnye afunde ubunzima Bachaza ubunzima babo, umz, ndilingana/ ndingamfumana/ ndiphantse ndingaphantsi/ ndingaphezulu, banike olonaqikelelo balufumenae kwisikali Alukho utshintsho phakathi kweyunuthi yokubala ubunzimakunye nobunzima olufunekayo		**Ukwazisa umlinganiselo oseSikweni** Abafundi babhala imisebenzi ukuqinisa oku kulandelayo, nofundo lwemifanekiso • yezinto ezibhalwe ubunzima kuzo, umz. izikali ezinosiba okanye inaliti ekhombe kwinani eliboni • isikali apho inaliti ikhombe kwinani elisemgceni

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho seSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezinto (umthamo onokuthwalwa zezo zinto kugalelwa kuzo) esebenzisa imilinganiselo enjengamacephe nekomityi • Ukuchaza umthamo wento ngokubala ukuba zingaphi izinto ezingacwangciswanga ezingenza umthamo wento ethile, umz. ibhotile inomthamo weekomityi ezine **Ukwazisa umlinganiselo oseSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezinto ngeelitha - iibhotile ngomthamo welitha enye - umlinganiselo wejagi okwilitha enye • Ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezinto ezithengiswayo, umz. iilitha ezi-2 zobisi ilitha e-1 yesiselo esibandayo iilitha ezi-5 zepeyinti okanye imilmitha, umz. iimilimitha ezingama -500 zobisi iimilimitha ezingama - 340 zesiselo esibandayo, iimilimitha ezingama - 750 zeoli • Ukwazi ukuba ikomityi iziimilimitha ezingama - 250 • Ukwazi ukuba itispuni izi milimitha ezi n- 5 Alukho utshintsho phakathi kwemilimitha kunye nelitha olufunekayo			**Ukwazisa umlinganiselo oseSikweni** Imisebenzi ebhalwayo ukuqinisa oku kulandelayo, kubandakanya ukufunda imifanekiso ye: • Zinto ezithengwayo ezinemithamo yazo ebhalwe kuzo ukubonisa ulandelelwano • mifanekiso yejagi apho umthamo okumyimge welitha enye okanye ezi-2 • yokufunda umgca womthamo kweso sixhobo sibonisa umthamo, uchaze umthamo wenjenje, ibulingana/ iphantse/ ingaphezulu/ ingaphantsi/iyalingana nelitha leyo Alukho utshintsho phakathi kwemilimitha kunye nelitha olufunekayo

IZIHLOKO	IKOTA 1	IKOTA 2	IKOTA 3	IKOTA 4
4.5 **Umjikelezo**			**Umjikelezo** Ukuphanda umgama ojikeleze izinto ezinokwakheka kuka 2-D no 3-D, uthelekisa okanye usebenzisa iiyunithi ezingekho seSikweni.	
4.6 **Ummandla**				**Ummandla** Ukuphanda ubukhulu bendawo usebenzisa iithayile.

AMAGQABANTSHINTSHI EBANGA LESI- 3 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**IKOTA 1**	**IKOTA 2**	**IKOTA 3**	**IKOTA 4**
5.1 **Ukuqokelela nokulungisa ulwazi.** **5.2** **Ukubonisa ulwazi** **5.3** **Ukuhlela nokutolika ulwazi**	**Okucetyiswayo:** Umjikelo wonke wolwazi ukwenza igrafu Ukuqokelela ulwazi malunga neklasi, isikolo ukuphendula imibuzo katitshala. Ukurekhoda ulwazi ngokodidi olunikiweyo Ukubonisa ulwazi ezi: • Iithebhiyile • Iigrafu zezitena Ukuthetha nokuphendula imibuzo malunga nolwazi olukwithebhiyile negrafu yezitena	Ukuhlela ulwazi kokunikiweyo. **Okucetyiswayo:** • Umfanekiso omnye otshatisiweyo • Igrafu yezitena enye	**Okucetyiswayo:** Ukulungisa kwakhona ulwazi olunikiweyo kuluhlu okanye itheyibhile kwigrafu yezitena. Ukubonisa ulwazi ngegrafu yezitena Ukuphendula imibuzo malunga nolwazi olukwigrafu yezitena.	Ukuhlela ulwazi kokunikiweyo. **Okucetyiswayo:** • Umfanekiso omnye wegrafu otshatisiweyo • Igrafu yezitena enye ubuncinane

3.5 AMANQAKU NEZIKHOKELO ZOKUFUNDA

Itheyibhile engezantsi inika ootitshala ezi zinto zilandelayo:

- inkalo zomxholo nezihloko ngokwamabanga nangokwesigaba;
- izakhono ekucetyiswa zenziwe kule kota;
- amanqaku angengcaciso nezikhokelo zokufunda; kunye
- Nexesha elinikiweyo ngokwesihloko kwisifundo yi- yure e-1 nemizuzu emi -24.

3.5.1 Ingcaciso ngomxholo kwibanga loku-1

ISIGABA -1 IKOTA 1

1. AMANANI, II-OPAREYSHINI NOLWALAMANO

Ikota yokuqala ichithwa ekuphuhliseni ulwazi lwaphambi lowazi amanani. Uphuhliso lwezakhono zokuqala ze pateni, iimilo, sithuba, imilinganiselo nedatha yakha izakhono zezikolo jikelele ngakumbi izakhono zamanani.

Ukutshatisa

Ukutshatisa amanani kukhokelela ekwazini ingqiqo yokuhambelana kwamanani, ibe sisiseko sokuthelekisa izinto ngokwamaqela.

Xa umntwana ekwazi ukuchonga u “ziyafana”, uyakwazi ukutsahtisa iiseti ezimbini. Ukufana kwezinto/amanani sisiseko sokuba nengqingo ngamanani . Ukuba nengqiqo ngamanani sisakhono esibalulekileyo kumlinganselo,kumanani,kwisithuba nemilo.

Ukuhlela

Xa kuhlelwa, abafundi bakhangela izinto ezifanayo nezahlukileyo. Abafundi kwakhona baphuhlisa ukukwazi ukuchaza nokuchonga.

Ukuchaza kuthetha ukuba abafundi bayakwazi ukuqaphela nokubiza izinto ezibangqongileyo.

Ukuchonga kuthetha ukuba abafundi bangakhetha izinto xa benikwe inkcazelo . Abafundi bachonga ngokwempawu ezithile. Abafundi bahlela izinto ngokobungakanani, umbala, imilo, ubude, ubunzima, umthamo (volulme ne capacity)

Ukuhlela kwenziwa nge:

- Ngeezinto zemihla ngemihla kwindlela yokusebenza ngolwazi oluqokelelweyo;
- iimilo zejiyometri nezinto kwimilo,isithuba ; kunye
- neempawu zezinto kumlinganiselo.

Ukuthelekisa

Xa abafundi bethelekisa izinto bagqalisa kwiyantlukwano phakathi kwezinto.

Abafundi bagqalisa ku:

- nkulu okanye ncinci;
- nzima okanye khaphu -khaphu;
- nde okanye mfutshane;
- shushu okanye bandayo;
- ayinanto okanye izele;
- zininzi okanye zimbalwa; kunye
- Kuqala, ekugqibeleni okanye embindini.

Ukufunda ukuthelekisa kugqalisa kwezi ndawo:

- imisebenzi yokuqala yemilinganiselo;
- imisebenzi yokuqala kwimilo nesithuba (iquka umsebenzi wendawo);kunye
- nemisebenzi yokuqala yeepateni.

Kwimisebenzi yamanani, abafundi batshatisa izinto kumaqela ahlukeneyo. Bafunda ukuchonga amaqela anezinto ezinenani elilinganayo, bahlule amaqela anezinto ezininzi okanye ezimbalwa kunamanye amaqela.

Ukucwangcisa/ukulandelelanisa

Ukucwagcisa ngundoqo kwisistimu yamanani. Ukubeka nokubala izinto ngolwandelelano kunceda abafundi abancinci ukuqinisekisa ukuba babala izinto kanye.

ukubeka izinto ngolandelelwano xa bebala kunika isiseko sokuba bakwazi ukuqonda indlela yokucwangcisa amanani.

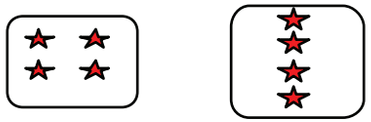
Umsebenzi wokuqala ngeepateni oquka iimilo nezinye izinto zinceda ukuba abafundi baqwalasele kucwangciso lwamanani. Emva kwethuba abafundi basebenzisa ezi zakhono xa besebenza ngeepateni zamanani.

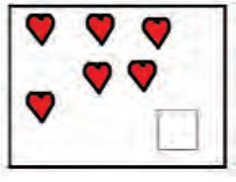
Ukunakana ngephanyazo nangokuchanekileyo

Ukunakana ngokuchanekileyo nangokukhawuleza inani lezinto kwingqokelela ngaphandle kokuzibala.

Oku kunceda abafundi ukuba babone ingqokelela yezinto ezincinci njengento enye. Le nto inceda abafundi ukwazi izakhono zokusebenza ngamanani.

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.1 **Bala izinto**	Bala izinto ngokuvakalayo nangokuzithemba uyokuma 50. Nika uqikelelo lwamanani ezinto ezinokuqinisekiswa ngokubalwa.	Bala izinto ngokuvakalayo nangokuzithemba uyokuma kwi 10. Nika uqikelelo lwamanani ezinto ezinokuqinisekiswa ngokubalwa.	Ukubala kunceda ukuphuhlisa ukwazi ubungakanani bamanani kuze kube sisiseko sokukwazi ukubala ngamanani apheleleyo. Kwikota yokuqala abafundi baphuhlisa ezi zakhono zilandelayo: • ukubala konke • ukubala ngokongeza • imithetho siseko ngobukhulu bamanani • ukusebenza ngeetekisi ezibhaliweyo Ukubala kwikota yokuqala kugxininisa kuphuhliso lwezakhono zokubala zabafundi. Ukuphuhliswa kwezakhono zokubala kuvumela ukuba: • bala izinto ezingamaqela nezingengawo amaqela; • bala usiya phambili, ubuya umva; • bala iintshukumo; • bala ngokokulandelelana kumgca manani; • phuhlisa ulwazi lobungakanani lwamanani ngokuwalandelelanisa nokuwathelekisa; kunye • Baqikelele nokuthelekelela/nokuqikelela. Bala izintoPhambi kokuba abafundi babale izinto mabanikwe amathuba okuba baziqhelanise nokubala ngomlomo/ngokuvakalayo. Abafundi mababe noluhlu lwamagama amanani ngokolandelelwano: inye, zimbini, zintathu bayokuma ku 20. Khuthaza abafundi ukuba benze izicengcelezo zamanani badlale imidlalo yamanani ukugxininisa ukubala ngomlomo/ngokuvakalayo. Esi sakhono sokubala ngomlomo/ngokuvakalayo okanye ukubala ngentloko sibalulekile ukuphuhlisa ulwazi lwamagama amanani nokwazi isingqisho okanye ipateni kumanani. Abafundi babala into nganye betshatise igama lenani kwiseti yezinto. Lento iquka ukubamba nokushukumisa iizinto ubiza igama lenani. Kubalulekile ukuba abafundibaqonde ukuba inani lokugqibela elibiziweyo limele into yokugqibela eqeleni.	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.1 **Bala izinto**	Bala izinto ngokuvakalayo nangokuzithemba uyokuma 50. Nika uqikelelo lwamanani ezinto ezinokuqinisekiswa ngokubalwa.	Bala izinto ngokuvakalayo nangokuzithemba uyokuma kwi 10. Nika uqikelelo lwamanani ezinto ezinokuqinisekiswa ngokubalwa.	Kufuneka bazi ukuba inani lokugqibela elibiziweyo libonisa inani lezinto kwiseti okanye ubukhulu beseti. Asingabo bonke abafundi abakwazi ukubala ngentloko baze baxele amagama amanani ngokulandelelana kwawo ngentsingiselo. Banokutsiba amanani bathi kukho izinto zokubala ezine ngelixesha zintlanu. Kubalulekile ukuba abafundi babale inani elifana lezinto ezahlukeneyo. Imizekelo: • bala izinto zokubala ezintandathu • ndiphathele iipensile ezintandathu • bala amaqhosha amathandathu Ingqiqo ngamani Abafundi bazakuqala ukuqonda xa bebala inani lezinto, ukuba inani alichatshazelwa bubungakanani okanye indawo. Umntu angabuza ukuba: zingaphi iinkwenkwezi kwikhadi ngalinye?  Indawo nohlelo lwenkwenkwezi lwahlukile kodwa inani leenkwenkwezi kwikhadi ngalinye liyafana. Kubalulekile ukuba xa ubala izinto eziphathekayo, Abafundi baqaphele inani elincinci lezinto bengazibalanga. Imizekelo, mabaqaphele • zintlanu, ngokwenani leminwe esandleni • izinto zokubala ezintathu, zihlelwe ngohlobo oluthile • inye ukuya kuntandathu, Kwindlela amachaphaza abekwe ngayo kwidayisi Lento ikwabizwa ngokuba kukunakana izinto ngokuchanekileyo nangephanyazo kwiqela ngaphandle kokuzibala.	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.1 **Bala izinto**	Bala izinto ngokuvakalayo nangokuzithemba uyokuma 50. Nika uqikelelo lwamanani ezinto ezinokuqinisekiswa ngokubalwa.	Bala izinto ngokuvakalayo nangokuzithemba uyokuma kwi 10. Nika uqikelelo lwamanani ezinto ezinokuqinisekiswa ngokubalwa.	Ngoko ke: Ingqiqo yamanani iphuhliswa ngokuzibala izinto zokwenyani. Abafundi bafunda: • ukunxulumanisa amagama amanani nengqokelela yezinto; • ukwakha umfanekiso ngqondweni wokuba inani lithetha ntoni, umz. ingakanani; kunye • Ukuba igama lenani lento yokugqibela ebaliweyo limele inani lezinto zizonke kwiqela. Imiyalelo nemibuzo kuxhasa ukubala kwezinto: • Bala izinti zokubala ezili-10. Zihlele emgceni. • Zihlele kwakhona ngolunye uhlobo izinti uze uzibale kwakhona. Sisafana isiphumo? • Bala iziciko zeebhotile ngaphandle kokuzibamba. • Sisafana isiphumo? • Ucinga ukuba zingaphi iikhrayoni ezilapha? • Ingaba zininzi okanye zimbalwa kunokuba ubucinga? • Wazi njani ukuba unalo na eli nani? • Wazi njani ukuba ubale zonke iikhrayoni? • Ungayiqinisekisa njani impendulo yakho? Ukuya kwiitekisi ezibhaiweyo Abafundi mabanikwe inxaxheba babale imizobo yezinto. Umzekelo: Zingaphi? 	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.1 **Bala izinto**	Bala izinto ngokuvakalayo nangokuzithemba uyokuma 50. Nika uqikelelo lwamanani ezinto ezinokuqinisekiswa ngokubalwa.	Bala izinto ngokuvakalayo nangokuzithemba uyokuma kwi 10. Nika uqikelelo lwamanani ezinto ezinokuqinisekiswa ngokubalwa.	Bala ngokongeza Xa abafundi bebala zonke ngokuzithemba ukuqala ku-1, bafanele ukubala ngokongeza kwingqokelela abasele benayo. Umzekelo: Cela abafundi ukuba babale ngokuvakalyo izinto ezisixhenxe baze,ukuqala kwezi zinto ezixhenxe,babala ngokuvakalayo ezintathu ukongeza bade babe nezilishumi. Ukubala ngokongeza yeyona ndlela echanekileyo kunokubala konke, kwaye abafundi baza kusebenzisa ukubala ngokongeza xa bebala. Izixhobo: Kubalulekile ukuqokelela iindidi ezahlukeneyo zezinto Abafundi abanokuzisebenzisa njengezinto zokubala. Imizekelo: • Imicinga yomatshisi • Izinti ze-ayisi khrimu • Iipete zeepesika • iimbotyi • iziciko zeebhotile	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.2 Ukubala usiya phambili nokubala ubuya umva	**Ukubala usiya phambili nokubala ubuya umva ngoononye uqala nakweliphi inani phakathi kwe- 0 ukuya kwi- 100** **Ukubala usiya phambili ngama** • 10, ukuqala nakwesiphi isiphinda phindi se-10 phakathi kwe -0 ukuya kwi- 100 • 5, ukuqala nakwesiphi isiphinda phindi sesi - 5 phakathi kwe 0 ukuya kwi-100 • 2, ukuqala nakwesiphi isiphinda phindi sesi -2 phakathi kwe 0 kwi-100	**Bala usiya phambili nokubala ubuya umva ngoononye uqala nakweliphi inani phakathi kuka -1 ukuya ku -20**	**Ukubala usiya phambili ngoononye** Ukubala ngomlomo/ngokuvakalayo okanye ukubala ngentloko linqanaba elibalulekileyo ukucengceleza amagama amanani ngokokulandelelana.Ukuba abafundi bayakwazi ukwenza oku,ayithethi ukuba banolwazi lobungakanani bamanani abawabizayo. Kwikota yokuqala kulindeleke ukuba abafundi bakwazi ukubala ukuya phambili nangasemva ngoo - 1 ukuya kuma- 20. Ukubala ukuya phambili nangasemva kungenziwa yiklasi yonke. Qinisekisa ukuba abafundi abakhwazi nje ngaphandle kwentsingiselo xa bebala. Kwimisebenzi yamaqela nakweyokusebenza bodwa, le misebenzi ilandelayo ingenziwa ukwengeza intsingiselo ekubaleni: • Qala ku- 2 ukuya kwi-8 • Bala ukusuka ku- 4 ukuya kwi- 10 • Bala ukusuka ku-2 ukuya kwi-8. Mangaphi amanani owabalileyo? **Ukubala ukuya kwi- 10** Ekuqaleni Abafundi bazakuqala ukubala ukuya kwishumi baze baziqhelanise namagama amanani ngokokulandelelana. Abafundi bangakruquka kukubala ngokuvakalayo, kufuneka babale ngeendlela ezahlukileyo, okanye bazakuba bacengceleza ngokungenantsingiselo.Ukubala ngokungenantsingiselo kufuna ukuxhaswa ngokufunda iisimboli zamanani nokubala izinto. Abafundi mabanikwe imifanekiso yamanani ngokulandelelana.Le mifanekiso ilandelayo ingasetyenziswa: • Amaso okubala • I-abhakhasi • Umgca manani Ekuqaleni umgca manani obonisa amanani onke, nomgca manani ongenamanani ungasetyenziswa.Lento ithetha ukuba Abafundi kufuneka bawazi amanani ngokokulandelelana kwawo ukuvala izikhewu. Ukubala ubuya umva Ukubala umva sisakhono esinzima kubafundi, ukuziqhelanisa naso rhoqo kubalulekile. Qala ukubala ubuya umva ukusuka kwinani xa abafundi sele beliqhelile, u-2, ukhulise oku njengoko ugqalisele kumanani aphezulu.	

<table>
<tr><th>ISAHLUKO</th><th>IINGQIQO NEZAKHONO
OKULINDELEKILEYO EKUPHELENI KONYAKA</th><th>IINGQIQO NEZAKHONO
UGXININISO KWIKOTA 1</th><th>AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA</th><th>UBUDE BEXESHA
(kwizifundo zeyure e-1 nemizuzu engama-24)</th></tr>
<tr>
<td>1.2
Ukubala usiya phambili nokubala ubuya umva</td>
<td>Ukubala usiya phambili nokubala ubuya umva ngoononye uqala nakweliphi inani phakathi kwe- 0 ukuya kwi- 100
Ukubala usiya phambili ngama
• 10, ukuqala nakwesiphi isiphinda phindi se-10 phakathi kwe -0 ukuya kwi- 100
• 5, ukuqala nakwesiphi isiphinda phindi sesi - 5 phakathi kwe 0 ukuya kwi-100
• 2, ukuqala nakwesiphi isiphinda phindi sesi -2 phakathi kwe 0 kwi-100</td>
<td>Bala usiya phambili nokubala ubuya umva ngoononye uqala nakweliphi inani phakathi kuka -1 ukuya ku -20</td>
<td>Ukubala ukuya ku -20
Ukubala ngaphaya kweshumi kungafuna Abafundi balandele emva kotitshala.Kubalulekile ukukhuthaza abafundi ukuba baqale ukubala nakweliphi inani.ukuqala ku 8 kunzima kunokuqala ku 1. Abafundi bazakusisebenzisa esi sakhono xa bebala ngokudibanisa.
Izixhobo
• Ukubala amaso ukuya ku 20
• Iabhakhasi
• Igridi zamanani zinceda Abafundi ekuphuhliseni ukufunda letheyibhuli. Ngenxa yokuba Abafundi bebala ngamashumi, igridi ifanele ukubonisa olu lwazi lulandelayo:
<table>
<tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr>
<tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr>
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• Umgca manani obonisa amanani ukuya ku 20</td>
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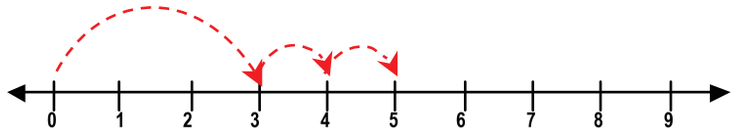
ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.3 **Iisimboli namagama amanani**	Chonga, nakana, ufunde amanani • Chonga, nakana, ufunde iisimboli zamanani ukuqala ku 1 ukuya ku 100 • Bhala isimboli yenani ku 1 ukuya ku 20 • Chonga, nakana, ufunde iisimboli zamanani ukuqala ki 1 ukuya ku 10 • Bhala amagama amanani ku 1 ukuya ku 10	Chonga, nakana, ufunde amanani • Chonga, nakana, ufunde iisimboli zamanani ukuqala ku 1 ukuya ku 20 • Bhala isimboli yenani ku 1 ukuya ku 5 • Chonga, nakana, ufunde iisimboli zamanani ukuqala ki 1 ukuya ku 5 • Bhala amagama amanani ku 1 ukuya ku 5	Ukufunda nokubhala iisimboli zamanani namagama. Abafundi mabafunde uku: • Bhala iisimboli zamanani namagama • Funda isimboli zamanani • Wabize amanani Ukufunda nokubhala kwesimboli zamanani namagama mazidityaniswe nemisebenzi yokubala. abafundi mabanikwe ithuba lokutshatisa iisimboli zamanani namagama amanani kwingqokelela yee izinto abazibalileyo. Ngalendlela Abafundi bazakudibanisa isimboli yamanani, amagama amanani, ukubhalwa kwamanani nentsingiselo yawo. Eminye imisebenzi Ukuqhelanisa ukubhala Abafundi bangaziqhelanisa ukubhala isimboli zamanani ngendlela zahlukeneyo: • Ngokutreyisa ngaphezu kwamanani • Ukwenza umsebenze “amachaphaza adityanisiweyo’ besebenzisa imigca engaphandle yee simboli zamanani. • Ukubhala esantini • Ngukubhala ebhodini okanye esamenteni • ngokupeyinta • Ngokuthunga amanani esebenzisa iwulu. Lo msebenzi uluncedo ekugxininiseni kwindawo yokuqala xa kubhalwa amanani. • Ngokutreyisa amanani amakhulu asikwe kwiphepha elirhabaxa okanye ilaphu. Ukufunda amanani Oku kungenziwa ngoku: • Khomba amanani kumgca manani okanye kwigridi yamanani • Ngokufunda amakhadi ukubala	

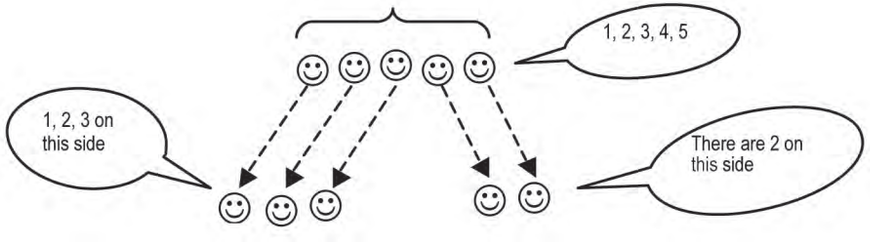
ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.3 **Iisimboli namagama amanani**	Chonga, nakana, ufunde amanani • Chonga, nakana, ufunde iisimboli zamanani ukuqala ku 1 ukuya ku 100 • Bhala isimboli yenani ku 1 ukuya ku 20 • Chonga, nakana, ufunde iisimboli zamanani ukuqala ki 1 ukuya ku 10 • Bhala amagama amanani ku 1 ukuya ku 10	Chonga, nakana, ufunde amanani • Chonga, nakana, ufunde iisimboli zamanani ukuqala ku 1 ukuya ku 20 • Bhala isimboli yenani ku 1 ukuya ku 5 • Chonga, nakana, ufunde iisimboli zamanani ukuqala ki 1 ukuya ku 5 • Bhala amagama amanani ku 1 ukuya ku 5	Ukutshatisa iisimboli zamanani kwingqokelela zee izinto Oku kungeziwa ngoku: • Tshatisa amanani ee izinto ngamanani • kubala ngaphandle amaqela ee izinto baze bakhethe amakhadi amanani ee izinto • Kubala ii izinto kwimifanekiso nangokubhala iisimboli namanani.	

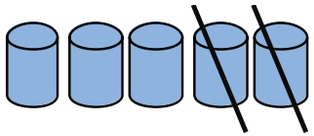
ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.4 **Chaza, thelekisa ucwangcise amanani**	Chaza, thelekisa ucwangcise izinto uyokuma ku 20 • Chaza uthelekisa ii izinto ngokwe "yona eninzi, eyona encinci nezilinganayo" • Chaza ucwangcise ingqokelela yee izinto ngokwe " yona eninzi, eyona encinci nakweyona enkulu." • Chaza, thelekisa ucwangcise ii izinto uyokuma ku 20 • Chaza uthelekise amanani apheleleyo ngoko" incinci kune, inkulu kune, ininzi kune, imbalwa kune, ziyalingana. • Chaza uthelekise amanani ukussuka ku –incinci ukuya ku enkulu kunye ngoku "enkulu ukuya kwencinci"	Chaza, thelekisa ucwangcise izinto uyokuma ku 5 • Chaza uthelekisa ii izinto ngokwe "zininzi, zimbalwa, yona eninzi, eyona encinci nezilinganayo, ezininzi njenge" • Chaza ucwangcise ingqokelela yee izinto ngokwe" yona eninzi, eyona encinci" • Cwangcisa ii izinto uyokuma ku 5. • Chaza ucwangcise ingqokelela yee izinto ngokwe " yona eninzi, eyona encinci nakweyona enkulu." • Chaza ucwangcise ingqokelela yee izinto ngokwe " yona eninzi, eyona encinci nakweyona enkulu." • Chaza, thelekisa ucwangcise ii izinto uyokuma kwi- 5 • Chaza uthelekise amanani apheleleyo uyokuma kwi- 5 ulesenzisa ulwimi, imizekelo;	Ukuthelekisa nokucwangcisa amanani kunceda abafundi ekuphuculeni izivo yokwazi ubungakanani bamanani. Iyakubanceda ekwazini ubukhulu nobuncinci bamanani. Xa abafundi benolwazi bobungakanani bamanani, bakufumana ukubala kulula. Kwisigaba sesiSeko lento kuthiwa lulwazi lokubala. Izakhono zokubala zibalulekileekuthelekiseni nasekucwangciseni kwamanani. Ucwangciso lwamanani luquka: • ukufunda amanani azikhadinali ezichaza ixabiso lwenani • ukusebenzisa, ukufunda,nokubhalaamagama amanani neesimboli • ulwimi lokuthelekisa amanani ukuthelekisa amanani ee izinto Idla ngokwenziwa ngokusebenzisa ungqinelano lwamanani. Abafundi babala ingqokelela yamanani baze batshatise amagama amanani ngokungqinelana nee izinto. Ukuthelekisa iingqokelela yee izinto ixhomekeke kumava okubala kwabafundi. Kubalulekile ukuba ugxininise kulwazi luka "phezulu no ngaphantsi" xa bethelekisa ubungakanani. Xa uthelelekisa ii izinto, ulwimi lokuthelekisa luyaphuhliseka. Imizekelo: ezininzi nje…, inani elifana nje nge…, lilingana ne…., ngaphezu kwe…, ngaphantsi kwe…, ncinci kuna….. Ukucwangcisa amaqela ee izinto Ekubaleni nasekuthelekiseni iiseti zee izinto, abafundi bafumanisa bafunde ezi zinto zilandelayo: • Iingqokelela ezimbini ziyalingana xa zisabelana ngamagama amanani nangona iingqokelela zihlelwe ngokohlukeneyo. • Ukubala amanani kumele ukulandelelana kwamanani eziya zinyuka qho ngexesha, umzekelo, u- 5 uza emva ko -4, yiyo lento ingqokelela yee izinto ezi- 5 ininzi ngo -1kune ngqokelela yezinto ezi- 4, ingaphantsi ngo- 1 kunengqokelela ka- 5. Ukucwangcisa nokuthelekisa amanani Xa abafundi becwangcisa amanani, banokusebenzisa umgama phakathi kwamanani ukwazi leliphi inani elikhulu kunelinye.	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.4 **Chaza, thelekisa ucwangcise amanani**	Chaza, thelekisa ucwangcise izinto uyokuma ku 20 • Chaza uthelekisa ii izinto ngokwe "yona eninzi, eyona encinci nezilinganayo" • Chaza ucwangcise ingqokelela yee izinto ngokwe " yona eninzi, eyona encinci nakweyona enkulu." • Chaza, thelekisa ucwangcise ii izinto uyokuma ku 20 • Chaza uthelekise amanani apheleleyo ngoko" incinci kune, inkulu kune, ininzi kune, imbalwa kune, ziyalingana. • Chaza uthelekise amanani ukussuka ku –incinci ukuya ku enkulu kunye ngoku "enkulu ukuya kwencinci"	• Ngoko "incinci kuno, inkulu kuno, imbalwa kuno. • Chaza ucwangcise: - Amanani ukususka ku ncinci ukuya ku – nkulu kunye ngo –nkulu ukuya ku – ncinci. - Usebenzisa ilwimi,, imizekelo, phambi, emva, embindini/ phakathi	Umzekelo, bazakuthi u -5 mkhulu kuno -2 ngoba u- 5 uza emva ko- 2, abafundi badibanisa ukubala kwee izinto, bathelekise iqela lee izinto ezili- 9 kwiqela lee izinto ezimbini.kubafundi besigaba sesibini nesesithathu, bazakucwangcisa bathelekise amanani ngokucacisa ukubaluluka kwamanani. Abafundi kufuneka bacwangcise amnani besebenzisa iindidi zemifanekiso. Abafundi bangacwangcisa amnani kwakhona besebenzisa umgca manani. Imizekelo: • Thatha inani u -3 ulibeke kumgca manani. • Khetha inani elisemva ko 4ulibeke kwindawo echanekileyo kumgca manani • Khetha inani eliphakathi kwesi- 3 nesi-5 ulibeke kwindawo echanekileyo kumgca manani • Khetha inani eliphambi kuka -2 ulibeke kwindawo echanekileyo kumgca manani • Khetha inani eliphambi kuka- 3 ulibeke kwindawo echanekileyo kumgca manani  Amakhadi amanani Umzekelo: Abafundi bangapakisha amakhadi ngokokulandelelana kwawo. Ukuqhubekekela kwiitekisi zokubhala Abafundi bangaqukumbela ulwazi lwabo ngokugqibezela imisebenzi kwiicwadi zomsebenzi. Oku kungenziwa ngexesha ngexesha labo. Intsusa nenani lolandelelwano Intsusa ibhekisa kwitotali yenani elikwiseti okanye kwingqokelela. Inani lolandelelwano lubhekisa kwindawo yee izinto kwiseti. Uqhagamshelwano phakathi kwentsusa nenani lolandelelwano lufuna ukwenziwa. Abafundi bakuyiqonda lento xa bebala iqela lee izinto ze bazi ukuba xa bebamba I izinto yesihlanu sebebale izinto ezintlanu.amanani olandelelwano enziwa kwikota yesi -4	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
UKUSOMBULULA IINGXAKI ZOKUBALA KWIMEKO ETHILE				
1.6 **Iindlela zokusom-bulula iingxaki zezibalo**	Sebenzisa ezindlela zilandelayo zokusombulula iingxaki zezibalo nokucacisa izisombululo kwiingxaki: • Izixhobo eziphathekayo, umz. Izinto zokubala • Iimifanekiso okuzoba amabali ezibalo • Ukwakha nouchitha amanani • Uku phinda kabini nokwahlula kabini ngokulinganayo • Umgca manani	Sebenzisa ezindlela zilandelayo zokusombulula iingxaki zezibalo nokucacisa izisombululo kwiingxaki: • Izixhobo eziphathekayo, umz. Izinto zokubala • Iimifanekiso yokuzoba amabali ezibalo • Umgca manani oxhaswa zizixhobo eziphathekayo umz. Amaso okubala	Ngale kota abafundi bazakuqala ukusombulula iingxaki zokubala ngamazwi besebenzisa ezi ndlela zilandelayo zokusombulula iingxaki: • Izixhobo ezibambekayo • Imizobo • Imigca manani **Imizobo nezixhobo ezibambekayo** Abafundi bazakuzoba imifanekiso basebenzise izixhobo ezibambekayo uuksombulula iingxaki. Ekupheleni kwekota abafundi bangazoba imifanekiso enamanani ukucacisa indlela yokubala nezisombululo. Kubalulukile ukuba imifanekiso nemizobo ibe namanani achaza indlela yokubala nezisombululo ngoku:: • Amanqaku adibeneyo • Amanani **Imigca amanani** Ukusebenzisa imigca manani ukubancedisa ukubala izakunika abafundi indlela yokurekhodisha indlela abacinga ngayo bayilandelele. Inika abafundi umfanekiso wokurekhodisha abanokuyisebenzisa ukucacisa indlela abazisombulule ngayo iingxaki zezibalo. Kule kota abafundi bazakwaziswa kumgca mananibazakuqalisa ukuzisebenzisa ngengeendlela zokubala. Xa uqala ukusebenza ngemigca manani amaso ahlohliweyo angabekwa ngaphezulu nangaphantsi komgca manani ukunceda amanani. Phambi kokuba abafundi basebenzise umgca manani njengendlela yokubala, kufuneka bazisebenzise uku: • Bala phambili nasemva • Funda iisimboli zamanani • Bhala iisimboli zamanani • Beka amanani kumgca manani • Ukucwangcisa nokuthelekisa amanani	

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1.6 **Iindlela zokusombulula iingxaki zezibalo**	Sebenzisa ezindlela zilandelayo zokusombulula iingxaki zezibalo nokucacisa izisombululo kwiingxaki: • Izixhobo eziphathekayo, umz. Izinto zokubala • Iimifanekiso okuzoba amabali ezibalo • Ukwakha nouchitha amanani • Uku phinda kabini nokwahlula kabini ngokulinganayo • Umgca manani	Sebenzisa ezindlela zilandelayo zokusombulula iingxaki zezibalo nokucacisa izisombululo kwiingxaki: • Izixhobo eziphathekayo, umz. Izinto zokubala • Iimifanekiso yokuzoba amabali ezibalo • Umgca manani oxhaswa zizixhobo eziphathekayo umz. Amaso okubala	Xa usebenzisa umgca manani njengomfanekiso wokubala, iku" tsiba" kungafundwa ngokusebenzisa iminwe okanye ngokwenza imigca phandle nangokutsiba kwinani ukuya kwelinye. Ezi ndidi zemisebenzi zinceda abafundi ukubona ukuba liphi inani ukuthelekisa nelinye. Kufanele ukuba bakwazi ukuthi: "ukusuka kwi -3 ukwi -5 kuzakuthatha imitsi emi- 2". Abafundi mabanikwe amathuba okuqashela ukuba mingaphi imitsi, ukusuka kwi-2 ukuya kwi-5. Umzekelo wokubonisa indlela abafundi abanokuwusebennzisa ngawo umgca manani kule kota: Ndinamakhwenkwe amathathu namantombazana amathathu awenza umsebenzi owongezelelweyo kwisifundo sobugcisa esikolweni esithile. Bangaphi abafundi bebonke kule klasi? Abafundi bangasebenzisa umgca manani ngalendlela ilandelayo ukufikelela kwimpendulo.  Jonga kumanqaku angezantsi, phantsi kuka "iimethodi nezicwangciiso gqinga" ukwazisa umgca manani. Qaphela ukuba abafundi basombulula iingxaki zokubala ngendlela enokuba utitshala ebengayilindelanga. Umzekelo, ukusombulula lengxaki ingaphezulu, abafundi banokukhetha ukuqala ukubala inani lwamantombazana, 2, baze bongeze u -3. Iimethodi zabafundi zizakuya zitshintsha ngokuba kuhamba unyaka, nangokuba beqonda ngakumbi iintlobo zokusombulula iingxaki zokubala, nangokuba ulwazi lwabo lwamanani luphuhla.	

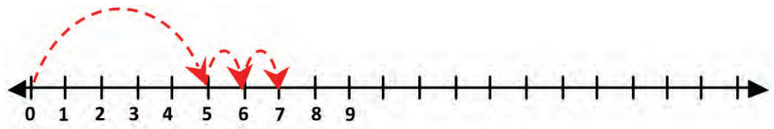
ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.7 **Ukudibanisa okuthabatha.**	Sombulula iingxaki zezibalo zamazwi uze ucacise indlela ozusombulule ngayo iingxaki zakho usebenzisa ukudibanisa, ukuthabatha ngeempendulo ukuya ku 20.	Sombulula iingxaki zezibalo zamazwi ngokwenza uze ucacise indlela ozusombulule ngayo iingxaki zakho usebenzisa ukudibanisa, ukuthabatha ngeempendulo ukuya ku 5.	Izibalo zamazwi zidla ngokusetyenziswa njengokuba qhelenisa ukubala. Abafundi baqala ukusombulula iingxaki ngokusebenzisa izixhobo eziphathekayo; ezithi ziphuhlise i: • Imifanekiso ezotyiweyo; • Imifanekiso ezotyiweyo nokubhala amanani ukucacisa izibalo; kunye • Nokusebenzisa amanani. Imizekelo: Kukho abafundi abahlanu kumahlandenyuka. Abathathu bahleli kwicala elinye. Bangaphi kwelinye icala? Kwikota yokuqala abafundi bangarekhodisha ingxaki yesisombulule sezibalo samazwi ngaledlela ilandelayo. **Iindlela zokubala** Ukusebenzisa ukubala konke ukusombulula iingxaki zomahla- ndenyuke.  Apha abafundi babala iqela ngalinye nengqokelela yonke, babala kathathu Basebenzisa ukubala ngokongeza besombulula ingxaki kamahla- ndenyuke. Abafundi babala ngokongeza ukusuka kwisi-3 bade bayekufika ku- 5. Le yiyona ndlela igqibeleleyo abanokuyisebenzisa . “Ndiyayazi ukuba kukho abafundi abathathu omnye umntwana ongezelelweyo wenza abafundi abane, omnye owongezelelweyo enze abafundi abahlanu. Kukho abafundi ababini kwelinye icala”.	

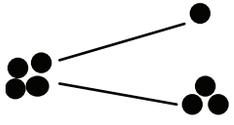
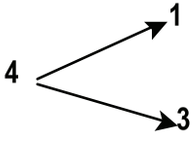
ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.7 **Ukudibanisa okuthabatha.**	Sombulula iingxaki zezibalo zamazwi uze ucacise indlela ozusombulule ngayo iingxaki zakho usebenzisa ukudibanisa, ukuthabatha ngeempendulo ukuya ku 20.	Sombulula iingxaki zezibalo zamazwi ngokwenza uze ucacise indlela ozusombulule ngayo iingxaki zakho usebenzisa ukudibanisa, ukuthabatha ngeempendulo ukuya ku 5.	*Ukwenza ukudibanisa nokuthabatha usebenzisa izixhobo* Abafundi basebenzisa izixhobo ngendlela ethile ukufikelela kwimpendulo. Abafundi basebenzisa izixhobo ukwenza intsingiselo yokudibanisa nokuthabatha usebenzisa izixhobo abanokuziphatha, bazise ngapha nangapha. Indlela abafundi abazisebenzisa ngazo izixhobo ixhomekeka kwindlela eme ngayo isibalo samazwi. **Ukurekhodisha imifanekiso yokudibanisa nokuthabatha** • Ukurekhodisha usebenzisa izixhobo ezibambekayo Abafundi bangasebenzisa izixhobo ezibambekayo ukubala kone nokubala ukya phambili. Abafundi bangaphinda bazisebenzise ezindllela xa bezoba imifanekiso ukubonisa indlela abcinga ngayo, iindlela abala ngazo nabasombulula ngazo iingxaki zabo. • Ukurekhodisha kwimifanekiso yodwa  **Ukurekhodisha kwimifanekiso namanani** Ukwenzela ukuba abfundi basebenzise amanani nemifanekiso ukucacisa indlela abacinga ngayo, kufuneka ba: • Kwazi ukunakana amanani u 1 ukuya ku 5 • Kwazi ukubala ii oizinto eziyi 5 baze bazi ukuba u 5 umele itotali yee izinto ezibaliweyo. • Bhala amanani • Cwangcisa uthelekise amanani Kukho abafundi abahlanu kumahla- ndenyuka. Abathathu bahleli kwelinye icala. Bangaphi kwelinye icala. **Iindidi zengxanki zokudibanisa nokuthabatha** Kuneentlobo ezintathu zeengxaki zokubala ngokudibanisa nokuthabatha indlela nganye ingabekwa ngeendlela ezahlukeneyo. Iindlela zezi:	

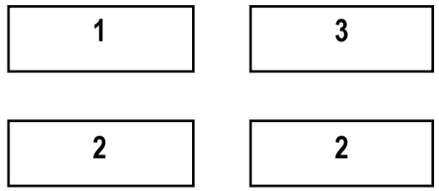
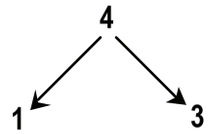
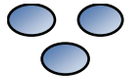
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1.7 **Ukudibanisa okuthabatha.**	Sombulula iingxaki zezibalo zamazwi uze ucacise indlela ozusombulule ngayo iingxaki zakho usebenzisa ukudibanisa, ukuthabatha ngeempendulo ukuya ku 20.	Sombulula iingxaki zezibalo zamazwi ngokwenza uze ucacise indlela ozusombulule ngayo iingxaki zakho usebenzisa ukudibanisa, ukuthabatha ngeempendulo ukuya ku 5.	*Tshintsha* UNoluthando unama apile amabini. USilo umnike ama apile amathathu. Mangaphi ama apile anawo ewonke? UNoluthando ebena maa pile amahlanu. Unike uSilo ama apile amane .mangaphi ama apile ngoku. *Dibanisa* UNosisi unamabhastile amabini aluhlaza namabini abhlowu. Mangaphi amabhastile anawo ewonke? uNosisi unamabhastile amane. Amathathu aluhlaza amanye abhlowu. Mangaphi amabhastile abhlowu uNosisa anawo? *Thelelekisa* UNosisi uneebhanana ezintlanu. UThemba unebhanana elinye. Zingaphi iibhanana zikaNosisa ngaphezu kwezika Themba? Izixhobo: Abafundi bangasebenzisa izinto zokubala, ukubancedisa ukwazi ukuba kwenzeka ntoni xa umntu ezibeka endaweni enye okanye ezithe saa. Izinto zokubala zinceda abafundi ukuba babone xa bebala konke. Imizekelo yezinto zokubala zezi: Izinto zokubala Izitiki zokubala Iziciko zokubala Iipeta zepesika Amatye Iityhubhu zeyunifeksi Ukusebenza amanani aphakathi kuka- 1 ukuya ku -5, Abafundi bangasebenzisa iminwe yabo njengezinto zokubala.	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.9 **Ukuhlula ngokwamaqela nokwaba ngokulinganayo kukhokela kukwahlula hlula**	Sombulula ucacise iingxaki zokubala ezisebenzisa ezipraktikali iquka ukwaba ngokulinganayo nokubeka ngokwamaqela ukuya ku 20 neempendulo eziquka amaselela.	Sombulula ucacise iingxaki zokubala ezisebenzisa ezipraktikali iquka ukwaba ngokulinganayo nokubeka ngokwamaqela ukuya ku 5 neempendulo eziquka amaselela.	Kwibanga loku-1 ukuthabatha kwaziswa ngokubanika iingxaki zokubala ezenziwayo eziquka ikwabelana nokuqukanisa. Kukwibanga lwesithathu apho kufundiswa uphawu u hlula hlula. Ngezantsi, kukho iinltobo zeengxaki zamazwi ezinokwenziwa. **Ukubeka ngokwamaqela** *Ukubeka ngokwamaqela, ulahla intsalela* UStella uthengisa isikwash ngeengxowa ezimbini. Usiyekelwe zizikwash ezintlanu. Zingaphi iingxowa zezikwash ezibini anokuzenza? *Ukubeka ngamaqela, ubandakanya intsalela kwimpendulo yakho* Kukho ama apile amane. Zingaphi iingxowa zama apile anokuzugcwalisa? **Ukwaba** *Ukwaba ulahla intsalela* Yahlula iilekese ezintlanu kwizihlobo ezintathu ngokulinganayo. **Ukurekhodusha imifanekiso kumaqela nokwaba** Xa ubonisa ukwahlula izibalo zamazwi, Abafundi bazakohlula ngaphandle kanye okanye iizinto ngexesha.   Abafundi banokwahlula into ibenye ngexesha, oku kuzakuboniswa xa kurekodishwa. Ngoba unyaka uhamba Abafundi bazakukwazi ukurekhodisha besebenzisa imifanekiso namanani ukubonisa inani elahlula hlulweyo.	

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IZIBALO EZINGALAWULWA MEKO Zininzi iindlela zokucinga ukufunda nokufundisa ukubala.Enye indlela kukucinga ngoluhlu lwamanani.Uluhlu lwamanani abafundi abasebenza kulo luzakuchaza iintlobo zezixhobo ekufuneka bazisebenzise nendlela abazakuwarekhodisha ngawo. Ngako ke, indlela enye yokucinga ngokubala kwisigaba sesiseko kukumela izibalo. Lento yenziwa ngolu hlobo: • Ngokusebenzisa izixhobo ezibambekayo; • Ngokuzoba imifanekiso; • Ngokusebenzisa imifanekiso neesimboli; • Ngokusebenzisa amanani okanye iintolo; okanye • Ngokusebenzisa izivakalisi zamanani. Abafundi bayayeka ukusebenzisa izixhobo ezibambekayo basebenzise izixhobo ezingabonwayongeesimboli zamananinangezivakalisi zamanani. Izibalo zingaphantsi koluhlu lokusombulula iingxaki zokubala.Abafundi baphuhlisa izakhono zokusombulula iingxaki zokubala ukuze basebenze ngamanani.Abafundi kufuneka benze izibalo ezinngasekelwanga mxholweni.				

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.12 Ubuchule (iindlela)	Sebenzisa obu buchule bulandelayo xa usenza izibalo: • Izixhobo ezibambekayo, imiz.. izinto zokubala • Zoba imifanekiso • Yakha ukuya phambili wahlula hlule amanani • Ukuphinda phinda nokwahlula ngokulinganayo • Umgca manani	Sebenzisa obu buchule bulandelayo xa usombulula iingxaki naxa ucacisa izisombululo zokubala: • Izixhobo ezibambekayo imiz. Izinto zokubala • Imifanekiso yokuzoba amabali ezibalo Imigca manani exhaswa zizixhobo ezibambekayo, umz. Ukubala amaso.	Ngale kota abafundi bazakuqala ukusombulula iingxaki zokubala besebenzisa izixhobo ezibambekayo. Kubalulekile ukuba Abafundi baseb ngamazwi besebenzisa ezi ndlela zilnzise iintlobo ezahlukeneyo zezixhobo ezichongwe ngobuchule ukuxhasa uphuhliso lwezinto ezifundisiweyo. Njengokuba abafundi baye bezithemba ekusebenziseni izixhobo, ukubonisa ukuba bacinga, banokurekhodisha izibalo zabo ngokuzoba. Lindela ukba imizobo yabo izakubonisa izixhobo ezibambekayo.kunokubakho abafundi abanokubonisa izibalo zabo ngookuzoba bengasebenzisi izixhobo ezibambekayo. **Imigca manani exhaswa zizixhobo ezibambekayo** Xa usebenzisa umgca amanani nje ngetekhnikhi yokubala, abafundi kufuneka basebenzise ezi zinto zilandelayo kuqala: • Ezinye izixhobo eziyimigca, imiz. Ukubala amaso,imikhondo yamanani; • Umgca manani ukubala ukuya phambili nangasemva; kunye • Umgca manani ukwenzela kubekwe kuze kucwangciswe amanani. Umgca manani oseSikweni mawusetyenziswe xa bafundi besenza ukudibanisa nokuthabatha.umgca manani oseSikweni mawubonise onke amanani. • Fundisa udibanisa usebenzisa umgca manani. a) Utitshala ubeka umgca manani ukuqala ku 0 ukuya ku 10 ebhodini. Ubonisa Abafundi indlela yokusombulula le ngxaki 3 + 2 usebenzisa umgca manani. Ubeka umfanekiso kumvundla ku 0. Umz. Umvundla utsiba ku 0 uye 5 uze utsibe eminye emitsi emibini.Mingaphi imitsi umvundla eyenzileyo?  b) Abafundi mabasebenzise iminwe ukutsiba kwiidesika zabo kwimigca manani, xa utitshala enika izivakalisi zamanani neempedulo ukya ku 10, umz: 1 + 2 =3.	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Ukubala: 1 -20 • Dibanisa ku 20 • Thabatha ku 20 • Sebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi uyekuma ku 10	Ukubala: 1 -5 • Dibanisa ku 5 • Thabatha ku 5 • Prektiza iibhondi uyekuma ku 5	Kwikota 1 abafundi bakwazi ukudibanisa njengamaqela adibeneyo nanje ngokubala ukuya phambili, basebenzisa ulwazi lwabo lokuba ukudibanisa kungenziwa nangoluphi uhlobo. Basebenzisa amaso, bazobe imifanekiso okanye umgca manani ukwenza izibalo ezinje ngo 3 + 2 okanye 1 + 4 ngokubala phambili. Bacalu calula amanani ukwenzela ukudibanisa. Kwikota yokuqala abafundi batolika ukuthabatha njengo “kuthatha into”.babonisa “uthatha into” ngokusebenzisa izinto bazobe imifanekiso nezivakalisi zamanani. Bayaqonda ukuba ii izinto ezishiyekileyo zisisiphumo sesibalo. Baphinda barekhodishe ukudibanisa nokuthabatha besebenzisa: • Izixhobo eziphathekayo; • Imifanekiso okanye imizobo;okanye • Imifanekiso namanani. **Ukusebenza ngommandla ka 1 – 5** Xa abafundi besebenza okanye bebala phakathi kwamanani athile banokukhulisa ulwazi lwabo lokudibanisa nokuthabatha ngalendlela ilandelayo: • Ukusebenzisa izixhobo ezibambekayo ukubonisa inani nokwenza izibalo • Barekhodishe izabalo esebenzisa imifanekiso neemodeli • Mabarekhodishe izibalo zabo besebenzisa ingqokelela yemifsnekiso namanani **Ukwakha nukucazilula amanani** Ukudibanisa nokuthabatha kwibanga 1 kusebenzela uk uba abafundi bakwazi ukucinga ngamanani njengamanye amanani.uninzi lwabafundi lusoloko lusenza imisebenzi yokwahlula hlula amanani apheleleyo. Le misebenzi igqalisa kwinani elinye.umz.xa usebenza ngenani u -4 abafundi baza: • Cazulula u- 4 ngendlela eyahlukileyo; • Biza okanye ufunde ngokukhwaza; okanye • Zoba okanye uwabhale phantsi.  	

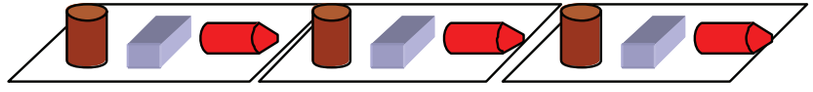
ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Ukubala: 1 -20 • Dibanisa ku 20 • Thabatha ku 20 • Sebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi uyekuma ku 10	Ukubala: 1 -5 • Dibanisa ku 5 • Thabatha ku 5 • Prektiza iibhondi uyekuma ku 5	Abafundi bangasebenzisa amakhadi amanani ukubonisa iindawo zamanani.ngoko ke, ukubonisa u 4, amanye alamakhadi angasetyenziswa ngoku:  Ngokurekhodusha kwincwadi zabo zokubala ngexesha labo elikhululekileyo.  Xa besenza ukuthabatha abafundi benza izibalo zamabali eziphuhlisa ulwazi lwabo lokuthabatha as “ ukuthatha” okanye “ ukubala phandle”. Abafundi kufuneka benze imisebenzi yoku” fakela “. Le misebenzi incedisa ulwazi lokuthabatha yaye zifuna indawo efihliweyo okanye engaziwayo. Imiz: Ndine….  Akwaba bendinezinto ezi- 5 Uphawu **alufundiswa** kule kota. Abafundi kufuneka baqhelaniswe kwiindlela ezininzi zokubhala izivakalisi ezizakunceda xa uphawu lufundiswa kwikota ezayo. **Umzekelo 1**  □ no □ benza **2** **Umzekelo 1**  □ no □ benza **3**	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Ukubala: 1 -20 • Dibanisa ku 20 • Thabatha ku 20 • Sebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi uyekuma ku 10	Ukubala: 1 -5 • Dibanisa ku 5 • Thabatha ku 5 • Prektiza iibhondi uyekuma ku 5	**Iibhondi zamanani** Kule kota abafundi baziqhelanisa neebhondi zamani ukuya kwi- 5.lento ingaboniswa kwimifanekiso nezivakalisi zamanani besebenzisa iindlela ezahlukeneyo zemifanekiso. Ukudibanisa Umzekelo: *Ukwenza isi -5 okanye ukufumana abahlobo aba-5 besebenzisa imifanekiso namanani.* Fakela umbala ukwenza isi- 5 Imiz:  _____ kunye _____ zenza isi- 5  _____ kunye _____ zenza isi- 5  _____ kunye _____ zenza isi- 5  _____ kunye _____ zenza isi- 5 **Ulwimi lokudibanisa nokuthabatha** Abafundi kufuneka baziqhelanise ulwimi lokudibanisa nokuthabatha. **Ukudibanisa:** Dibanisa, kunye ne,yandisa ngo,hlanganisa,zizonke, zenza	

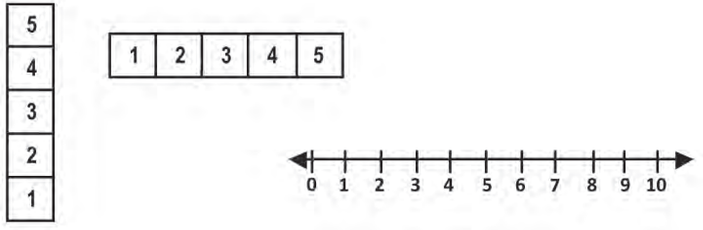
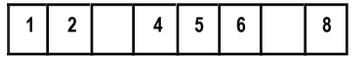
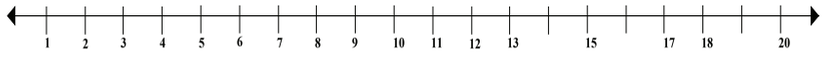
ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Ukubala: 1 -20 • Dibanisa ku 20 • Thabatha ku 20 • Sebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi uyekuma ku 10	Ukubala: 1 -5 • Dibanisa ku 5 • Thabatha ku 5 • Prektiza iibhondi uyekuma ku 5	**Ukuthabatha:** thabatha, thatha, umahluko,phakathi,ngaphantsi, icuthwe ngo Kwikota yesibini abafundi baza" kuguqula" ulwimi lokudibanisa nokuthabatha zibe ziisimboli. Abafundi bamele ukukwazi ukuphendula iezi ntlobo zahlukeneyo zemiyalelo: • Yenza u 3 ngaphezulu kuno • Dibanisa 1 ngaphezulu kuno • Thatha u 3 • Yenza u1 ngaphantsi • u3 no 2 ngaphezu kuno • 4 uthabathe u2 • 3 udibanise no 1	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.16 **Izibalo zentloko**	**Ingqiqo ngamanani: Ummandala wama 20** • Landelelanisa le seti yamanani oyinikiweyo • Thelekisa amanani uyokumaku 100 uchaze ukuba leiiphi elininzi nelingaphantsi. • Yazi ukuba leliphi inani elingaphezu ngo 1 okanye ngaphantsi ngo 1 kwinani ulinukiweyo. • Yazi ukuba leliphi inani elingaphezu ngo -2 okanye ngaphantsi ngo 2 kweli nani ulinukiweyo. • Yazi ukuba leliphi inani elingaphezu ngo- 2 okanye ngaphantsi ngesi- 2 kweli nani ulinukiweyo. • Yazi ukuba leliphi inani elingaphezu ngo 10 kanye ngaphantsi ngo 10 kweli nani ulinukiweyo. **Ngokukhawuleza khumbula:** • Iibhondi zamanni ukuya ku 10 • Khumbula amanqaku okudibanisa nokuthabatha ka 10	**Ingqiqo ngamanani:** Ummandla **we- 5** • Landelelanisa le seti yamanani oyinikiweyo • Thelekisa amanani uyokumaku 10 uchaze ukuba leliphi elininzi nelingaphantsi. • Yazi ukuba leliphi inani elingaphezu ngo 1 okanye ngaphantsi ngo 1 kwinani ulinukiweyo. • Yazi ukuba leliphi inani elingaphezu ngo 2 okanye ngaphantsi ngo 2 kweli nani ulinukiweyo.	Iiseshoni zokubala ngentloko ziphuhlisa Abafundi: • Ulwazi lwamanani; • Ulwimi lweMthematika; • Izakhono zokucinga kunye • Nezakhono zokumamela. Ngaleseshoni yokubala ngentloko Abafundi mabanikwe inxaxheba yokucacisa iimethodi zabo. Le seshoni yakha ulwazi lwamanani (izivo ngamanani) ize ifundise Abafundi indlela elula yamanani. Inani u 5 aliselulo inani nje. Imiz. Inani 4, Abafundi mabazi ukuba: • Liza emva ko 5; • Iiza phambi ko 6; • Iinokudityaniswa ngee izinto eziyi 5; • bangabhala iisimboli ; • Babhale amagama amanani. **Iingqiqo ngamanani** Imizekelo yemibuzo nemisebenzi enokubuzwa nenokwenziwa: • Funda umgca ubuze: ngubani owokuqala, owesibini, owesithathu okanye wokugqibela? • Leliphi elingaphantsi, u 3 okanye 5? • Leliphi elingaphezulu, u 2 okanye 4? • Ndinike amanani aphakathi kuka 1 no 3, • Ndinike amanani phakathi kuka 2 no 5.Ingaba kukho inani elinye? • Beka lamakhadi amanani ngokobuncinci ukuya kubukhulu bamanani. Imibuzo yokubala engabuzwayo: • Qala ngo 3 uze ubale ukuya phambili ngoo- 1ukuya kwi- 10.	

ISAHLUKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.16 **Izibalo zentloko**	**Iindlela zokufundisa ukubala ngentloko** Sebenzisa iindlela zokubala ukudibanisa nokuthabatha ngokuchanekileyo: • Beka amanani amakhulu kuqala ukwenzela ukubala okanye ukubala ngomva. • Umgca manani • Ukuphinda phinda nokwenza iziqingathaa • Yakha uqhawule amanani			

IBANGA LOKU- 1 IKOTA YOKU - 1 2.IIPATENI, II-FANKSHINI NEALJIBRA				
IZIHLOKO	**IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA**	**INGQIQO NEZAKHONO UGXININISO LWEKOTA-1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**UBUDE BEXESHA** (kwizifundo zeyure e-1 nemizuzu engama-24)
2.1 **Iipateni zeJiyometri**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa, nokuchaza ngamaso • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezilula ezenziwe ngokukrwela imigca, ukwenza imlo okanye into **Ukuyila iipateni zakho** Ukuyila iipateni zakho zejiyometri • Ngezinto ezibonwayo • Ngokukrwela imigca, imilo okanye into **Iipateni ezisingqongileyo** Ukuchonga, ukuchaza ngamazwi nokukopa iipateni zejiyometri • Kwindalo • Kubomi bale mihla • Kwimbali yenkcubeko yethu	**Ukukopa nokwandisa** Ukukopa nokwandisa iipateni ezilula usebenzisa • Izinto eziphathekayo • Ukuzoba (umz. Usebenzisa imibala nemilo)	**Ukukopa** ipateni kuncedisa Abafundi ukuba babone indlela yokuqiqa eyenziwe ngayo ipateni **Ukwandisa**ipateni kuncedisaAbafundi ekujongeni bayiqonde ngokukuko indlela eyenziwe ngayo ipateni Abafundi bangakopa bandise iipateni ezenziwe ngezinto eziphathekayo nangaphambi kokuba bazive bekhululekile ekusebenziseni ikhrayoni okanye ipensile ukuqala ukukopa nokwandisa iipateni ngokuzoba. Iipateni zingenziwa ngezinto zemihla ngemihlaezifumaneka eklasini, ezinjengezixhobo zokubala, izinti zematshisi, iibhokisi zematshisi, imilo zejiyometri, amaso, ibhobhile, iibhokisi, iibhola, iikhrayoni, iipensile, njl.Abafundi bangenza izinto ngodongwe baze bazisebenzise ekwenzeni iipateni. Kwibanga 1 Abafundi bangagxininisa kwiipateni apho iimilo okanye izinto (amaqela eemilo okanye izinto) ziphindwayo ngendlela enye. Umzekelo 1: Kwezinye iipateni ubungakanani bento eqeleni buya bolekisana, kodwa amaqela aphindwa ngokufanayo  Umzekelo 2: Iipateni zingenziwa ngokusebenzisa into enye kodwa imibala yezinto itshintshe ngokulungeleleneyo  Umzekelo 3: Kwezinye iipateni izinto ezahlukeneyo ziyasetyenziwsa ukwenza iqela, kodwa amaqela ezinto aphindwa ngendlela efanayo. 	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
2.1 **Iipateni zeJiyometri**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa, nokuchaza ngamaso • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezilula ezenziwe ngokukrwela imigca, ukwenza imlo okanye into **Ukuyila iipateni zakho** Ukuyila iipateni zakho zejiyometri • Ngezinto ezibonwayo • Ngokukrwela imigca, imilo okanye into **Iipateni ezisingqongileyo** Ukuchonga, ukuchaza ngamazwi nokukopa iipateni zejiyometri • Kwindalo • Kubomi bale mihla • Kwimbali yenkcubeko yethu	**Ukukopa nokwandisa** Ukukopa nokwandisa iipateni ezilula usebenzisa • Izinto eziphathekayo • Ukuzoba (umz. Usebenzisa imibala nemilo)	Ukunceda Abafundi bebanga lokuqala babone ukuba liliphi na iqela eliphindiweyo, kuluncedo ukubeka iqela ngalinye kumaphetshana ohlukeneyo, okanye ulibonise ngaphakathi kwebhloko ephepheni, Umzekelo 4: Iipateni zingenziwa ngokuphinda amaqela ezinto.Amaqela angenziwa zizinto eziliqela ezifanayo ezibekwe ngeendlela ezahlukeneyo. Ukwenziwa kweepateni yinto ebaluleke kakhulu kwimfundo yabaqalayo,kwaye kuyenzeka kuLwimi, Izakhono zobomi, neMathematika. Umzekelo, ukwenziwa kweepateni yinxalenye yeengoma nomnye umculo, izicengcelezo, umdaniso nezinye iimo zobugcisa obubonwayo. Kukho amathuba wokuba Abafundi baziqhelanise nezakhono zokwenza iipateni ezibonwayo abazisebenzisa kwiMathematika naxa befunda ngezakhono zobomi- ingakumbi ukuhlohla amaso okanye ukuzoba iipateni.	Isifundo esi-1

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
2.2 **Iipateni zamanani**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ulandelelwano lwamanani alula ukuya ebuncinaneni kwi-100 . **Ukuyila ezakho iipateni** Ukuyila ezakho iipateni zamanani	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ulandelelwano lwamanani alula ukuya ebuncinaneni ku-20. Ulandelelwano malubonakalise ukubala usiya phambili nasemva: • Ukubala ngononye usuka kulo naliphi na inani eliphakathi kukazi-1 nama-20	KwisiGaba esisiSiseko,iipateni zamananizikhulisa ingqiqo yabafundi kwiipateni zamanani.Iipateni zamanani zinxulunyaniswa nemisebenzi yamanani kunye nolwalamano. Ulandelelwano lwamani lunganxulunyaniswa nokubala.kwaye luqinisa lukhulise izakhono zokubala kwabafundi.Njengoko izakhono zokubala zitshintsha kwaye zikhula, kukwanjalo nakulandelelaniso lwamanani Xa Abafundi bebala ngamazwi bangabonakalisa ulandelelwano lwamanani abhalwe phantsi ngeendlela ezahlukeneyo umz.  Abafundi bangagcwalisa amanani ashiyiweyo anikwe ngayo nayiphi na indlela ekwimo yolandelelwano olubonakaliswe ngasentla. Khumbula, nangona kunjalo, ukuba Abafundi babhala amanani ukuya kuzi-5. Abafundi bangagcwalisa ngokuwabiza amanani alahlekileyo baze basebenzise amakhadi amanani ukugqibezela ulandelelwano. Jonga amanqaku ngokuchaza, ukuthelekisa nokulandelelanisa. **Umzekelo 1**: umzila wamanani/.igridi yamanani  **Umzekelo 2:**ulandelelwano manani 1, 2, 3, __, 5, __, 7, __, 9, 10 Ekupheleni kwekota, uluhlu lwamanani luya kuma-20. Abafundi bangasebenza ngolandelelwaniso lwamanani ukuqala ku-1 ukuya kuma-20 okanye inxenye yolwandelelwano. **Umzekelo wesi- 3**: umgca-manani 	Izifundo ezi-3

IBANGA LOKU-1 IKOTA YOKU-1 2 IZITHUBA NEMILO (IJIYOMETRI)				
IZIHLOKO	**IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA**	**INGQIQO NEZAKHONO UGXININISO LWEKOTA-1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**UBUDE BEXESHA** (kwizifundo zeyure e-1 nemizuzu engama-24)
3.1. **Indawo-bume, ukufumana indawo, nemibono**	**Ulwimi nendawo- bumilo** Ukuchaza indawo-bumilo yento enye ngokuyinxulumanisa nenye umz. Ngaphezulu kwe, ngaphambili kwe, ngasemva, ekhohlo, ekunene, phezulu, phantsi, ecaleni kwe. **Indawo-bumilo nemibono** Tshatisa izimvo ezahlukeneyo zezinto zemihla ngemihla **Indawo-bumilo nezalathisio** • Ukulandela izalathisi uljikeleza iklasi • Ukulandela imiyalelo ukubeka into enye ngokunxulumene nenye umz. Beka ipensile ngaphakathi ebhokisini	**Ulwimi nendawo- bumilo** Ukuchaza indawo-bume yento enye ngokuyinxulumanisa nenye umz. Ngaphezulu kwe, ngaphambili kwe, ngasemva, ekhohlo, ekunene, phezulu, phantsi, ecaleni kwe. **Indawo-bume nezalathiso** • Ukusebenzisa ulwimi lwendawo bume olufundwe xa kulandelwa izalathisi • Ukulandela izalathiso uljikeleza iklasi • Ukulandela imiyalelo ukubeka into enye ngokunxulumene nenye umz. Beka ipensile ngaphakathi ebhokisini	**Ulwimi nendawo- bumilo** Ulwimi lwendawo bume lungaziswa ngemisebenzi eyenziwayo equka Abafundi kwintshukumo zomzimba ezidibanisa iingoma nezicengcelezoezinentshukumo nemidlalo enentshukumo yamazwi. Le nto ingenzeka ngexesha lokufundiswa kweklasi yonke. Kuyacetyiswa ukuba uchithe izifundo ezibini kwimisebenzi yendawo-bume ngeKota yoku-1, kodwa uqhubeke ngokwazisa nokuziqhelanisa namagama endawo-bume yeklasi iyonke,ugxininise kwixesha lokusebenza kweqela okanye ngokuzimeleyo. Ulwimi lwendawo-bume bungaqhelaniswa ngexesha lezifundo zolwimi okanye iZakhono zoBomi. Kuluncedo ukwazisa iipere zamagama endawo-bumengexesha elinye umz. Ukunyuka nokwehla, ngaphakathi nangaphandle.Amagama endawo- bume aquka: • Ekhohlo, ekunene ; • Phambili/ emva ; • Ngasemva/ ngaphambili kwe ; • Ngaphezulu/ ngaphantsi; • Ingaphakathi/ ngaphandle; • Ngaphantsi/ ngaphezulu ; • Ngaphantsi/ ngaphezulu ; • Kufutshane/ kude; • phakathi uLwimi lwendawo-bume bungaqiniselwa ngokubhaliweyo okunje ngemizobo, imibala okanye ukutshatisa imzobo ngamazwi	Izifundo ezi-2

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
3.2. **Indawo-bume, ukufumana indawo, nemibono**	**Ulwimi nendawo- bumilo** Ukuchaza indawo-bumilo yento enye ngokuyinxulumanisa nenye umz. Ngaphezulu kwe, ngaphambili kwe, ngasemva, ekhohlo, ekunene, phezulu, phantsi, ecaleni kwe. **Indawo-bumilo nemibono** Tshatisa izimvo ezahlukeneyo zezinto zemihla ngemihla **Indawo-bumilo nezalathisio** • Ukulandela izalathisi uljikeleza iklasi • Ukulandela imiyalelo ukubeka into enye ngokunxulumene nenye umz. Beka ipensile ngaphakathi ebhokisini	**Ulwimi nendawo- bumilo** Ukuchaza indawo-bume yento enye ngokuyinxulumanisa nenye umz. Ngaphezulu kwe, ngaphambili kwe, ngasemva, ekhohlo, ekunene, phezulu, phantsi, ecaleni kwe. **Indawo-bume nezalathiso** • Ukusebenzisa ulwimi lwendawo bume olufundwe xa kulandelwa izalathisi • Ukulandela izalathiso uljikeleza iklasi • Ukulandela imiyalelo ukubeka into enye ngokunxulumene nenye umz. Beka ipensile ngaphakathi ebhokisini	**Indawo-bumilo nezalithiso** Abafundi bangaqale bafunde ulwimilobume-bendawo baze basebenziseulwazi ukulandela: • Imiyalelo yokushenxisa okanye ukubeka iizinto ngokuzinxulumanisa nezinye umz.ukubeka ikhrayon ecaleni kwezixhobo zokubala; “beka amakhadi amanani ngaphezulu kwekhadibhodi”. • Izalathisi ukushenxisa iziqu zabo eklasini umz. “yiza ngaphambi kweklasi”, “yima ecaleni kwesitulo sakho”,”tsiba ngaphezulu komgqomo wenkunkuma”njl. Ukufundisa Abafundi ukulandela izalathisi kungenziwa ngokuziqhelanisa nemisebenzi apho Abafundi bashenxayo ngeziqu zabo okanye bashenxisa izinto ngokwemiyalelo.	Izifundo ezi-3

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
3.2. **Izinto ezino kwakheka kuka 3-D**	**Uluhlu lwezinto** Ukunakana nokubiza izinto ezinembonakalo emacala amathathu eklasini nasemifanekisweni • Iimilo eziyibhola (iingqukuva) • Iimilo ezizibhokisi (iprizim) **Iimpawu zezinto** Ukuchaza, ukuhlela, nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • bungakanani • umbala • izinto eziqengqelekayo • izinto ezitshibilizayo **Imisebenzi egqalisiweyo** Ukuqaphela nokwenza izinto ezinokwakheka kuka 3-D usebenzisa izinto eziphathekayo ezinjengebhloko zokwakha,izinto ezibuya zisetyenziswe, iikiti zokwakha	**Uluhlu lwezinto** Ukunakana nokubiza izinto ezinembonakalo emacala amathathu eklasini nasemifanekisweni • Iimilo eziyibhola (iingqukuva) • Iimilo ezizibhokisi (iprizim) **Iimpawu zezinto** Ukuchaza, ukuhlela, nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • bungakanani • umbala **Imisebenzi egqalisiweyo** Ukuqaphela nokwenza izinto ezinokwakheka kuka 3-D usebenzisa izinto eziphathekayo ezinjengebhloko zokwakha, izinto ezibuya zisetyenziswe, iikiti zokwakha	Umsebenzi omninzi ngezinto ezinokwakheka kuka 3-D kwibanga 1 ungenziwa ngezinto eziphathekayo.Ilizwe silibona ngamacala amathathu, ke ngoko ukuqala ngezinto eziphathekayo kunceda Abafundi ukuba bongeze kulwazi abeza nalo esikolweni.. Abafundi abaninzi abancinane bayazama ukuchaza izinto zeJiyometri ezinokwakheka kuka 3-D kwimifanekiso.Ukusebenza ngezinto eziphathekayo kunceda Abafundi ukuba bachaze imifanekiso yezinto zeJiyometri kamva.Xa unento ephathekayo ungayijika-jika uyijonge macala onke. Ungayibona ukuba ibukeka njani ngasemva nangaphantsi. Xa unomfanekiso kuphela, kufuneka ucinge ngamacala angabonakaliyo emfanekisweni. Le yinto engelula kubafundi abancinane.Ukuba Abafundi banikwe inkcazelo yento ngaphandle kokuyibona okanye ukuyiphatha, kuye kube nzima ukuqonda iimpawu zayo ngokupheleleyo. **Ukwakha ngezinto ezinokwakheka kuka 3-D** Abafundi baqala ngokudlala ngokukhululekileyo ngeentlobo ezahlukeneyo zezinto ezinokwakheka kuka 3-D besenza izinto ezikhethwe ngabo besebenzisa iibhloko zokwakha okanye iikiti zokwakha okanye izinto eziphinda zisetyenziswe.Le nto bangayenza ngexesha labo elilodwa. Ungasebenzisa izinto eziphinda zisetyenziswe (ezinjengebhokisi zematshisi) okanye ibhloko zokwakha okanye iikiti zokwakha ukwenza imodeli umz. Ithawa, irobhothi, uloliwe, itekisi, inqaba, njl.Abafundi bangenza ikopi yemodeli. Le nto ingenziwa ngexesha elilodwa kodwa kubalulekile ukuxoxa nAbafundi ukuba kutheni ezinye izinto zisetyenziswa njengemodeli.Le nto yenza abfundi bagxininise kwiimpawu zejiyometri zezinto. Umzekelo, ukuba ithawa yakhiwe ngeebhokisi okanye iibhloko, ungababuza Abafundi “ungayakha ithawa ngeebhola zodwa?” kufuneka bacacise iimpendulo zabo. **Ukunakana nokuxela iibhola (iingqukuva) iibhokisi (prizimu)** Abafundi bachonga bachaze iimilo zebhola (ngqukuva) neemilo zebhokisi (prizim) Abafundi mabachaze izinto zemihla ngemhla ngukuxela zimile okwebhola na okanye okwebhokisi umz. Esi sitena simile njengebhokisi okanye le-oreyinji imile njengebhola. Kubalulekile ukuba Abafundi babone basebenze ngemizekelo yezinto ezingaphezulu kwesinye ezimile njengebhola,nezinto ezimile njengebhokisi.. Abafundi **banganikwa** uluhlu lwezinto ezingqukuva basebenze ngazo umz. Iibhola zobungakanani obahlukeneyo, iimayibhile, iiorenji njl Abafundi bangaphinda banikwe uluhlu lwezinto ezimile njengeprizim basebenze ngazo umz. Ibhloko, izitena neebhokisi zobungakanani obahlukeneyo	Izifundo ezi-3

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
3.2. **Izinto ezino kwakheka kuka 3-D**	**Uluhlu lwezinto** Ukunakana nokubiza izinto ezinembonakalo emacala amathathu eklasini nasemifanekisweni • Iimilo eziyibhola (iingqukuva) • Iimilo ezizibhokisi (iprizim) **Iimpawu zezinto** Ukuchaza, ukuhlela, nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • bungakanani • umbala • izinto eziqengqelekayo • izinto ezitshibilizayo **Imisebenzi egqalisiweyo** Ukuqaphela nokwenza izinto ezinokwakheka kuka 3-D usebenzisa izinto eziphathekayo ezinjengebhloko zokwakha,izinto ezibuya zisetyenziswe, iikiti zokwakha	**Uluhlu lwezinto** Ukunakana nokubiza izinto ezinembonakalo emacala amathathu eklasini nasemifanekisweni • Iimilo eziyibhola (iingqukuva) • Iimilo ezizibhokisi (iprizim) **Iimpawu zezinto** Ukuchaza, ukuhlela, nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • bungakanani • umbala **Imisebenzi egqalisiweyo** Ukuqaphela nokwenza izinto ezinokwakheka kuka 3-D usebenzisa izinto eziphathekayo ezinjengebhloko zokwakha, izinto ezibuya zisetyenziswe, iikiti zokwakha	Abafundi **mabafumane bahlele** izinto ezimile njengebhola (ingqukuva), okanye emile njengebhokisi(iprizimu) xa benikwe ingqokolela yezinto. Abafundi bangafumana, babonise, babize izinto ezimile njengebhokisi (prizim) eklasini. Abafundi bangayalelwa ukuba ukuba benze iimilo ezinjengebhola okanye iimilo ezinjengebhokisi ngodongwe okanye intlama yokudlala. **Ukuthelekisa nokuchaza izinto ezinokwakheka kuka 3-D: ubungakanani** Abafundi bathelekisa ubukhulu bezinto ezifanayo **Umzekelo:** • Ukulandelelanisa iibhola nokobungakanani • Ukusebenzisa ulwimi lobungakanani ukuthelekisa izinto “ibhokisi inkulu kunebhola, kuba ndingayifaka ibhola phakathi ebhokisini” **Ukuchaza izinto ezinokwakheka kuka 3-D: umbala** Abafundi bathetha ngemibala yezinto baze bahlele izinto ngokwemibala Ukuchonga nokubiza izinto nemibala yazo kunye nokuthelekisa ubungakanani bezinto kungaqhelaniswa ngexesha lokusebenza ngeepateni. **Imisebenzi ebhalwayo** Nangona umsebenzi omninzi wezinto ezinokwakheka kuka 3-D isenziwa, umsebenzi ungaqiniswa ngemisebenzi ebhaliweyo **Ulwimi** Kubalulekile ukukhulisa ubuchule bomfundi bokuthetha ngezinto ezinokwakheka kuka 3-D • Ulwimi lobungakanani: inkulu, inkulu kunenye, inkulu kuzo zonke, incinane, incinane kunenye, incinanene kuzo zonke • Imibala • Ulwimi lwezinto: libhokisi, iibhola,**(Abafundi abalindelekanga ukuba bazi isigama esingu-ngqukuva neprizimu)**	Izifundo ezi-3

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
3.2. **Izinto ezino kwakheka kuka 3-D**	**Uluhlu lwezinto** Ukunakana nokubiza izinto ezinembonakalo emacala amathathu eklasini nasemifanekisweni • Iimilo eziyibhola (iingqukuva) • Iimilo ezizibhokisi (iprizim) **Iimpawu zezinto** Ukuchaza, ukuhlela, nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • bungakanani • umbala • izinto eziqengqelekayo • izinto ezitshibilizayo **Imisebenzi egqalisiweyo** Ukuqaphela nokwenza izinto ezinokwakheka kuka 3-D usebenzisa izinto eziphathekayo ezinjengebhloko zokwakha,izinto ezibuya zisetyenziswe, iikiti zokwakha	**Uluhlu lwezinto** Ukunakana nokubiza izinto ezinembonakalo emacala amathathu eklasini nasemifanekisweni • Iimilo eziyibhola (iingqukuva) • Iimilo ezizibhokisi (iprizim) **Iimpawu zezinto** Ukuchaza, ukuhlela, nokuthelekisa izinto ezinokwakheka kuka 3-D ngoko: • bungakanani • umbala **Imisebenzi egqalisiweyo** Ukuqaphela nokwenza izinto ezinokwakheka kuka 3-D usebenzisa izinto eziphathekayo ezinjengebhloko zokwakha, izinto ezibuya zisetyenziswe, iikiti zokwakha	• Indawo-bume ukuchaza isakhiwo **Umzekelo**: - Ngaphezulu kwe/ ngaphantsi - Nasemva, ngaphambili - Ecaleni kwe, ngasecaleni - Ngaphantsi,ngaphezulu - Ngase, phakathi kwe - Ngaphakathi, ngaphandle Ulwimi lobungakanani nombala lungakhuliswa ngexesha lezifundo zoLwimi okanye iZakhono zoBomi.Zistyenziswe okanye ziqhelaniswe ngexesha lezifundo zeMathematika Ulwimi lwendawo bume lungakhuliswa ngexesha lezifundo zoLwimi okanye iZakhono zoBomi nangexesha Abafundi bagxininisa kwindawo –bume. Lungasetyenziswa okanye luqhelaniswe xa Abafundi besebenza nezinto ezinokwakheka kuka 3-D	Izifundo ezi-3

IBANGA LOKU-1 IKOTA YOKU-1 4. UMLINGANISELO				
IZIHLOKO	**IINGQIQO NEZAKHONO IMFUNO YOKUPHELA KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA 1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**UBUDE BEXESHA** (kwizifundo zeyure e-1 nemizuzu engama-24)
4.1 **Ixesha**	**Ukudlula kwexesha** ukuthetha ngokudlula kwexesha • Ukulandelelanisa iziganeko ezenzeka rhoqo kubomi babo. • Ukuthelekisa ubude bexesha usebenzisa ulwimi: lide, lifutshane, ngokukhawuleza, kancinane • Ukulandelelanisa iziganeko usebenzisa ulwimi olunjengo: izolo, namhlanje, ngomso **Ukuxela ixesha** • Ukuchaza ixesha eyenzeka ngalo into usebenzisa ulwimi umzekelo: kusasa, emalanga, ebusuku, kwangoko, kade • Ukuxela uze ulandelelanise iintsuku zeveki • Ukuxela ulandelelanise iinyanga zonyaka. • Ukubeka iimini zokuzalwa kwikhalenda.	**Ukudlula kwexesha** ukuthetha ngokudlula kwexesha • Ukulandelelanisa iziganeko ezenzeka rhoqo kubomi babo. • Ukuthelekisa ubude bexesha usebenzisa ulwimi: lide, lifutshane, ngokukhawuleza, kancinane • Ukulandelelanisa iziganeko usebenzisa ulwimi olunjengo: izolo, namhlanje, ngomso **Ukuxela ixesha** • ukuchaza ixesha eyenzeka ngalo into usebenzisa ulwimi umzekelo: kusasa, emalanga, ebusuku, kwangoko, kade • Ukuxela uze ulandelelanise iintsuku zeveki • Ukuxela ulandelelanise iinyanga zonyaka. • Ukubeka iimini zokuzalwa kwikhalenda	Abafundi mabafunde ukuthetha: • Ngokulandelelanisaa iziganeko no • Bude bexesha. Ubuninzi balo msebenzi wenzeka ntsuku zonke ngexesha lokufundiswa kweklasi yonke okanye ngexesha ekufundiswa ngalo amaqela. Abafundi bathetha baphendule imibuzo ngexesha ekwenzeka ngalo izinto, ukusetyenziswa kolwimi njengo ekuseni, emini, ebusuku, kwangoko, kade.. **Ukudlula kwexesha** Abafundi balandelelanisa iziganeko besebenzisa ulwimi olunjengo izolo, namhlanje, ngomso. Abafundi bathelekisa ubude bamaxesha besebenzisa ulwimi njengo inde kunenye okanye imfutshane kunenye,iyabaleka kunenye okanye iyacothoza kunenye. Abafundi bathetha ngokulandelelanisa iziganeko kubomi babo. Abafundi balandelalanisa imifanekiso enjengale • Amanqanaba okwenza amaqebengwana okanye ikomityi yeti,; • Iifoto ezibonakalisa ukukhula komntwana abe ngumntu omdala; • Umjikelo wobomi wezilwanyana umz. Iqanda libe yinkuku okanye iqanda libe lisele okanye iqanda libe libhabhathane; ne • Iziganeko ezenzeka rhoqo ngosuku (ukuvuka, ukuba sesikolweni, ukudlala, ukutya isopholo, ukulala). **Ukuxela ixesha** • Abafundi bafunda iintsuku zeveki becula iingoma besenza nezicengcelezo. Abafundi baziqhelanisa yonke imihla. • Iimini zokuzalwa kwikhalenda kwintsuku ekuzizo. • Abafundi bafunda inyanga zonyaka becula iingoma besenza nezicengcelezo	Izifundo ezi-2

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO YOKUPHELA KONYAKA	IINGQIQO NEZAKHONO ZEKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
4.2 **Ubude**	**Umlinganiselo ongekho sesikweni.** • Thelekisa uze ulandelelanise ubude, umphakamo okanye ububanzi bezinto ezimbini nangaphezulu ngokuzilungelelanisa • Ukusebenzisa ulwimi ukuthetha ngokuthelekisa umzekelo: inde kunenye, imfutshane kunenye, inde kunenye, ibanzi kunenye • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe usebenzisa imilinganiselo engekho seSikweni umzekelo: umlinganiselo wesandla, isantya, ubude bepensile, izixhobo zokubala njalo njalo • Chaza ubude bezinto ngokubala nokutsho ubude bento ngokungekho seSikweni	**Umlinganiselo ongekho sesikweni.** • Thelekisa uze ulandelelanise ubude, umphakamo okanye ububanzi bezinto ezimbini nangaphezulu ngokuzilungelelanisa • Ukusebenzisa ulwimi ukuthetha ngokuthelekisa umzekelo: inde kunenye, imfutshane kunenye, inde kunenye, ibanzi kunenye	Yonke imilinganiselo yeBanga1 ayikho sesikweni.Akukho milinganiselo isesikweni yobude yenziwayo. Kuyacetyiswa ukuba izifundo zeMathematika zigqalise kubude ebuncinaneni iiKota ezimbini zonyaka (Kota -1 neKota -3). Ugqaliselo kwiKota -1 lungakuthelekiswa ngqo ize kwiKota yesi 3 abafundi bangasebenza ngeeyunithi zemilinganiselo engekhosikweni.Abafundi bangaziqhelanisa baqinise le milinganiselo ngexesha labo lokusebenza unyaka wonke. **Uthelekiso ngqo lobude bezinto eziphathekayo** • Ukukhulisa ulwazi ngobude nolwimi olusetyenziswayo abafundi baqala ngokucinga bathethe ngobude bethelekisa izinto ezimbini (okanye imizobo yezinto ezimbini) ezinomahluko oqaphelekayo ngokobude.. **Umzekelo**: • Umtya omde nomtya omfutshane • Umthi omde nomthi omfutshane, • Umlambo obanzi nomlambo omxinwa Abafundi bangenza okanye bazobe imizekelo enjengale • Ukusebenzisa udongwe okanye intlama yokudlala ukwenza inyoka ende nenyoka emfutshane • Ukusebenzisa iibhloko ukwenza ithawa(tower) ende nethawa (tower) emfutshane • Ukuzoba ititshala ende netitshala emfutshane Bakuba abafundi bekwazi ukuthetha ngobude ngokwezichasi, umntu angabazisa ulwimi olutsha lokuthelekisa, umzekelo, “ndenze uloliwe omde kodwa uSihle wenze uloliwe omdana” Ukuthelekisa ubude ngokubeka izinto ecaleni kwenye Bakuba bekwazi abafundi ukuthetha ngobude obugqithisileyo (inde, imfutshane, njl), bathelekise ubude bezinto ezahlukeneyo xa zijongwa okokuqala bangaya kwimizekelo engabonakali yahlukene xa ijongwa okokuqala kwaye kufuneka bayibeke ecaleni kwenye ukuyithelekisa. Umzekelo, • Bafuna ukuba nguwuphi kubantwana ababini omde kunomnye ngokuba beme ngokusingeleneyo. • Babeka iikhrayoni ezimbini ecaleni kwenye balungelelanise amazantsi azo ukufumana emfutshane kunenye	Izifundo ezi-2

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO YOKUPHELA KONYAKA	IINGQIQO NEZAKHONO ZEKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
4.2 Ubude	**Umlinganiselo ongekho sesikweni.** • Thelekisa uze ulandelelanise ubude, umphakamo okanye ububanzi bezinto ezimbini nangaphezulu ngokuzilungelelanisa • Ukusebenzisa ulwimi ukuthetha ngokuthelekisa umzekelo: inde kunenye, imfutshane kunenye, inde kunenye, ibanzi kunenye • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe usebenzisa imilinganiselo engekho seSikweni umzekelo: umlinganiselo wesandla, isantya, ubude bepensile, izixhobo zokubala njalo njalo • Chaza ubude bezinto ngokubala nokutsho ubude bento ngokungekho seSikweni	**Umlinganiselo ongekho sesikweni.** • Thelekisa uze ulandelelanise ubude, umphakamo okanye ububanzi bezinto ezimbini nangaphezulu ngokuzilungelelanisa • Ukusebenzisa ulwimi ukuthetha ngokuthelekisa umzekelo: inde kunenye, imfutshane kunenye, inde kunenye, ibanzi kunenye	Abafundi mabanikwe ithuba lokuthelekisa imizekelo emibini lwentlobo ezahlukeneyo zezinto ezinjenge zinti, iipensile, imicinga yokusela, imitya, iribhoni, nemicu yamaphepha, njl.njl. Imizekelo yezinto ezimbini nayo ingathelekiswa ukuba ibekwe ecaleni komnye ilingelelaniswe ngasentla okanye ngasezantsi. Abafundi bangaqhubeka bathelekise balandelelanise izinto ezintathu nangaphezulu. Esi senzo sibizwa ngokuba yisiriyeyishini “seriation”. Imizekelo iquka • Amaqela Abafundi abeme ngokusingelana ngababini ukuze beme umgca ukuqala koyena wakhe wamfutshane ukuya koyena wakhe wamde; kunye • Ukumiswa kwamaqela ezinto ezingantathu nangaphezulu kwiqela ngalinye, ukusuka kwende kakhulu ukuya kwemfutshane kakhulu okanye ebanzi kakhulu ukuya kwemxinwa kakhulu .Izinto ezilungele ukusetyenziswa ziquka iipensile, iikhrayoni, iibhotile, izinti, imitya,imicu yamaphepha, izihlangu . Abafundi bayakhula ngengqiqo yobude ngexesha elinye ngokuya bekhula kulwimi lokuchaza ubude. Njengoko le nto ingafuni manani, ingenziwa ekuqaleni kweKota -1 phambi kokuba abafundi baqinise ulwazi kwingqiqo yamanani ukuya kwisi-5 nemisebenzi Nangona ukulinganisa kusisakhono sokwenza, abafundi bangenza imisebenzi ebhalwayo, engaquka ukuzoba nokufaka imibala (colouring), ukuze baziqhelanise nokusebenzisa iikhrayoni okanye iipensile ukuze baziqhelanise nokurekhodisha xa belinganis.	Izifundo ezi-2

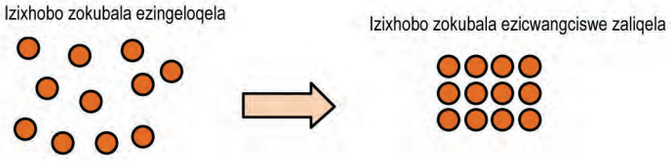
IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO YOKUPHELA KONYAKA	IINGQIQO NEZAKHONO ZEKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
4.3 **Umthamo**	**Umlinganiselo ongekho sesikweni** • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe ubunzima usebenzisa isikali sokulungelelanisa nemilinganiselo engekho seSikweni umzekelo: iibhloko, izitena njalo njalo. • Ukusebenzisa ulwimi ukuthetha ngothelekiso umzekelo: ilula, inzima, ilula kunenye, inzima kunenye • Ukuchaza ubunzima bezinto ngokubala, nokuchaza ubunzima ngeeyunithi ezingekho sesikweni	**Umlinganiselo ongekho sesikweni** • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe ubunzima usebenzisa isikali sokulungelelanisa nemilinganiselo engekho seSikweni umzekelo: iibhloko, izitena njalo njalo. • Ukusebenzisa ulwimi ukuthetha ngothelekiso umzekelo: ilula, inzima, ilula kunenye, inzima kunenye	Yonke imilinganiselo yeBanga1 ayikho sesikweni.Akukho milinganiselo isesikweni yezixhobo zobunzima yenziwayo Kuyacetyiswa ukuba izifundo zeMathematika zigxininise kubunzima ebuncinaneni iiKota ezimbini zonyaka (Kota 1 neKota 4). Ugqaliso kwiKota -1 lungakuthelekiswa ngqo ize kwiKota yesi- 4 abafundi bangasebenza ngeeyunithi zemilinganiselo engekho seSikweni. Abafundi bangaziqhelanisa baqinise le milinganiselo ngexesha labo lokusebenza unyaka wonke **Uthelekiso ngqo lobunzima bezinto eziphathekayo** • Ukukhulisa ulwazi ngobunzima nolwimi olusetyenziswayo ekuthethwa abafundi baqala ngokucinga bathethe ngobunzima bethelekisa izinto ezinzima nezilula Bachonga izinto ezilula kakhulu baze bachonge into enzima kakhulu. Oku kungaqiniswa ngokubonisa imizobo apho izinto ezinzima kakhulu nezilula kakhulu zithelekiswa.. • Bakuba bekwazi abafundi ukuthetha ngokobunzima ngokusebenzisa izichasi, inzima no ilula, abafundi bangathelekisa izinto baxele ukuba yiyiphi enzima kunenye nelula kunenye.Le nto ingenziwa ngokubamba into kwisandla ngasinye uzithelekise ukuba yiyiphi enkulu kunenye nokuba yiyiphi encinane kunenye. Abafundi mabarekhode wonke umsebenzi ngokwenza imisebenzi yokuzoba okanye ukutshatisa • Ukuthelekisa usebenzisa isikali somlinganiselo (balancing scale)	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO YOKUPHELA KONYAKA	IINGQIQO NEZAKHONO ZEKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
4.3 **Umthamo**	**Umlinganiselo ongekho sesikweni** • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe ubunzima usebenzisa isikali sokulungelelanisa nemilinganiselo engekho seSikweni umzekelo: iibhloko, izitena njalo njalo. • Ukusebenzisa ulwimi ukuthetha ngothelekiso umzekelo: ilula, inzima, ilula kunenye, inzima kunenye • Ukuchaza ubunzima bezinto ngokubala, nokuchaza ubunzima ngeeyunithi ezingekho sesikweni	**Umlinganiselo ongekho sesikweni** • Qikelela, yenza umlinganiselo, thelekisa, lungelelanisa uze urekhodishe ubunzima usebenzisa isikali sokulungelelanisa nemilinganiselo engekho seSikweni umzekelo: iibhloko, izitena njalo njalo. • Ukusebenzisa ulwimi ukuthetha ngothelekiso umzekelo: ilula, inzima, ilula kunenye, inzima kunenye	• Imilinganiselo yentengiso ingasetyenziswa. Ukuba awunayo imilinganiselo yentengiso, ungenza enye ngokuncamathelisa ipere yezi zilandelayo, ihenga (hanger) yebhatyi,ikomityi yeyogathi, umzantsi osikiweyo webhotile ezilitha ezi-20kanye umzantsi webhokisi yobisi okanye isiselo (izinto zokugalela ezifanayo zincanyathiselwa kumacala ehenga). - Abafundi bangaqala ngokubeka izinto ezifanayo kumacala esikali ukubona ukuba intonga okanye umzantsi wehenga uxwesile xa izinto zinobunzima obufanayo. - Abafundi bathelekisa izinto ngokuzibeka kumacala esikali ukubona ukuba yiyphi enzima akanye elula kunenye. - Abafundi bangathelekisa izinto ngokubeka izinto ezingaphezulu kwento enye kwicala elinye okanye kumacala omabini esikali ukubona ukuba zingaphi izinto ezinobunzima njengenye umz. Iikhrayoni ezi-5 zinobunzima besikere esinye. - Lo msebenzi ungandiswa wenziwe isiriyeyishini (seriation), apho Abafundi bahlola ubunzima beepere zezinto ezithelekiswayo zide zilandelelane ukuqala kwelula kunenye ukuya kwenzima kunenye okanye enzima kunenye ukuya kwelula kunenye. Izinto mazichongwe ukuquka izinto ezinkulu ezilula nezinto ezincinane ezinzima, umz. Ipakethe yetyuwa ebunzima bungama-250g nebhokisi khonfleyikisi. Oku kunceda abafundi ukuba baqonda kwasekuqaleni ukuba ubunzima buzalaniswa nobungakanani ukuba iyalinganiselwa/iyakalwa. Abafundi baphuhliswa kwingengqiqo yobunzima ngaxesha nye nolwimi lokuchaza ubunzima luyakhula. Kuba oku kungafuni manani, lo msebenzi ungenziwa ekuqaleni kweKota yoku-1 ngaphambi kokuba abafundi baqinise ingqiqo yamanani ukya kwi-5 nemisebenzi.. **Ukurekhodisha** Nangona ukulinganisela kusisakhono sokwenza, abafundi mabenze imifanekiso ebhalwayo enokuquka imizobo nokufaka imibala, ukuze baziqhelanise nokusebenzisa iikhrayoni okanye iipensile baze baziqhelanise nokurekhoda xa elinganisela	Izifundo ezi- 2

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO YOKUPHELA KONYAKA	IINGQIQO NEZAKHONO ZEKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho sesikweni** • Ukuthelekisa nokulandelelanisa umthamo wento engamanzi (liquid) kwiziqulatho ezibini ezibekwe ecaleni kwesinye.Abafundi batshekisha ngokugalela kwisiqulatho sesithathu ukuba kuyimfuneko • UkuThelekisa nokulandelelanisa umthamo wento engamanzi ongagcinwa kwiziqulatho ezibini ukuba zigcwlisiwe (capacity) • Ukusebenzisa ulwimi ukuthetha nothelekiso umz. Ingaphezulu kwe, incinane kune, igcwele, ayinanto • Ukuqikelela, ukulinganisela, ukuthelekisa, ukulandelelanisa nokurekhoda umthamo weziqulatho ngokusebenza umlinganiselo ongekho seSikweni umz. Amacephe neekomotyi.	**Umlinganiselo ongekho sesikweni** • Ukuthelekisa nokulandelelanisa umthamo wento engamanzi (ilikhwidi) kwiziqulatho ezibini ezibekwe ecaleni kwesinye.Abafundi batshekisha ngokugalela kwisiqulatho sesithathu ukuba kuyimfuneko • Ukusebenzisa ulwimi ukuthetha nothelekiso umz. Ingaphezulu kwe, incinane kune, igcwele, ayinanto	Yintoni umthamo? Umthamo bubungakanani obunokugcinwa yinto. (bonke ubungakanani besithuba ngaphakathi kwento). Ibhotile inganomthamo weekomityi ezine, kodwa kwixesha elithile inganekonityi enye yento engamanzi.Abafundi bebanga lokuqala balindeleke ukuba bazi ukuba yintoni umthamo Yonke imilinganiselo kwiBanga loku-1 ayikho seSikweni. Awukho umlinganiselo womthamo oseSikweni weyunithi owenziwayo .Kuyacetyiswa ukuba izifundo zeMathematika zigxininise kumthamo kwiiKota ezintathu zonyaka (Kota 1, Kota 2 neKota 3). Ugqaliso kwiKota 1 lungakukhuliso lolwimi kuthethwe ngezinto ezigcweleyo kunezinye nangothelekiso kumthamo, iKota yesi -2 ingakuthelekiso ngqo ize kwiKota yesi-3 abafundi basebenze neeyunithi zomlinganiselo ezingekho seSikweni.Abafundi bangaziqhelanisa baqinise le milinganiselo ngexesha labo lokusebenza unyaka wonke **Uthelekiso ngqo lomthamo kwiziqulatho** Ukukhulisa ulwazi ngomthamo nolwimi olusetyenziswayo Abafundi baqala ngokucinga nokuthetha ngomthamo bethelekisa ubungakanani bezinto ezingamanzi ezikwiziqulatho ezifanayo (okanye imizobo yeziqulatho ezifanayo) kugxininiswa ku • Igcwele no ayinanto • Ingaphezulu kune/ ingaphantsi kune • Iyafana Abafundi bangagcwalisa okanye bathulule iziqulatho besebenzisa amanzi okanye umhlaba njl.Njengoko lo msebenzi ungafuni manani, ungenziwa kwangoko kwiKota 1 phambi kokuba Abafundi baqinise ingqiqo yabo yamanani ukuya kwi-5 nemisebenzi. **Ukurekhoda** Nangona ukulinganisela kusisakhono sokwenza, abafundi mabenze imisebenzi ebhalwayo enokuquka imizobo nokufaka imibala, ukuze baziqhelanise • nokusebenzisa iikhrayoni okanye iipensile baze baziqhelanise • nokurekhoda xa elinganisela	Isifundo 1

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO YOKUPHELA KONYAKA	IINGQIQO NEZAKHONO ZEKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
4.4 Umthamo/ Ivolumu	• umthamo wesiqulatho ngokubala nokuxela ukuba zingaphi iiyunithi ezingekho seSikweni ezigcwalisa isiqulaqtho umz. Ibhotile inomthamo weekomotyi ezine			Isifundo 1

IBANGA LOKU-1 IKOTA YOKU-1 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA**	**INGQIQO NEZAKHONO UGXININISO LWEKOTA-1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**UBUDE BEXESHA** (kwizifundo zeyure e-1 nemizuzu engama-24)
Ukusebenza ngengqokelela yezinto				
5.1 Ukuqokelela nokuhlela izinto	**Ukuqokelela ulandelelanise izinto** Ukuqokelela uhlele izinto eziphathekayo zemihla ngemihla.	**Ukuqokelela ulandelelanise izinto** Ukuqokelela uhlele izinto eziphathekayo zemihla ngemihla.	Ukuhlela, ukuvelisa kwakhona nokuchaza ingqokelela ehleliweyo zizakhono ezibalulekileyo zabafundi ekufuneka zikhule kwangoko ekufundeni (jonga amanqaku kwizakho zaphambi kwamanani ekuqaleni kweenowuthsi zengcaciso)Inkqubo ikhulisa izakhono abafundi abaza kuzisebenzisa xa besenza umjikelo wokuqokelela ulwazi. Abafundi banganikwa ingqokelela yezinto bacelwe ukuba bazihlele. Umzekelo, nika amaqela izixhobo zokubala ezifanayo ubacele ukuba bazihlele ngokwemibala, banike ingqokelela yezixhobo zokubhala ezahlukeneyo ezinjengelebheli zesonka (bread tags), iingqakumba zeepesika/iipete, izinti zematshisi, iziciko zeebhotile ucele Abafundi bazihlele ngokwamaqela. Abafundi bazoba umfanekiso wamaqela abawenzileyo. Ngale ndlela Abafundi barekhoda abakwenzileyo .Baphendula imibuzo ngamaqela abawenzileyo **Umzekelo** “Uwenze njani amaqela akho ezixhobo zokubala?” “ ndenze amaqela emibala.” “Nguwuphi umbala ubunelona qela likhulu lezixhobo zokubala?” “Iqela lam elikhulu belingubomvu.” “Mingaphi imibala yeentlobo zezixhobo zokubala obunayo?” “bendineentlobo zemibala emihlanu.” Abafundi bangenza ezabo iingqokolela. Umzekelo, Abafundi bangaqokelea amagqabi kumabala esikolo okanye beze neziqulatho zokutya ezingenanto emakhaya .	Izifundo ezi-2
5.2 Ukumela/ ukubonakalisa ingqokelela ehleliweyo yezinto	**Velisa kwakhona ingqokelela yezinto ezihleliweyo** Ukuzoba umfanekiso wezinto eziqokelelweyo	**Velisa kwakhona ingqokelela yezinto ezihleliweyo** Ukuzoba umfanekiso wezinto eziqokelelweyo		
5.3 Ukuxoxa nokunika ingxelo ngengqokelela ehleliweyo yezinto	**Xoxa unike ingxelo ngengqokelela yezinto ezihleliweyo** • Nika izizathu zendlela ingqokelela ehlelwe ngayo. • Phendula imibuzo - Ngendlela uhlelo olwenziwe ngayo (inkqubo) - Ngendlela ingqokelela ebonakala ngayo (imveliso) • Ukuchaza ingqokelela nomzobo • Ukucacisa indlela ingqokelela ehlelwe ngayo	**Xoxa unike ingxelo ngengqokelela yezinto ezihleliweyo** • Nika izizathu zendlela ingqokelela ehlelwe ngayo. • Phendula imibuzo - Ngendlela uhlelo olwenziwe ngayo (inkqubo) - Ngendlela ingqokelela ebonakala ngayo (imveliso) • Ukuchaza ingqokelela nomzobo • Ukucacisa indlela ingqokelela ehlelwe ngayo		

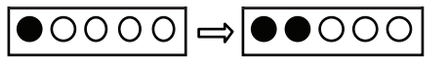
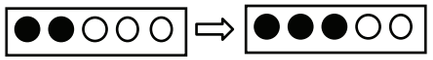
IBANGA LOKU -1 IKOTA YESI -2 1.AMANANI, II-OPAREYSHINI NOLWALAMANO				
IZIHLOKO	**IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA**	**INGQIQO NEZAKHONO UGXININISO LWEKOTA-1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**UBUDE BEXESHA** (kwizifundo zeyure e-1 nemizuzu engama-24)
UKHULISO NGQIQO MANANI: Uubana ngamanani apheleleyo				
1.1 **Ukubala izinto**	Ukubala izinto ngokuthembekileyo ukuya kuma-50 . • Nika ingqikelelo yezinto eziliqela ezinokutshekitshwa ngokubala.	Ukubala izinto ngokuthembekileyo ukuya kuma-50 . • Nika ingqikelelo yezinto eziliqela ezinokutshekitshwa ngokubala. • Ukubala ngokweqela kuyakhuthazwa	**Yintoni eyahlukileyo kwiKota yokuqala?** KwiKota yesi-2, uluhlu lokubala amanani luyandiswa.Lusekhona ugxininiso ekuqondeni ukuba inani lokugqibela elibiziweyo libonakalisa inani lezinto ezikwingqokelela. Abafundi babala izinto ezininzi kwaye kwiKota yesi-2 mabafunde ngendlela yokubeka izinto xa kubalwa ukuze xa betshekisha abakubalileyo, ukucwangcisa kubancede ekubaleni ngokulula. **Umzekelo:**  Kule kota Abafundi baqhubeka ngokwandisa izakhono zabo zokubala: • Ukubala konke; • Ukubala uqalakulo;. • Ubaluleko lomthetho-siseko wamanani; • Nokusebenza ngeetekisi ezibhaliweyo. Kwikota yesibini abafundi baqala: • Ukubala izinto abangenakuziphatha okanye bazibambe. **Umzekelo:** Buza Abafundi: “Mangaphi amacandelo kwifestile yeglasi ?” **Bala izenzo** Umzekelo: Qhwaba amaxesha ali-15. Phakamisa iminwe esi-8.	

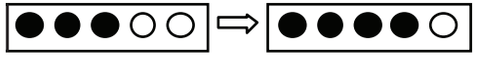
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.1 **Ukubala izinto**	Ukubala izinto ngokuthembekileyo ukuya kuma-50 . • Nika ingqikelelo yezinto eziliqela ezinokutshekitshwa ngokubala.	Ukubala izinto ngokuthembekileyo ukuya kuma-50 . • Nika ingqikelelo yezinto eziliqela ezinokutshekitshwa ngokubala. • Ukubala ngokweqela kuyakhuthazwa	**Uqikelelo** Ukuqikelela iqela lezinto eziyingqokelela kukhulisa izakhono ezibalulekileyo zokuqikelela. Oku kunceda Abafundi ukuba baqikelele ngokukuko.Oku kubalulekile xa besenza umsebenzi: bangaztshekisha ukuqinisekisa ukuba iimpendulo zabo ziyinyaniso Kuluncedo kubafundi ukubala imifanekiso yezinto eziyingqokelela nezingeyongqkelela nezingekho qeleni.Zama ukuthelekisa izinto eziyingqokelela nezingeyiyo ingqokelela ngokucela abafundi ukuba baqikelele ukuba yiyiphi enezinto ezininzi. Bangaqikelela iqela lezinto ezikumfanekiso ngamnye. Bangalibhala phantsi inani loqikelelo. Bangabala. Bangathelekisa uqikelelo lwabo nokubala kwabo. Cela abafundi bathethe ngendlela ababale ngayo.Zama ukufumanisa ukuba babale bonke na Abafundi eqeleni. **Ukuxela inani lezinto ngokwamaqela ngokuchanekile ungazibalanga nganye nganye** Abafundi bandisa izakhono zokunakana ingqokelela encinci yezinto **Ukubala ngamaqela** Ukuze uncede Abafundi babale ngokushiya izithuba ezi-2, ezi-5 nezili-10 kufuneka babeke izinto ngoono-2, ono-5, nama-10.Amakhadi amanani makabekwe ecaleni kwengqokolela nganye ukubonakalisa inani lezinto eziqokelelweyo.Ukubala ngamaqela kuzakulungiselela Abafundi ukuqonda iziphidwa kwisigaba esiphakathi . **Izixhobo zokubala:** Ingqwalaselo eyodwa mayinikwe iintlobo zezixhobo emazisetyenziswe. • Izixhobo ezinesakhiwo esithile ezinjengomtya wamaso okubala • Isihlohlo sobalo (abacus) ukuziqhelanisa nokubala ngamashumi. • Ukwenza iinyanda zono-2, iinyanda zoozi-5 namashumi baze bazibale zonke	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.2 **Bala usiya phambili, ubale ubuya umva.**	**Ukubala usiya phambili nokubala ubuya umva** • Ukubala ngezinye ukuqala kulo naliphi na inani phakathi kwe-0 ne-100 **Ukubala usiya phambili** • Ngezi-10 ukususka nakwesiphi isiphindwa seshumi se-10 phakathi kuka-1 ne-100 • Ngezi-5 ukususka nakwesiphi isiphindwa sesi-5 phakathi kuka -1 ne-100 • Ngezi-2 ukususka nakwisiphi isiphinwa ses-2 phakathi kuka-1 ne-100	**Ukubala usiya phambili nokubala ubuya umva** • Ukubala ngezinye ukuqala kulo naliphi na inani phakathi kwe-0 nama-50 **Ukubala usiya phambili** • Ngezi-10 ukususka nakwesiphi isiphindwa se-10 phakathi kuka-1 nama-50 • Ngezi-5 ukususka nakwesiphi isiphindwa sesi-5 phakathi kuka-1 nama-50 • Ngezi-2 ukususka kuso nasiphi na isiphindwa sesi-2 phakathi kuka-1 nama-20	**Yintoni eyahlukileyo kwiKota 1?** Kwi-Kota 2, Abafundi ngoku babala ukuya kuma-50 ngoononye. Babala ngokuqakathangama-10, ngezi-5 nangezi-2 .. **Ukubala ngamazwi uqakatha** Ukubala ngokuqakatha lelinye igama lokubala ngamaqela Kunceda ekukhuliseni ulwazi lweepateni zamanani. Ukubala ngokuqakatha kukhuthaza abafundi ukuba babale bacinge ngamaqela, yenza ukuba babenolwazi olwaneleyo. Kubanceda ekukhuliseni izakhono zabo zokuqikelela.Ukubala ngokuqakatha kubenza bazi ulwalamano phakathi kwamananiangalandelelaniyo.Yenza isiseko seepateni zamanani nophindaphindo. **Eminye imisebenzi** Nazi ezinye iingcebiso zokwenza iindlela ezahlukeneyo zokubala ngokuqakatha: • Qala ngokubala amanani alandelelanayo kodwa ugxininisa kwisibini ngasinye. Umzekelo, Abafundi bangaqhwaba babize inani lesibini ngokukhwaza. Cela abafundi babale kodwa bangalibizi elesibini.Oku kungandiswa ngokuthi abafundi babize inani lesithathu, lesine, lesihlanu. • Ungayohlula iklasi ibe ngamaqela, iqela ngalinye litshintshane ukubiza inani elilandelayo. Ukuba, umzekelo, wahlula iklasi ibe ngamaqela amahlanu, iqela ngalinye malibale isihlanu senani ngasinye. • Xelela Abafundi benze ipateni ebonwayo enjengokubamba iintloko kwinani lokuqala, ukunqumlezisa iingalo nokubamba amagxa kwelesibini, nokubetha amathanga abo njengoko bekhwaza elesithathu inani. • Isingqi somculo singasetyenziswa nokubala ngokuqakatha . **Ukubala izinto kungakhuliswa ngezakhono zokubala ngokukhwaza** Eklasini, imisebenzi yokubala ingakhulisa izakhono ezahlukeneyo. Ukubala ngokuqakatha makwaziswe xa kubekwa izinto ngokwamaqela. **Eminye imisebenzi** **Iigridi zamanani** Xelela abafundi bakrwelele amanani abawachonga njengoko bebala ngesi-2, izi-5,ngama-10 .Babuze ukuba baqaphela ntoni ngamanani abawasebenzisileyo. Tshintsha amanani abaqala kuwo abafundi ukubala.	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.2 **Bala usiya phambili, ubale ubuya umva.**	**Ukubala usiya phambili nokubala ubuya umva** • Ukubala ngezinye ukuqala kulo naliphi na inani phakathi kwe-0 ne-100 **Ukubala usiya phambili** • Ngezi-10 ukususka nakwesiphi isiphindwa seshumi se-10 phakathi kuka-1 ne-100 • Ngezi-5 ukususka nakwesiphi isiphindwa sesi-5 phakathi kuka -1 ne-100 • Ngezi-2 ukususka nakwisiphi isiphinwa ses-2 phakathi kuka-1 ne-100	**Ukubala usiya phambili nokubala ubuya umva** • Ukubala ngezinye ukuqala kulo naliphi na inani phakathi kwe-0 nama-50 **Ukubala usiya phambili** • Ngezi-10 ukususka nakwesiphi isiphindwa se-10 phakathi kuka-1 nama-50 • Ngezi-5 ukususka nakwesiphi isiphindwa sesi-5 phakathi kuka-1 nama-50 • Ngezi-2 ukususka kuso nasiphi na isiphindwa sesi-2 phakathi kuka-1 nama-20	**Ukuya kwiitekisi ezibhalwayo** • Umgca manani–abafundi babonakalisa ukubala ngokuqakatha besebenzisa umgca manani . • Ulandelelaniso manani–Xa kuphela ikota Abafundi bangagqibezela ulandelelaniso lwamanani alula(jonga amanqaku ngeepateni zamanani) • Umzekelo: - 2, 4, 6, 8, __ - 5, 10, 15, 20, __ - 10, 20, 30, 40, __	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.3 **Iisimboli namagama amanani**	**Ukunakana, ukuchonga nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwisi-1 ukuya kwi-100 • Ukubhala iisimboli zenani ukusuka kwisi-1 ukuya kwi-20 • Ukuchonga, ukunakana nokufunda amagama enani ukusuka kwisi-1 ukuya kwi-10 • Ukubhala amagama enani ukusuka kwisi-1 ukuya kwi-10	**Ukunakana, ukuchonga nokufunda amanani** • Ukuchonga, ukunakana nokufunda iisimboli zenani ukusuka kwisi-1 ukuya kwi-50 • Ukubhala iisimboli zenani ukusuka kwisi-1 ukuya kwi-10 • Ukuchonga, ukunakana nokufunda amagama enani ukusuka kwisi-1 ukuya kwi-10 • Ukubhala amagama enani ukusuka kwisi-1 ukuya kwi-10	**Yintoni eyahlukileyo kwiKota 1?** KwiKota 2, uluhlu lwamanani lokwazi, ukufunda nokubhala iisimboli zamanani namagama luyanda. Ukubala kumgca-manani nakwiigridi kunika Abafundi ukuziqhelanisa ekuchongeni, ekunakaneni, ekubizeni nasekufundeni iisimboli zenani. Nika Abafundi olunye uqhelaniso ngokugxininisa ingqaleloyabo kwiisimboli zamnani kokusingqongileyo nakokubhaliweyo. **Umzekelo:** • Bajonga amanani ephepha neencwadi • Bachonga imihla yokuzalwa ekhalendeni **Eminye imisebenzi** Utitshala unika le imiyalelo ilandelayo ukufumana inani,Abafundi babonisa oonotsheluza ukubonisa impendulo. • Fumana inani eliphambi kwi-12 • Fumana inani elisemva kwi-12 • Inani elingaphezulu ngesi-3 kwi-11 • Inani elingaphantsi ngesi-1kwi-14	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.4 **Ukuchaza, ukuthelekisa nokulandelelanisa amanani**	**Ukuchaza, ukuthelekisa nokulandelelanisa izinto ukuya kuma-20** • Ukuchaza nokuthelekisa ingqokelela yezinto ngokobuninzi, mbalwa, eyona, eyona incinane,engaphezulu kune, encinane kune, efana ne, zininzi njenge, yahlukile • **Ukuchaza nokulandelelanisa** ingqokelela yezinto ukusuka kwezona zininzi kuya kwezona zimbalwa nokusuka kwezona zimbalwa ukuya kwezona zininzi. **Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kuma-20** • **Ukuchaza nokulandelelanisa** amanani apheleleyo ngokwencinane kunenye, enkulu kunenye, engaphezulu kunenye, encinane kunenye, elingana nenye	**Ukuchaza, ukuthelekisa nokulandelelanisa izinto ukuya kwi-10** • Ukuchaza nokuthelekisa ingqokelela yezinto ngokobuninzi, mbalwa, eyona, eyona incinane,engaphezulu kune, encinane kune, efana ne, zininzi njenge, yahlukile • **Ukuchaza nokulandelelanisa** ingqokelela yezinto ukusuka kwezona zininzi kuya kwezona zimbalwa nokusuka kwezona zimbalwa ukuya kwezona zininzi. **Ukuchaza, ukuthelekisa nokulandelelanisa amanani ukuya kwi-10** • Ukuchaza nokulandelelanisa amanani apheleleyo ngokwencinane kunenye, enkulu kunenye, engaphezulu kunenye, encinane kunenye, elingana nenye	**Yintoni eyahlukileyo kwiKota 1?** KwiKota yesi-2 Abafundi baqhubeleka noku: • Landelelanisa nokuthelekisa izinto; • Landelelanisa nokuthelekisa amanani; • Nokusebenzisa ulwimi lokulandelelanisa nokuthelekisa. Ngeli xesha abafundi baqhubeleka nokulandelelanisa bathelekise izinto. Abafundi bangaqala ngokwakha ubuhlobo phakathi kwamanani ngokugxininsa ku-nye no-zimbini ngaphezulu, ku-nye no-ngaphantsi ngezimbini. • Xa kuthelekiswa iinqokelela abafundi mabakwazi ukuchaza izinto ngokuthi, “Ndinezixhobo zokubala ezingaphezulu ngesibini kunezakhe” okanye “unezixhobo ezimbalwa ngesinye kunezam”. • Xa kuthelekiswa amanani abafundi mabakwazi ukuthi “engaphezulu ngesinye kuzine nguzintlanu” okanye” uzi-7 ungaphezulu ngesibini kuzintlanu.” **Ukuphuhlisa ingqiqo ka “ingaphezulu ngesinye kunenye”** “Ingaphezulu kune”, kunyeno” incinane kune” sisiqalo sokudibanisa nokuthabatha okungekhosikweni. Ivumela abafundi ukuba baqonde ngobungakanani benani kunye nolandelwlwano lwamanani. • Yalela abafundi ukuba babeke isixhobo sokubala esi-1 kwisithuba sokuqala esingenanto kwikhadi yabo “efreyim zi-5”.Xelela Abafundi ukuba babeke isixhobo sokubala esinye ngaphezulu ecaleni kwesixhobo sokubala sokuqala. Buza: Zingaphi onazo ngoku? Mkhulu kangakanani u-nye ku-nye  • Yalela Abafundi ukuba babeke isixhobo sokubala esinye ngaphezulu kwikhadi yabo “efreyim z-5” Buza: Zingaphi onazo ngoku?  Mkhulu kangakanani u-nye kuno-mbini?	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.4 **Ukuchaza, ukuthelekisa nokulandele lanisa amanani**	• **Ukuchaza nokulandelelanisa amanani:** - Ukusuka kwelincinane ukuya kwelikhulu nokusuka kwelkhulu ukuya kwelincinane. - Ngaphambili, emva, embindini, phakathi - Ukusebenzisa umgca- manani uqala kwi-0 kuya kuma-20 • **Ukuchaza nokulandelelanisa** usebenzisa ulwimi umz. Ngaphambili, emva, embindini/ phakathi	• **Ukuchaza nokulandelelanisa amanani:** - Ukusuka kwelincinane ukuya kwelikhulu nokusuka kwelkhulu ukuya kwelincinane. - Ngaphambili, emva, embindini, phakathi - Ukusebenzisa umgca- manani uqala kwi-0 kuya kuma-20 • **Ukuchaza nokulandelelanisa** usebenzisa ulwimi umz. Phambi, emva, embindini, /phakathi	• Yalela Abafundi ukuba babeke isixhobo sokubala esi-1 ngaphezulu kwikhadi “efreyim zi-5” yabo Buza imibuzo: Zingaphi onazo ngoku?  Mkhulu kangakanana u-nye kuzi-ntathu? Zingaphi izixhobo ozifunbayo ukwenza ezihlanu? Buza “ungandixelela ntoni ngenani u- 4?(ungaphantsi ngesinye kuzi- 5.) Ungandixelela ntoni ngenani uzi-2 ? (ungaphantsi ngesithathu kuzi-5.) **Ukulandelelanisa amanani** . Iqela lemifanekiso Abafundi bathelekisa iqela lezinto ezili-9 kwiqela lezinto ezili-12 . imifanekiso esemgceni Xa abafundi belandelelanisa amanani bangasebenzisa izithuba phakathi kwamanani ukwazi ukuba liliphi inani elikhulu kunelinye. Umzekelo, Baya kuthi i-9 likhulu kunesi-2 kuba isi-9 siza emva kwesi-2 Ulandelelaniso lwamanani lungenziwa rhoqo ngexesha labo elizimeleyo **Eminye imisebenzi** *Ukulandelelanisa amanani* Abafundi balandelelanisa amakhadi amanani ukuqala ku-1 ukuya kwi-13 ukuqala kwelona lincinci ukuya kwelona likhulu . Abafundi bajika amakhadi abo imintla iya ezantsi. Bakhetha nawaphi na amakhadi ama-4, bawalandelelanise ukusuka kwelincinci kakhulu ukuya kwelikhulu kakhulubacele abahlobo batshekishe ukuba balandelelanise kakuhle na.Xa sele bekwazi ukulandelelanisa amakhadi ama-4 bakhetha ama-5.Bawabeka ngokulandelelanayo baze bakope amanani ukusuka kwelona lincinane ukuya kwelona likhulu.	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
	1.4 **Ukuchaza, ukuthelekisa nokulandele lanisa amanani**		**Imisebenzi ebhalwayo** Abafundi kufuneka baqinise ulwazi ngokugqibezela umsebenzi obhalwayo **Imizekelo:** Ekupheleni kwekota abafundi mabakwazi ukugqibezela izivakalisi zohlob olufanayo: u-1 ngaphezulu kune- 3 ngu_____ u-1ngaphezulu kune- 4ngu _____ u-1ngaphantsikuno- 2 ngu _____ ____ i-1 ngaphezulu kune-4 ____ i-1 ingaphantsi ngesi-3	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.6 **Ubuchule bokusombulula iiingxaki zezibalo**	Ukusebenzisa ubuchule obulandelayo xa usombulula izibalo zamanani nokucacisa indlela osombulule ngayo: • izixhobo eziphathekayoumz. izixhobo zokubala • Imifanekiso ukuzoba izibalo zamazwi (story sums) • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda nokwahlula ngokulinganayo • Umgca –manani	Ukusebenzisa ubuchule obulandelayo xa usombulula izibalo zamanani nokucacisa indlela osombulule ngayo: • izixhobo eziphathekayo umz.izixhobo zokubala • Imifanekiso ukuzoba izibalo zamazwi (story sums) • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda i nokwahlula ngokulinganayo • Umgca –manani ngokuxhaswa zizixhobo eziphathekayo umz. amaso okubala	**Yintoni eyahlukileyo kwiKota 1?** Kule Kota abafundi baziswa uphinda-phindo nokwahlula ngokulinganayo okokuqala Ekupheleni kwekota Abafundi baza kuqala uksombulula izibalo zamanani zamazwi: • Imifanekiso nezixhobo eziphathekayo • Ukwakha nokuhlukanisa amanani • Ukuphindaphida nokwahlula ngokulinganayo • Umgca-manani **Imizobo okanye izixhobo zokubala eziphathekayo** Abafundi bazakuqhubeka nokuzoba imifanekiso basebenzise izixhobo zokubala eziphathekayo ukusombulula izibalo zamanani zamazwi. Kubalulekile ukuba imifanekiso okanye imizobo ibe namanani kunye nezibalo zamazwi. **Ukwakha nokcalula amanani** Le yeyona ndlela ibalulekileyo kwisiGaba esisisiSeko.Ukusebenzisa obu buchule buvumela Abafundi ukuba bahlule okanye badibanise amnani ukwenza izibalo zibelula. **Umzekelo** 6 + 4 = 5 + 1 + 4 4 + 1 = 5 + 5 = 10 Esi sakhono sisetyenziswa rhoqo kwisiGaba esiphakathi. **Ukuphinda phinda kabini nkwahlula ngokulinganayo** Le ndlela yokubala intsokothile kwaye ifuna ingqiqo manani.Abafundi abanako ukukhetha le ndlela bakhululekile kwimigaqo abayisebenzisayo . Kule kota Abafundi baqala uphinda-phindo manani kuba babala ukuya kwi-10. Phambi kokuba uphinda-phindo nokwahlula ngokulinganayo lusetyenziswe njengobuchule bokubala kufuneka le ndlela iqale ifundiswe.	

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IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.6 **Ubuchule bokusombulula iiingxaki zezibalo**	Ukusebenzisa ubuchule obulandelayo xa usombulula izibalo zamanani nokucacisa indlela osombulule ngayo: • izixhobo eziphathekayoumz. izixhobo zokubala • Imifanekiso ukuzoba izibalo zamazwi (story sums) • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda nokwahlula ngokulinganayo • Umgca –manani	Ukusebenzisa ubuchule obulandelayo xa usombulula izibalo zamanani nokucacisa indlela osombulule ngayo: • izixhobo eziphathekayo umz.izixhobo zokubala • Imifanekiso ukuzoba izibalo zamazwi (story sums) • Ukwakha nokuhlukanisa amanani • Ukuphinda-phinda i nokwahlula ngokulinganayo • Umgca –manani ngokuxhaswa zizixhobo eziphathekayo umz. amaso okubala	**Umzekelo 1:** Kukho amakhwenkwe ama-5 namantombazana ama-4 enza izifundo ezongezelelweyo zobugcisa esikolweni.Bangaphi abafundi abakwiklasi yobugcisa?  KwiKota 2 Abafundi bangenza izibalo besuka kwinani elithile ngozinye, kodwa bakhuthazwe ukusebenzisa umgca-manani ukubonakalisa ukubala usuka kwinani elithile ngokuqakatha. **Umzekelo 2:** Abafundi bangaqhekeza u-4 abe ngamaqela ama-2.Umgca manani uza kubonakalisa ukutsiba ngezibini ukuqala kuzi-5  	
1.7 **Ukudibanisa okuthabatha.**	Ukusombulula izibalo zamnani zamazwi ngokomxholo nokucacisa izisombululo zakho kwizibalo zamanani zamazwi eziquka ukudibanisa, ukuthabatha iimpendulo zingedluli kuma-20	Ukusombulula izibalo zamnani zamazwi ngokomxholo nokucacisa izisombululo zakho kwizibalo zamanani zamazwi eziquka ukudibanisa, ukuthabatha iimpendulo zingedluli kwi-10	**Yintoni eyahlukileyo kwiKota 1?** Kule Kota Abafundi baziqhelanisa nokwenza izibalo zamanani zamazwi ukuze bazithembe ekusebenziseni ubuchule xa besombulula izibalo zamanani zamazwi .Ugxininiso kule kota malube sekurekhodeni.Abafundi mababhale phantsi izivakalisi zamanani njengokurekhodiweyo kwezibalo zamanai zamazwi ukuya kwisihlanu. Abafundi bakuqhubeka besebenzisa izixhobo zokubala eziphathekayo nemizobo ukubonisa izibalo zabo ukusuka kuzi-5 ukuya kwi-10 . Khangela amanqaku kwiKota 1 ezibalo zamanani zamazwi ezinokwenziwa kule kota. Yandisa uluhlu lwamanani ukuya kwi-10.	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.8 **Ukudibanisa okuphindi weyo olukhokelela kuphinda phindo**	Ukusombulula izibalo zamazwi ngokusemxholweni nokucacisa indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa iimpendulo zingedluli kuma-20	Ukusombulula izibalo zamazwi ngokusemxholweni nokucacisa indlela osombulule ngayo ubandakanya uphinda-phindo lokudibanisa iimpendulo zingedluli kuma-10.	Uluhlu lwamanani olubalwayo kulekota luvumela abafundi ukuba baqale ngophinda-phindo lokudibanisa. Ukubala ukuya e-10 kuvumela ukuba kurekhodishwe . **Umzekelo:** • 1 + 1 + 1 • 2 + 2 + 2 + 2 • 3 + 3 + 3 IKota yoku1 yakha ingqiqo nokuqondwa kokudibanisa nabafundi mabakwazi ukudibanisa amaqela alinganayo. Kule Kota abafundi baza kusebenza ngezibalo zamanani zamazwi ezivumela umfanekiso wophinda-phindo lokudibanisa. Uphinda-phindo lokudibanisa lwaziswa kubafundi njengamaqela amanani olingano. Ekuqaleni abafundi bangaziswa kulinganiso lwamaqela emihla ngemihla . Izibalo zamanani zamazwi eziquka uphinda-phindo lokudibanisa zonke ziba kwimo: • Amaqela ezi-2: izandla, iinyawo, iikawusi, izihlangu, amehlo, iindlebe, amavili ebhayisekile • Amaqela ezi -3: amavili etrayisekile, imiqukumbelo koonxantathu, • Amaqela ezi-4: amavili emoto, amanqina etafile • Amaqela ezi-5: iminwe, iinzwane Ulwimi lophindaphindo dibaniso lubalulekile.Abafundi mabanikwe amathuba okuchaza ngomlomo abakubonayo. **Ukurekhodisha imifanekiso yokudibania okuphindiweyo** Ukusebenzisa izixhobo zokubala eziphathekayo.. • Kwimifanekiso kuphela • Abafundi baza kuzoba imifanekiso ukubonisa indlela abawenze ngawo amaqela ukudibanisa . • Ukurekhoda ngemifanekiso namanani • Imifanekiso iyakubonakaliso imizobo exhaswa ngamanani. • Ukuya kwiitekisi ezibhaliweyo	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.11 **Imali**	• Ukunakana nokuchonga imali yaseMzantsi Afrika - iinkozo 5c, 10c, 20c, 50c, R1, R2 - imali engamaphepha R10 ne R20 • Ukusombulula izibalo zamanani zemali kuquka iitotali netshintshi ngeesenti ukuya kuma-20c 20c okanye iirandi ukuya kumaR20R20.	• Ukunakana nokuchonga imali yaseMzantsi Afrika - iinkozo 5c, 10c, 20c, 50c, R1, R2 • Ukusombulula izibalo zamanani zemali kuquka iitotali netshintshi ngeesenti ukuya kwii- 10c okanye iirandi ukuya kwi- R10	Ukufundisa Abafundi ngemali, ukucacisa olu lwazi lulandelayo: • Yintoni imali • Kutheni imali ibalulekile • Isentyenziswa njani imali kwimini esiphila kuzo • Abafundi bayibala njani imali Abafundi bafunda ngemali phambi kokuba baye esikolweni. Abanye abafundi banganayo ingqiqo yexabiso lemali bakwazi nokunakana babize iinkozo zemali kunye nemali engamaphepha. Kule kota abafundi mabafunde ngengqiqo esisiseko sokusebenzisa imali kwimeko eziphathekayo.Le nto yenzeka kwiimeko eziphathekayo ezinjengokudlala ivenkile. • Yiza nemali ezinkozo yaseMzantsi Afrika nengamaphepha engama- R20 nee R10 esikolweni. Abafundi mabeve umphetho weenkozo zemali baxoxe ukuba zohluke njani. Baxoxa ngeesimboli ezikwimali ezinkozo nengamaphepha. • Abafundi babeka imali ezinkozo phantsi kwesqwenga sephepha esibhityileyo bakhuhle ngaphezulu besebenzisa ipensile.Basika iikopi bazincamathisele kwiincwadi zabo bazinike amagama. • Bashicilela basike imifanekiso emininzi yenkozo zemali ii-5c, 10c kunye nee-20c .bancamathisela indibanisela yemali ezinkozo ezenza ii-20c kunye nee- 10c umz. 20c = 10c 5c 5c 20c = 5c 5c 5c 5c 1 Iitotali ezenza ii-20c – imali ezinkozo yodwa - Abafundi sele besazi ukubala ngezi- 5nama-10kwaye baza kusebenzisa olu lwazi ukufumana iitotali. - Utitshala unika umntwana ngamnye iikopi zephepha elineenkozo zemali ii -5c, 10c kunye ne- 20c. Ubaxelela iinkozo zemali amabazithathe,umz. Iinkozo zemali ezintathu zee- 5c. Bayabala ngezi-5okanye benza uphindaphindo lokudibanisa, 5c+5c+5c. • Utitshala uxelela Abafundi ukuba bathathe ii-20c besebenzisa inkozo zemali ezahlukeneyo.Mababone ukuba emnyeuthatha iinkozo zemali ezizi-5c zibe mbini kunye noukhozo olunye lwemali oluzii- 10c . • Abafundi bagcwalisa iphepha lokusebenzela apho babonakalisa ukuba ziziphi iinkozo abazifunayo ukwenza itotali yeesentiezingama- 20.	

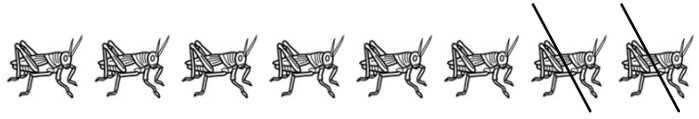
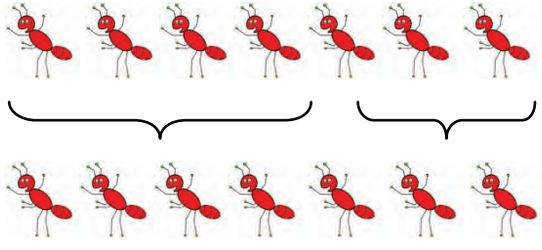
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.11 **Imali**	• Ukunakana nokuchonga imali yaseMzantsi Afrika - iinkozo 5c, 10c, 20c, 50c, R1, R2 - imali engamaphepha R10 ne R20 • Ukusombulula izibalo zamanani zemali kuquka iitotali netshintshi ngeesenti ukuya kuma-20c okanye iirandi ukuya kuma R20.	• Ukunakana nokuchonga imali yaseMzantsi Afrika - iinkozo 5c, 10c, 20c, 50c, R1, R2 • Ukusombulula izibalo zamanani zemali kuquka iitotali netshintshi ngeesenti ukuya kwii- 10c okanye iirandi ukuya kwi- R10	**Umzekelo:** 20c = 10c + 10c or 5c+ 5c + 5c + 5c= 20c or 5c+5c + 10c =20c 2 Nika itshintshi usebenzisa iinkozo zemali kuphela - Utitshala usebenza nAbafundi ngokuthi athathe iinkozo zemali kunye nabo umz.bathatha iinkozo zemali ezizi-5c ukwenza ii- 20c. - Utitshala uyabuza: “ukuba uhlawula umthengisi ii- 15c, yimalini eseleyo?”Abafundi abafumana ubunzima ekubaleni ngeenkozo zombona bangsebenzisa izixhobo zokubala ukubanncedisa. - Abafundi bagcwalisa iphepha lokusebenzela apho babala khona itshintshi yezinto abazithengileyo ngee-20c okanye ngaphantsi. **Umzekelo:** o 10c - 5c = 5c o 20c - 10c =10c –amashumi apheleyo o 20 -5c – 5c - 5c = 5c –uphindaphindo lokuthabatha	

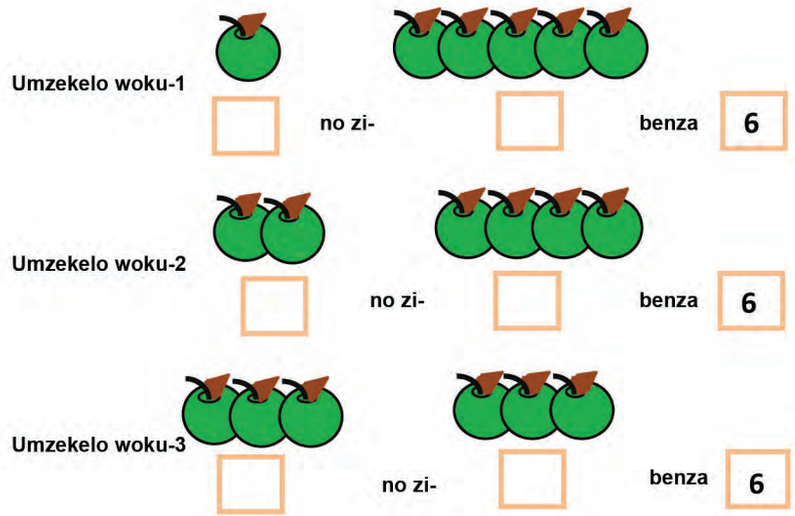
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
Izibalo ezingalawulwa meko				
1.12 **Ubuchule (iindlela)**	Ukusebenzisa ubuchule bulandelayo ukwenza izibalo ukusombulula izibalo zamanani: • Izixhobo eziphathekayo umz. Isixhobo sokubala • Imifanekiso ezotyiweyo • Ukwakha nokuqhekeza • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani	Ukusebenzisa ubuchule bulandelayo ukwenza izibalo ukusombulula izibalo zamanani: • Izixhobo eziphathekayo umz. Isixhobo sokubala • Imifanekiso ezotyiweyo • Ukwakha nokuqhekeza amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani incediswa zizixhobo zokubala eziphathekayo umz. Amaso okubala	**Yintoni eyahlukileyo kwiKota 1?** kwKota 2, abafundi baqala ukubala ukuya kwi- 10. Ukusebenza kolu luhlulwamanani luthetha ukuba le ndlela yokubala ingakhuliswa iqhelaniswe.Obu buchule bungaqhelaniswa kwicandelo lezibalo zamanani zamazwi. **Ukwakha nokucalula amanani** Imisebenzi yokwakha nokuqhekeza amanani ikhulisa ulwazi lomfundi ngolwalamano lobungakanani bamanani. Le misebenzi ilungiselela isiseko semisebenzi yokuqala. Ukuqhekeza nokudibanisa kunceda ekwenzeni izibalo lula. Ukuziqhelanisa rhoqo noluhlobo lomsebenzi lukhuthaza Abafundi ukuba balusebenzise njengobuchule beMathematika. **Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo** • Phambi kokuba uphinda-phindo kabini nokwahlula ngokulinganayo kusetyenziswe njengobuchule bokubala kufuneka kuqondwe kuphinde kuqhelaniswe. • Ukusebenzisa izixhobo zokubala eziphathekayo • Oku kungenziwa ngeziyaleli ngqo.xelela ubonise Abafundi ukuba kukho izinti zokubala ezhlanu ekufunaka eziphindaphindile ngokubeka ezinye ezihlanu. • **Ukuya kwiitekisi ezibhalwyo** usebenzisa imifanekiso. • **Abafundi** mabanikwe imifanekiso yophindaphindo baze bayibonise imifanekiso leyo ngemizobo • **Ukusebenzisa amanani** • Abafundi bangaqala ngokugwalisa izivakalisi ezinjengezi: - Phinda kabini u-1 zilingana... - Phinda kabini u- 2 zilingana.... - Phinda kabini u- 3 zilingana..... - Phinda kabini u- 4 zilingana……	

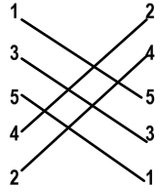
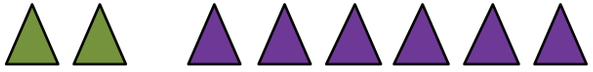
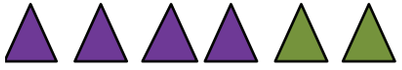
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.12 **Ubuchule (iindlela)**	Ukusebenzisa ubuchule bulandelayo ukwenza izibalo ukusombulula izibalo zamanani: • Izixhobo eziphathekayo umz. Isixhobo sokubala • Imifanekiso ezotyiweyo • Ukwakha nokuqhekeza • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani	Ukusebenzisa ubuchule bulandelayo ukwenza izibalo ukusombulula izibalo zamanani: • Izixhobo eziphathekayo umz. Isixhobo sokubala • Imifanekiso ezotyiweyo • Ukwakha nokuqhekeza amanani • Ukuphinda-phinda kabini nokwahlula ngokulinganayo • Imigca- manani incediswa zizixhobo zokubala eziphathekayo umz. Amaso okubala	**Umgca-manani oxhaswa zizixhobo zokubala eziphathekayo** Xa kusetyenziswa umgca-manani njengendlela yokubala, kufuneka Abafundi basebenzise kuqala:: • Ezinye izixhobo zemigca zokubalaumz. Amaso okubala, imizila yamanani; • Umgca –manani ukuubala usiya phambili nokubuya umva; • Nomgca-manani ukubeka amanani endaweni nokuwalungelelanisa. Umgca- manani osesikweni ungasetyenziswa (ukulungele) xa Abafundi bedibanisa okanye bethabatha umgca-manani osesikweni kufuneka ubonise onke amanani akuwo.	

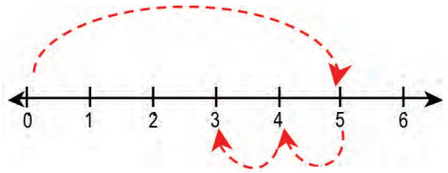
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uluhlu lwamanani: 1 -20 • ukudibanisa ukuya kuma- 20 • ukuthabatha kuma-20 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	Uluhlu lwamanani: 1 -10 • ukudibanisa ukuya kuma- 10 • ukuthabatha kuma-10 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 7	**Yintoni eyahlukileyo kwiKota 1?** KwiKota yesi-2, luhlu lwamanani luyanda ukusuka kuzi-5 ukuya kwi-10. Kule kota abafundi baza kuqala ngokuqonda: • uphawu lokuguqugula ukudibanisa; • nolwalmano phakathi kokudibanisa nokuhlalutya Phambi kokuba Abafundi baziswe iisimboli zokudibanisa nokuthabatha mabanikwe ulwazi olwaneleyo: • ngokubala onkecounting all; • ngokubala uqala kwelona likhulu kunelinye inani; • ngokusebenzisa nokuqonda ulwimi olusetyenziswayo lokudibanisa nokuthabatha ; and • Nangokulandelelanisa kunye nokuthelekisa amanani. Kule kota, abafundi baqhubeka nokukhulisa ulwazi lwabo ngokudibanisa kunye nokuthabatha. Ukudibanis nokuthabatha kwalamanani kakhulu nokubala. U-ngaphezulu ngesi-1 okanye u-ngaphantsi ngesibini usasetyenziswa unxulunyaniswanenani elilandelayo kubalo nolandelelaniso. Kule kota abafundi basebenzisa iisimboli ukubhala izivakalisi manani kaninzi nangokuzithemba. Inkqubela ekusebenziseni iisimboli mayenziwe ngononophelo. Kubalulekile ukuba Abafundi baqonde iintsingiselo ezahlukeneyo ezinxulunyaniswa neesimboli . Abafundi mabakwazi ukuqonda basebenzise amagama afana nodibanisa, kufike, zizonke, zonke, zonke zenza, thabatha, intsalela phakathi nothabatha ngaphambili kokuba iisimboli zaziswe. Abafundi mabaqale ngokukwazi ukuphendula imibuzo efana nozi-3 nozi-2; zintlanu uthabathe zibe-3, phambi kokuba isimboli isetyenziswe. **Ukurekhoda imifanekiso** Ukubala ukuya kwi-10 kuthetha ukuba Abafundi baza kurekhoda ukubala kwabo besebenzisa drawings or concrete apparatus; • Imifanekiso namanani; okanye • Amanani kuphela. Ekupheleni kwekota, kuluhlu lwamanani uzi-1 ukuya kuzi-5, Abafundi bangazithemba ekusebenziseni amanani kuphela hayi imizobo yemifanekiso ukumela izibalo zabo.	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uluhlu lwamanani: 1-20 • ukudibanisa ukuya kuma- 20 • ukuthabatha kuma-20 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	Uluhlu lwamanani: 1-10 • ukudibanisa ukuya kuma- 10 • ukuthabatha kuma-10 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 7	**Ubuchule bokbala xa udibanisa okanye uthabatha** *Ukudibanisa ngokubala konke.* Abafindi bakuqala kuzi-1 babale ukuya kuzi-5 baze baqhubeke nokubala ukuya kuzi-7.  *Ukwenza ukudibanisa usuka.* Abafundi bakubala besuka kuzi-5 ukuya kuzi-7 **5**  le ndlela yokubala isebenzisa kakuhle kakhulu kunokuba ngezinye.Abafundi bakusebenzisa le ndlela kakuhle kakhulu ngokuya uluhlu lokubala amanani lusanda . *bala usuka kwinani elikhulu kunelinye* **6**  Abafundi babala ukusuka kwinani elikhulu kunelinye, elingzi-6, babale ukusuka kulo baye kuzisi-8 *ukuthabatha ngothatha* 7 – 3 =  7- 3 = 4 Xa urekhoda ukuthabatha Abafundi bangahlaba imifanekiso ukubonakalisa ukuthabatha .	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uluhlu lwamanani: 1 -20 • ukudibanisa ukuya kuma- 20 • ukuthabatha kuma-20 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	Uluhlu lwamanani: 1 -10 • ukudibanisa ukuya kuma- 10 • ukuthabatha kuma-10 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 7	*Ukuthabatha ngokubala usuka kwinani*  6 - 2 = □ Abafundi bangabala besuka kuzi-2 ukuya kuzi-6 .kufuneka baqwalasele ukuba mangaphi amanani abawabalileyo ukusuka kuzi-2 ukuya kuzi-6 .. *Ukuthabatha ngokubala usiya emva* 8 - 2 = □  Abafundi bangasoloko beqala kwinani elikhulu, elinguzi-8, babale baphinde umva izinyathelo ezibini ukuya kuzi-6 **Ukwakha nokuqhekeza amanani** Oku kungenziwa ngeendlela ezahlukeneyo .  7 = 4 + 3 7 = 4 + 3 **Ibhondi zamanani** Kule kota Abafundi baziqhelanisa nebhondi zamanani ukuya kuzi-7.Oku kungamelwa kwimifanekiso nakwizivakalisi zamanani ngokusebenzisa iintlobo zemifanekiso.	

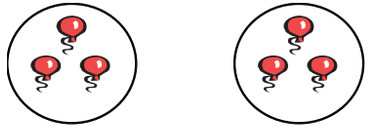
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uluhlu lwamanani: 1 -20 • ukudibanisa ukuya kuma- 20 • ukuthabatha kuma-20 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	Uluhlu lwamanani: 1 -10 • ukudibanisa ukuya kuma- 10 • ukuthabatha kuma-10 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 7	ukudibanisa **umzekelo:** *ukwenza uzi-6 okanye ukufumana abahlobo bakazi-6 usebenzisa imifanekiso namanani*  **Umzekelo woku-1** □ **no zi-** □ **benza** **6** **Umzekelo woku-2** □ **no zi-** □ **benza** **6** **Umzekelo woku-3** □ **no zi-** □ **benza** **6** *Ukwenza uzi-6 usebenzisa imifanekiso namanani* Faka imibala ukubonisa uzi-6 ngeendlela ezahlukeneyo. □□□□□□ _____ nozi-_____ benza uzi- 6	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uluhlu lwamanani: 1 -20 • ukudibanisa ukuya kuma- 20 • ukuthabatha kuma-20 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	Uluhlu lwamanani: 1 -10 • ukudibanisa ukuya kuma- 10 • ukuthabatha kuma-10 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 7	*Ukusebenzisa amanani kuphela* Tshatisa iipere zamanani ukwenza uzi-6:  **Uguqulo** Kule kota abafundi baqala ngokunakana iimpawu zoguqulo zokudibanisa ngaphandle kokwazi isigama. **Umzekelo:** Bala oonxantathu  **6 + 2 = □**  **2 + 6 = □** Ubhalo olwalanyaniswa nokudibanisa kunye nokuthabatha izivakalisi zamanani– ukuqonda ulwalamano phakathi kokudibanisa nokuthabatha Kule kota abafundi bafunda ukuba bangabhala izivakalisi zamanani zokuthabatha endaweni yezivakalisi zamanani zokudibanisa **Umzekelo:**  4 + 2 = 6 nozi 6 - 2 = 4 2 + 4 = 6 nozi 6 - 4 = 2	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uluhlu lwamanani: 1 -20 • ukudibanisa ukuya kuma- 20 • ukuthabatha kuma-20 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	Uluhlu lwamanani: 1 -10 • ukudibanisa ukuya kuma- 10 • ukuthabatha kuma-10 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 7	**Uzilingana** Uzilingana akanakwaziswa ngokukhawuleza.. Ingaluncedo ukusebenzisa isimboli ngendlela ebhetyebhetye ukunika abafundi ithuba lokusebenzisa iintolo endaweni kazilingana. **Umzekelo:** Zizonke zenza **4 and 2** → 6 **Ukusebenzisa umgca-manani** Ukwazisa ukutahatha ukuya kwi-10 kumgca-manani . Utitashala usebenzisa umgca-manani ukuthabatha amanani ukuya kwi-10 umz.uzi- 5 - 2 **Umzekelo : u**mvundla utsiba uye kwisi-5, uze utsibe amanani ama-2 ukuya emva uze ume kuzi-3.Ke uzi- 5 - 2 = 3  **Imisebenzi ebhalwayo** Abafundi bangaboniswa iindlela ezahlukeneyo zemifanekiso ukuxhasa ukuqonda ukudibanisa nokuthabatha. Mabanikwe imisebenzi ebhalwayo ebuza cacileyo: • Ukubala usuka ; • Dibanisa ngokubala usuka kwinani elikhulu kunelinye; okanye • Thabatha ngokuhlaba umfanekiso ukubonakalisa ukuthatha .	

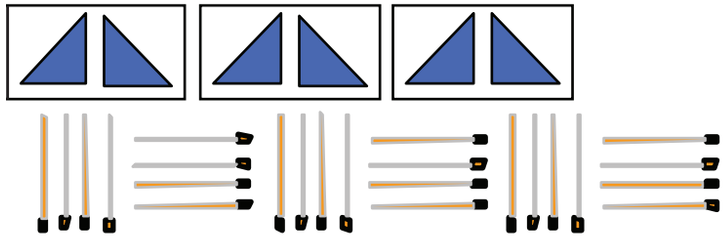
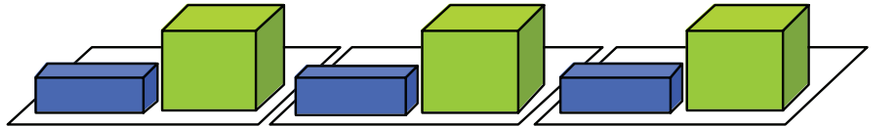
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uluhlu lwamanani: 1 -20 • ukudibanisa ukuya kuma- 20 • ukuthabatha kuma-20 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	Uluhlu lwamanani: 1 -10 • ukudibanisa ukuya kuma- 10 • ukuthabatha kuma-10 • ukusebenzisa iisimboli ezizizo (+, –, =, □) • ukuziqhelanisa neebhondi zamanani ukuya kwi- 7	**Uphindaphindo** Uluhlu lwamanani Abafundi abasebenza ngalo lubavumela ukuba baqale ngokuphindaphinda. Oku kungaziswa ngeendlela ezininzi kwaye kungenziwa xa Abafundi bebala izinto . **Umzekelo:**Abafundi bangenza amaqela oozi-2, oozi-4, oozi-6,oozi-8 noozi-10 ngezixhobo zokubala.Izivakalisi zamanani zingakhatshwa yimifanekiso .  **Phindaphinda ka-1 zilingana…..** **Phindaphinda ka-2 zilingana…..** **Phindaphinda ka-3 zilingana…..** **Phindaphinda ka-4 zilingana…..** **Phindaphinda ka-5 zilingana…..**	

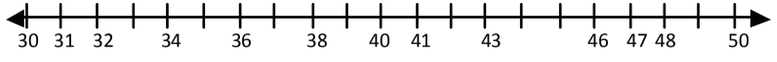
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.14 **Ukudibanisa okuphindi weyo okukhokelela kuphinda phindo**	• Ukudibanisa okuphindiweyo (okt. Inani elifanayo) ukuya kuma- 20 • Ukusebenzisa iisimboli ezichanekileyo (+, =, □)	• Ukudibanisa okuphindiweyo (okt. Inani elifanayo) ukuya kuma- 10 • Ukusebenzisa iisimboli ezichanekileyo Ukudibanisa okuphindiweyo (okt. Inani elifanayo) ukuya kuma- 20 • Ukusebenzisa iisimboli ezichanekileyo (+, =, □)	**Yintoni eyahlukileyo kwiKota 1?** Kwi Kota yesi-2 Abafundi baqala ukwenza uphinda-phindo lokudibanisa ukuya kwi-10. Bakuba Abafundi benengqiqo epheleleyo yamanani u-zi-1 ukuya kuzi-5, uphinda-phindo lokudibanisa lwayakwazeka kubo.Uphinda-phindo lokudibanisa luyakwaziswa kubafundi njengeqela lezinto ezilinganayo . Ukusebenza ngezinto eziseqeleni kubalulekile ekuqondeni ukuphinda-phinda. Abafundi mabakwazi • Ukwenza amaqela ezinto alinganayo ; • Ukuchaza ukulungelelana; • Nokubala itotali yezinto. Ekuqaleni Abafundi bangabala ngoozinye kodwa ngokuya beqhla ukubala ngokuqakatha kufuneka babale izinto ezibekwe ngambini, ngantlanu okanye ngalishumi.. Abafundi mabanikwe iintlobo zemifanekiso emininzi eya kuxhas ukuqonda ngophinda-phindo lokudibanisa Kungaluncedo ukubazisa Abafundi imifanekiso ya yemihla ngemihla ekumaqela alinganayo, umzekelo: Iqela lezi-2 – izandla, iinyawo, iikawusi, iziihlangu, iindlebe, ibhayisekile Iqelq lezi-3 – iibhayisekile ezimavili mathathu,, edges of triangles **Umzekelo:** Mangaphi amavili ewonker?  Mingaphi iminwe.gcwalisa isivakalisi manani esngaszantsi.  □ + □ + □ = 15	

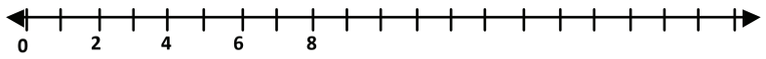
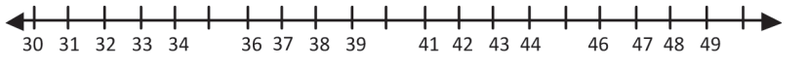
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.14 **Ukudibanisa okuphindi weyo okukhokelela kuphinda phindo**	• Ukudibanisa okuphindiweyo (okt. Inani elifanayo) ukuya kuma- 20 • Ukusebenzisa iisimboli ezichanekileyo (+, =, □)	• Ukudibanisa okuphindiweyo (okt. Inani elifanayo) ukuya kuma- 10 • Ukusebenzisa iisimboli ezichanekileyo Ukudibanisa okuphindiweyo (okt. Inani elifanayo) ukuya kuma- 20 • Ukusebenzisa iisimboli ezichanekileyo (+, =, □)	**Ukurekhodisha imifanekiso yokudibanisa okuphindiweyo** Ugxininiso apha lusekukhuliseni ulwimi ukuxhasa ukuqonda ngokuphinda-phinda. Abafundi bazakurekhoda ulwazi lwabo besebenzisa imifanekiso.Abafundi mabanikwe imifanekiso yezinto eziseqeleni bazijikeleze ngokuzoba izangqa ukubonisa iqela lezinto  Ulwimi olunokusetyenziswa ngu izi-3 ezikumaqela ama-2.Xa Abafundi bekwazi ukuchaza ngokuzithemba izimeli mifanekiso besebenzisa ulwimi bangazicacisa ezizimeli kwizivakalisi zamanani . Isivakalisi senani: 3 + 3 = 6	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO XA KUPHELA UNYAKA	INGQIQO NEZAKHONO UGXININISO LWEKOTA-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
1.16 **Izibalo zentloko**	**Ingqiqo manani: uluhlu lwama 20** • Ukulandelelanisa iseti yamanani akhethiweyo • Ukuthelekisa amanani ukuya kwi-20 nokutsho ukuba liliphi elingaphezulu okanye ngaphantsi ngesi-1,2, ne-10 **Ukukhumbula ngokukhawulezileyo:** • iibhondi zamanani ukuya kwi-10 • Ukukhumbula ukudibanisa nokuthabatha imiba ukuya kwi-10 **Iindlela zokubala ngentloko** Ukusebenzisa iindlela zokubala ukudibanisa nokuthabatha ngobuchule • Ukubeka inani elikhulu kuqala ukuze ubale usuka kulo okanye ubuya umva kulo • Umgca manani wengqondo • Ukuphinda-phinda kabini nokwahlula ngokulingana • Ukwakha nokwahlukanisa amanani	**Ingqiqo manani: uluhlu lwama 20** • Ukulandelelanisa iseti yamanani akhethiweyo • Ukuthelekisa amanani ukuya kwi-10 nokutsho ukuba liliphi elingaphezulu okanye ngaphantsi ngesi-1,2,	**Yintoni eyahlukileyo kwiKota 1?** Kwikota yesi-2 uluhlu lwamanani luyanda ukusuka kwisi-5 ukuya kwi-10. Imizekelo yemibuzo nemisebenzi enokubuzwa nenokwenziwa: • Qala ngesi-3 ubale uye phambili ngo nye ukuya kwi-10. • Liliphi elincinane ngesi-8 okanye isi-5? • Liliphi elingaphezulu ngesi-8 okanye isi-4? • Lliliphi inani elincinane kwisi-9 ngesi-2? • Liliphi inani elingaphezulu kwisi-3 ngesibini • Ndinike inani eliphakathi kwesi-1 nesi-2. • Ndinike inani eliphakathi kwesi-6 ne-10. Ingaba linani elinye • Beka lamanani kwikhadi lamanani ukusuka kwelona lakhe lalincinane ukuya kwelona likhulu..	

IBANGA LOKU -1 IKOTA YESI- 2 2. IIPATENI, II-FANKSHINI NE ALJIBRA				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA YE-2**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**UBUDE BEXESHA** (kwizifundo zeyure e-1 nemizuzu engama-24)
2.1 **Iipateni zejiometri**	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonakalayo/ ezibambekayo • Iipateni ezilula ezenziwe ngemizobo yemigca,iimilo okanye izinto ezibonakalayo/ ezibambekayo **Yenza ipateni yakho** Yenza ipateni yakho yejiyometri • ezibonakalayo/ ezibambekayo • ngokuzoba imigca,iimilo oknye izinto **Singqongwe ziipateni** Chonga,uchaze ngamazwi uze ukope iipateni zejiyometri • kwindalo • kwizinto zale mihla ezenzeka empilweni yethu • ezivela kwinkcubeko yethu	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonakalayo/ ezibambekayo • Iipateni ezilula ezenziwe ngemizobo yemigca,iimilo okanye izinto ezibonakalayo/ ezibambekayo **Yenza ipateni yakho** Yenza ipateni yakho yejiyometri • ezibonakalayo/ ezibambekayo • ngokuzoba imigca,iimilo oknye izinto	**Ukukopa** ipateni kunceda Abafundi ukuba babone ingqiqo yokuba iipateni zakhiwa njani. **Ukwandisa** ipateni kunceda Abafundi ukuba bakwazi ukukhangela ukuba bayilandelel na ingqiqo yepateni. **Ukuchaza ipateni** kunceda Abafundi ukuba bakhulise ulwimi nezakhono zokuthetha. Inceda ukuba ubone ukuba Abafundi bayitolike njani ipateni. Kwibanga lokuqala Abafundi banokugqalisela kwipateni apho izinto okanye iqela lezinto liphinda phindwayo ngendlela efanayo. Bonke Abafundi bathi bakwazi ukusebenzisa ikhrayoni/ipensile xa bezoba ngendlela ekhululekileyo kwikota yesibini.Abafundi bangaqhubekeka bekopa,besandisa iipateni ezenziwe ngemifanekiso endaweni yezinto.Kufuneka bagqalisele ekuchazeni iipateni. Akusoloko kulula ebantwaneni ukuchaza iipateni.Ungabanceda ukuba bafunde izinto ekulindeleke ukuba bathethe ngazo ngokuthi babuze imibuzo efana nale: “Milo zini ozibonayo kule pateni? “Ingaba zingumbala omnye ? “Ingaba ubona iimilo ezingaphi kule pateni ? Ingaba ezi zinto zijonge calanye?“ “Ingaba kukho inani elilinganayo lezinto kwiqela ngalinye ? “Ingaba iqela ngalinye linezinto ezingaphi?” “Ingaba zonke iimilo ziyalingana ? njl-njl Kwikota yesi-2 kunokugqaliselwa ekusebenziseni izinto ezinezakhiwo zejiyometri kuka 2-D no 3-D ebezifundiswe kwikota yoku-1.Abafundi bangenza izinto ezinezakhiwo kuka 2-D by cuttingokuthi basike amaphepha okanye amakhadi kungenjalo bazobe. Banokwenza iipateni besebenzisa ibhokisi zezihlangu neemilo zebhola ebebezenze ngomdongwe okanye intlama yokudla,	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
2.1 **Iipateni zejiometri**	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonakalayo/ ezibambekayo • Iipateni ezilula ezenziwe ngemizobo yemigca,iimilo okanye izinto ezibonakalayo/ ezibambekayo **Yenza ipateni yakho** Yenza ipateni yakho yejiyometri • ezibonakalayo/ ezibambekayo • ngokuzoba imigca,iimilo oknye izinto **Singqongwe ziipateni** Chonga,uchaze ngamazwi uze ukope iipateni zejiyometri • kwindalo • kwizinto zale mihla ezenzeka empilweni yethu • ezivela kwinkcubeko yethu	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonakalayo/ ezibambekayo • Iipateni ezilula ezenziwe ngemizobo yemigca,iimilo okanye izinto ezibonakalayo/ ezibambekayo **Yenza ipateni yakho** Yenza ipateni yakho yejiyometri • ezibonakalayo/ ezibambekayo • ngokuzoba imigca,iimilo oknye izinto	Iipateni zingenziwa besebenzisa imilo enye.Iimilo zisenokutshintshwa imibala rhoqo. umz  Kubalulekile kwibanga lokuqala ukuba Abafundi bancediswe ukuba babone ukuba ngawaphi amaqela ezinto aphinda phindiweyo ngokuthi kubekwe iqela ngalinye kumaphepha awohlukileyo okanye afakwe kwibhloko. Iipateni zinokwenziwa ngamaqela afanayo aphinda phindwayo,apho iqela ngalinye linento enye kodwa indawo yezinto kumaqela itshintshatshintshayo.Amaqela afanayo ayaphinda phindwa .umz:  Kwiipateni izinto ezahlukileyo zisetyenziswa ukwenza iqela,kodwa amaqela ezinto aphinda phindwa ngendlela enye umz. Kwezinye iipateni ubukhulu bezinto eqeleni buyabolekisana,kodwa ke amaqela ayaphindaphindwa ngendlela efanayo.  Abafundi bangenza iipateni ngokuthi boluke amaso.Iipateni zinokwenziwa kwizifundo zeZakhono Zobomi.	ISIFUNDO ESI-1

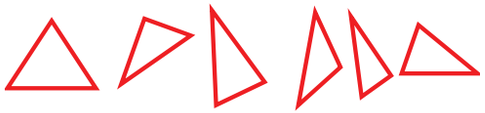
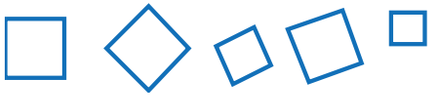
ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
2.2 **Ipateni zamanani**	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ulandelelwano lwamanani alula ukuya kwi-100 **Yenza ipateni yakho** Yenza ipateni yakho yamanani	Ulandelelwano kufuneka lubonise ukubala ubheka phambili nokubala ubheka ngasemva: • Ngo-1 ukusuka nokuba kukweliphi inani phakathi kuka 1ukuya kuma-50 Ngaphambili ngama: • 10 ukusuka nokuba kusesiphi isiphinda phindwa se 10 phakathi kwe 0 nama 50 • Ngezi-5 ukusuka nokuba kusesiphi isiphinda phindwa sesi-5 phakathi kwe 0 nama 50 • Ngezi-2 ukusuka nokuba kusesiphi isiphinda phindwa sesi-2 phakathi kwe 0 nama 20 **Yenza ipateni yakho** Yenza ipateni yakho yamanani	Ulandelelwano lwamanai kungadityaniswa nokubala.Njengokuba izakhono zokubala zAbafundi zitshintsha kwaye zikhula uhlobo lolandelelwano lwamanani Abafundi abasebenza ngalo lungakhula. Ulandelelwano kufuneka lubonise ukubala ubheka phambili nokubala ubhek ngasemva kwi; • kwisinye ukusuka nokuba kuleliphi inani phakathi kuka 1 nama 50 ; • kumashumi ukusuka nokuba kusesiphi isiphinda phindwa se 10 phakathi kuka 0 no 50; • kwizihlanu ukusuka nokuba kusesiphi isiphinda phindwa sesi 5 phakathi kuka- 0 no 50 kunye • kwizibini ukusuka nokuba kusesiphi isiphinda phindwa sesi-2 phakathi kuka -0 no 20. Xa Abafundi bebala ngomlomo banokuboniswa ulandelelaniso lwamanani olubhalwe ngendlela ezahlukileyo . Banokwalatha kwinani elo libalwayo umz. 1 **2** 3 **4** 5 **6** 7 **8** 9 **10** 11 **12** 13 **14** 15 **16** 17 **18** 19 **20** Abafundi bangafakela amanani angekhoyo, amanani angakuyo nakweyiphi imeko yolandelelwano engasentla Khumbula ukuba Abafundi babhala kuphela amanani ngokwesimboli ukuya kwi-10. Abafundi bangafakela amanani angekhoyo ngolandelelwano ngaphaya kwe -10 ukuba: • oku kwenziwa ngomlomo; • amakhadi amanani anikiwe ukuba afakelwe kwizikhewu okanye • uluhlu lweesimboli zamanani anikiwe.Abafundi bangazoba umgca ukusuka kwinani elikhethwe ngokuchanekileyo ukuya kwindawo ekufuneka likuyo. Unikwe imizekelo ngasezantsi: Umgca manani onamanani ashiyiweyo  	Izifundo ezi-3

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure e-1 nemizuzu engama-24)
2.2 **Ipateni zamanani**	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ulandelelwano lwamanani alula ukuya kwi-100 **Yenza ipateni yakho** Yenza ipateni yakho yamanani	Ulandelelwano kufuneka lubonise ukubala ubheka phambili nokubala ubheka ngasemva: • Ngo-1 ukusuka nokuba kukweliphi inani phakathi kuka 1ukuya kuma-50 Ngaphambili ngama: • 10 ukusuka nokuba kusesiphi isiphinda phindwa se 10 phakathi kwe 0 nama 50 • Ngezi-5 ukusuka nokuba kusesiphi isiphinda phindwa sesi-5 phakathi kwe 0 nama 50 • Ngezi-2 ukusuka nokuba kusesiphi isiphinda phindwa sesi-2 phakathi kwe 0 nama 20 **Yenza ipateni yakho** Yenza ipateni yakho yamanani	Ulandelelwano olubonisa ukubala ubheka phambili okanye ngasemva ngoo-1 onamanani ashiyiweyo. Abafundi batshatise amanani kuluhlu abalunikiweyo.Bakrwela umgca ukubonisa apho inani elikhethiweyo kufuneka lifake lwe khona. 40, 41, 42, __, 44; __, __, 47, ___, 49, 50. 50, 49, 48, __, __, 45, 44, ___, ____, 41, 40 Ibhalwe ngokulandelelana ukuya phambili ngeziphinda phindwa njengoko kubhaliwe ngasentla namanani athile ashiyiweyo. Umgca manani obonisa izithuba ebezikho kuqala,Abafundi bavala ezinye izikhewu.  Igridi yamanani enolandelelwano lokubala olugqunyiweyo okanye olushiyiweyo. 1 | | 3 | | 5 | | 7 | | 9 | 11 | | 13 | | 15 | | 17 | | 19 |  Abafundi banokusebenzisa umbala okanye bawagqume amanani njengoko betsiba tsiba xa bebala. Ekupheleni kwekota, uluhlu lwamanani liyenyuka liya kuma-50.Abafundi banokusebenza ngolandelelwano oluzeleyo 1-50 okanye amalungu olandelelwano.	Izifundo ezi-3

IBANGA LOKU- 1 IKOTA YESI-2 3.ISITHUBA NEMILO (IJIYOMETRI)				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA YE-2**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24)
3.1. **Indawo -bumilo, ukufumana indawo, umbono**	**Ulwimi lokuchaza indawo** Chaza indawo yento ngokuzalanayo nenye into.umz ngaphezulu, ngasemva, ekhohlo,ekunene,phezulu,ezantsi,ecaleni ngaphambili. **Indawo -bumilo nombono** Tshatisa indlela esibona ngayo yento oyibona imihla yonke. **Indawo -bumilo kunye nezalathiso** Landela izalathiso ukuhamba egumbini lokufunda Landela imiyalelo ukuze ukwazi ukubeka into ngokuzalanayo nenye. Umz.faka ipensile phakathi ebhokisin		Ulwimi lokuchaza indawo olukhuliswe kwikota yokuqala malusetyenziswe baze abafundi baziqhelanise nalo rhoqo ngexesha lokufundisa kwaye kugqaliselwe kwindlela yokufundisa yamaqela kwikota yonke.Chitha ixesha elifutshane rhoqo unika umsebenzi wokuziqhelanisa nolwimi . Umsebenzi wolwimi oluchaza indawo lunokubethelelwa ngokurekhodisha ngokubhala umz. Ukuzoba,ukusetyenziswa kwemibala okanye ukutshatisa imizobo namagama. Oku kunokwenziwa ngexesha elikhululekileyo. Olunye lolwimi oluchaza indawo abafundi banokuziqhelanisa nalo xa besebenza ngeemilo ezinokwakheka kuka 2-D.	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
3.2 **limilo ezinokwakheka kuka 3-D**	Nakana uze uxele izinto ezinokwakheka kuka 3-D egumbini lokufunda nasemifanekisweni. • limilo ezingqukuva • limilo eziyibhokisi (into enamacala onke athe tyaba) **limpawu zezinto** Chaza,hlela uze uthelekise izinto ezinokwakheka kuka 3-D ngoko: • bukhulu • umbala • izinto ezikwaziyo ukuqengqeleza • izinto ezikwaziyo ukutshebeleza (indawo eyakhelwe abafundi ukutshebeleza) **Imisebenzi ekugqaliswe kuyo** Nakana uze wakhe izinto ezinokwakheka kuka 3-D usebenzisa izinto ezibambekayo ezifana nezinto ebezisetyenzisiwe ukuze zibe nokukwazi ukusebenziseka,,iibhloko zokwaka,izixhobo zokwakha.		Abafundi banokuqhubekeka ukwakha izinto besebenzisa izinto ebezisetyenzisiwe ukuze zibe nokukwazi ukusebenziseka okanye iibhloko zokwakha /iibhokisi zematshisi okanye izixhobo zokwakha ngexesha labo.	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
3.3 **Iimilo ezinokwakheka kuka 2-D**	**Uludwe lweemilo** Nakana uze uxele izinto ezinemilo ezinezakhiwo kuka 2-D • izangqa • oonxantathu • izikwere **Iimpawu zeemilo** Ukuchaza,ukuhlela nokuthelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • bukhulu • umbala • imilo • amacala tse • amacala angqukuva	**Uludwe lweemilo** and name 2-D shapes • izangqa • oonxantathu • izikwere **Iimpawu zeemilo** Ukuchaza,ukuhlela nokuthelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • bukhulu • umbala • imilo • amacala tse • amacala angqukuva	Umsebenzi omninzi weemilo webanga lokuqala wenziwa praktikhali ngezinto ezibambekayo nezibonakalayo.Wonke umsebenzi mawubethelelwe ngokwenza imisebenzi ebhalwayo. Abafundi baqala ngokudlala ngeendidi ngeendidi zemilo, kuquka ukuzoba imifanekiso esikwe ngokweemilo zejiyometri.Oku kunokwenziwa ngexesha lAbafundi elilelabo. Oku kunokwenziwa kwakhona ngexesha lesifundo Lezakhono Zobomi. Abafundi bakopa imifanekiso eyenziwe ngeemilo zejiyometri.Le mifanekiso inokufumaneka kwincwadi yomfundi okanye kutitshala. Oku kwenza Abafundi ukuba bakawazi ukuchonga izangqa nezikwere ezinobukhulu obahlukileyo kwiindawo ezahlukileyo noonxantathu abaneemilo ezahlukileyo. Oku kunokwenziwa ngexesha lAbafundi elilelabo. Oku kunokwenziwa kwakhona ngexesha lesifundo Lezakhono Zobomi. **Ukuthelekisa nokuchaza iimilo ezinokwakheka kuka 2-D**: **ubukhulu** Abafundi bathelekisa ubukhulu beemilo ezifanayo umz. • Landelelanisa izangqa ukusuka kwesona sincinci ukuya kwesona • Beka zonke izikwere okanye ezinobukhulu obulinganayo kunye. Sebenzisa ulwimi olusetyenziswa ukuchaza ubukhulu, ukuthelekisa iimilo ezahlukileyo umz. “Ndizobe unxantathu phakathi kwesikwere, ukuze unxantathu abemncinci kunesikwere.” **Ukuchaza iimilo ezinokwakheka kuka 2-D : umbala** Abafundi bathetha ngemibala yeemilo baze bahlele iimilo ngokombala. Nakana uze uxele izinto nemibala yayo, uze uziqhelanise nokuthelekisa ubukhulu bezinto xa usebenza ngeepateni. **Nakana uze uxele izangqa,oonxantathu nezikwere** Abafundi kufuneka basebenze ngezangqa nezikwere ezinobukhulu obahlukileyo noonxantathu abaneemilo ezahlukileyo. Kubalulekile ukuba Abafundi bangaboni kuphela umzekelo wemilo enye kwiimilo nganye abazifundiswayo.	Izifundo ezi-3

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
3.3 **Iimilo ezinokwakheka kuka 2-D**	**Uludwe lweemilo** Nakana uze uxele izinto ezinemilo ezinezakhiwo kuka 2-D • izangqa • oonxantathu • izikwere **Iimpawu zeemilo** Ukuchaza,ukuhlela nokuthelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • bukhulu • umbala • imilo • amacala tse • amacala angqukuva	**Uludwe lweemilo** and name 2-D shapes • izangqa • oonxantathu • izikwere **Iimpawu zeemilo** Ukuchaza,ukuhlela nokuthelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • bukhulu • umbala • imilo • amacala tse • amacala angqukuva	Iseti zeemilo ezithengwayo zinika kuphela umzekelo woonxantathu abanye.Abafundi kufuneka bakwazi ukunakana: • Oonxantathu abaneemilo ezahlukileyo kwaye bakwazi ukubabeka nangeendlela ezahlikileyo.Naba abanye oonxantathu:  • Izikwere ezinobukhulu obahlukileyo ababekwe kwiindawo naegeendlela ezahlukileyo: Nazi ezinye izikwere  Izangqa ezinobukhulu obahlukileyoCircles of different sizes. Nazi ezinye izangqa:  Kubalulekile ukuba Abafundi basebenze ngeemodeli zeemilo ezisikwe kumakhadi. Oku kwenza ukuba Abafundi babone oonxantathu abohlukileyo nezikwere ezibekwe kwindawo ezahlukileyo neendlela ezahlukileyo. Abafundi bahlela ukuba ngaba iimilo zinamacala athe tse okanye angqukuva . Abafundi bahlela iimilo baze bazibeke ngokwamaqela ukuba ngaba zingonxantathu,izikwere okanye izangqa. Umsebenzi ubethelelwa ngomsebenzi obhalwayo.Lo msebenzi unokuquka ukusebenza ngemibala,ukutshatisa amagama ngokweemilo.njl-njl.	Izifundo ezi-3

IBANGA LOKU- 1 IKOTA YESI-2 4.UMLINGANISELO				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA YE-2**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24in)
4.1 **Ixesha**	**Ukudlula kwexesha** Thetha ngokudlula kwexesha • Hlela iziganeko ezenzeka rhoqo ebomini babo. • Thelekisa ubude bexesha usebenzisa ulwimi umz. Ndana,mf utshanana,khawuleza ,cotha • Landelelanisa iziganeko usebenzisa ulwimi olufana nolu: izolo, namhlanje, ngomso. **Ukuxela ixesha** • Chaza xa into ethile isenzeka usebenzisa ulwimi umz. kusasa, emva kwemini, ebusuku, phambi kwexesha, emva kwexesha • Zazi iintsuku zeveki • Zazi iinyanga zonyaka • Bhala intsuku zokuzalwa kwikhalenda		Abafundi mabafunde indlela yokuthetha ngezi zinto • Ukulandelelana kweziganeko • Ubude bexesha Abafundi baqhubekeka ngokubethelela iindlela zokuthetha ngexesha imihla ngemihla ngexesha lokufundisa okanye ngexesha lokufundisa. Abafundi bathetha baze baphendule imibuzo ngexesha izinto ezenzeka ngalo,besebenzisa ulwimi olufana nolu,kusasa,emva kwemini,ebusuku,phambi kwexesha nasemva kwexesha. Abafundi balandelanisa iziganeko besebenzisa ulwimi oufana nolu,izolo,namhlanje, ngomso,iintsuku zeveki kunye neenyanaga zonyaka. Abafundi bathelekisa ubude bexesha besebenzisa ulwimi olufana nolu: ndana,mfutshanana,cotha/khawuleza Abafundi bathetha ngokuhlela iziganeko ebomini babo.Bahlela ulandelelwano lwemifanekiso efana nale: • Amanyathelo okwenza isendwitshi okanye ikomityia yeti • IIfoto ezibonisa ukukhula komntwana abe ngumntu omkhulu • Umjikelo wobom wesilwanyana umz ukusuka kwiqanda ukuya kwintshontsho okanye ukusuka kwiqanda ukuya kwisele okanye ukusuka kwiqanda ukuya kwibhabhatahne kunyel • Neziganeko ezenzeka rhoqo ngosuku (ukuvuka, ukuba sesikolweni, ukutya isidlo sasebusuku,ukulala.). Qhubekeka ubhala iintsuku yokuzalwa kwikhalenda unyaka wonke.	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.2 **Ubude**	**Umlinganiselo ongekho seSikweni** ▪ Thelekisa ahlele ubude,umphakamo okanye ububanzi bezinto ezimbini nangaphezulu ngokuthi uzibeke enye ecaleni kwenye ▪ Sebenzisa ulwimi ukuthetha ngokuthelekisa umz. ndana, mfutshanana, ndana, banzana ▪ Qikelela,linganisela, thelekisahlela, rekhodisha ubude usebenzisa umlinganiselo ongekho sesikweni umz.ukusebenzisa izandla (hand spans) amanyathelo, ubude beepensile, ubude, izinto zokubala njl-njl.		Yonke imilinganiselo kwubanga lkuqala ayikho sesikweni.Akukho mlinganiselo osesikweni one-unithi ezisemgangathweni osetyenziswayo. Kwikota yokuqala bekucetyisiwe ukuba abafundi mabagqalisele koku kulandelayo: • Uthelekiso ngqo lobude bezintongokuthi ubeke enye ecaleni kwenye. • Cwangcisa uze uthelekise ubude okanye ukuphakama okanye ububanzi bezinto ezintathu okanye ngaphezulu ngokuthi ubeke izibini zezinto enye ecaleni kwenye ukuze zonke izinto zibe zilandelelanisiwe • Khulisa ulwimi lokuthetha ngomahluko kubude,ukuphakama,ububanzi njl-njl Ngexesha lokuba abafundi bezisebenzela ngexesha elilelabo kwikota yonke,banokuziqhelanisa baze babethelele ukucwangcisa nokuthelekelela ubude okanye ukuphakama okanye ububanzi bezinto ezintathu nangaphezulu ngokuthi ubeke izibini zezinto enye ecaleni kwenye ukuze zonke izinto zibe zilandelelanisiwe. Wonke umsebenzi kufuneka urekhodishwe.	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.3 Umthamo	**Umlinganiselo ongekho seSikweni** • Qikelela,linganisel, thelekisacwangcisa uze urekhodishe usebenzisa umlinganiselo ongekho sesikweni nokuveyisha izinto umz izitena, iibhloko njl-njl • Sebenzisa ulwimi ukuthetha ngokuthelekisa izinto umz khaphukhaphu, nzima, khaphu khaphana, nzinyana.		Yonke imilinganiselo kwubanga lkuqala ayikho seSikweni.Akukho mlinganiselo osesikweni one-unithi ezisemgangathweni osetyenziswayo. Kwikota yokuqala bekucetyisiwe ukuba abafundi mabagqalisele koku kulandelayo: • Uthelekiso oluthe ngqo lobunzima bezinto noku: • Cwangcisa uze uthelekise ubunzima bezinto ezintathu nangaphezulu ngokuthi bathathe umlinganiselo wobunzima wezibini zezinto ukuze zonke izinto zibe zilandelelanisiwe uze: Ukhulise ulwimi lokuthetha ngobunzima obahlukileyo • Ngexesha lokuba abafundi bezisebenzela ngexesha elilelabo kwikota yonke,banokuziqhelanisa baze babethelele ukucwangcisa nokuthelekelela ubunzima bezinto ezintathu nangaphezulu ngokuthi bathathe umlinganiselo wobunzima wezibini zezinto ukuze zonke izinto zibe zilandelelanisiwe Wonke umsebenzi kufuneka urekhodishwe.	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YE-2	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho seSikweni** • Thelekisa uze ucwangcise ubungakanani bamanzi onokugalelwa kwizikhongozeli ezibini ezibekwe esinye ecaleni kwesinye. Abafundi bakukhangela oku ngokugalela kwisikhongozeli sesithathu ukuba kuyimfuneko. • Thelekisa uze ucwangcise ubungakanani bamanzi onokugalelwa kwizikhongozeli ezibini (umthamo). • Sebenzisa ulwimi lokuthetha ngokuthelekisa umz ngaphezulu kune,ngaphantsi kune,izele,ayinanto/ ayizelanga. • Qikelela uze wenze umlinganiselot, thelekisa uze ucwangcise umthamo wesikhongozeli ngokusebenzisa umlinganiselo ongekho semgangathweni umz. icephe nekomityi.	**Umlinganiselo ongekho seSikweni** • Thelekisa uze ucwangcise ubungakanani bamanzi onokugalelwa kwizikhongozeli ezibini ezibekwe esinye ecaleni kwesinye. Abafundi bakukhangela oku ngokugalela kwisikhongozeli sesithathu ukuba kuyimfuneko • Sebenzisa ulwimi lokuthetha ngokuthelekisa umz ngaphezulu kune,ngaphantsi kune,izele,ayinanto/ ayizelanga • Qikelela uze wenze umlinganiselot, thelekisa uze ucwangcise umthamo wesikhongozeli ngokusebenzisa umlinganiselo ongekho semgangathweni umz. icephe nekomityi	Yonke imilinganiselo kwubanga lkuqala ayikho sesikweni.Akukho mlinganiselo osesikweni one-unithi ezisemgangathweni osetyenziswayo. Ugqaliselo obekucetyiswe ngalo kwikota yokuqala ibikukukhulisa ulwimi lokuthetha ngezinto ezibaxekileyo nokuthelekisa umthamo. Ugqaliselo kwikota yesibini lunokuba kuthelekelelo oluthe ngqo.Ugqaliselo kwikota yesine lunokuba kuziqhelaniso nobethelelo lomthamo ngexesha lokuba Abafundi bezisebenzela ngexesha elilelabo apha enyakeni. **Uthelekelelo oluthe ngqo lwemithamo kwizikhongozeli** • Khulisa ukuqonda umthamo nolwimi olusetyenziswayo ukuthetha ngomthamo. Abafundi baqalisa ukucinga nokuthetha ngomthamo ngokuthi bathelekise ukuba ungakanani umthamo okwizikhongozeli ezifanayo (okanye bazobe izikhongozeli ezibini) - Zele, ayinanto/ayizelanga - Ngaphezulu kwe /ngaphantsi kune - Lingana ne Abafundi bazalisa ze bakhuphele izikhongozeli zingabinanto • Thelekisa imithamo yezikhongozeli ezibini okanye ezintathu ngokuthi bagalele kwisikhongozeli sesithathu. ezahlukileyo. Abafundi bathi xa bekwazi ukuthetha ngomthamo (ayinanto,izele) bakwazi nokuthelekisa umthamo (onomahluko ocacileyo) kwizikhongozelo ezifanayo,bangaqhubekeka bethelekisa umthamo kwizikhongozeli ezibini ezahlukileyo. Gqalisela ngakumbi kwizikhongozeli ezivulekileyo nezincinane umz - Zalisa ibhotile enomthamo welitha ezi-2 nenye enomthamo ongama-500 - Buza Abafundi ukuba yeyiphi ibhotile enomthamo ongaphezulu kunomnye. Abafundi bakhangela oku ngokuthi bagalele amanzi kwisikhongozeli sesithathu baze baphawule ukuphakama. Abafundi abancinci ababucingi ububanzi besikhongozeli xa bephawula ngomthamo. Bajonga kuphela ukuba isikhongozeli sizaliswe saya kumaphi.Abafundi banokunikwa amava amaninzi ngokuthelekisa umthamo okwizikhongozeli ezinobubanzi obahlukileyo. **Ukurekhodisha** Abafundi mabahale phantsi wonke umsebenzi	Izifundo ezi- 2

IBANGA LOKU- 1 IKOTA YESI-2 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA YE-2**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24in)
Ukusebenza ngengqokelela yezinto				
5.1 **Qokelela uze uhlele izinto**	**Qokelela uze ulungise izinto** Qokelela uze uhlele izinto ezibambekayo nezibonakalayo zemihla ngemihla.	**Qokelela uze ulungise izinto** Qokelela uze uhlele izinto ezibambekayo nezibonakalayo zemihla ngemihla.	Jonga kumanqaku eKota yokuqala Kwikota yesibini abafundi baqhubekeka besebenza ngeengqokelela ngendlela efanayo,kodwa isikhokelo esinikwa Abafundi sinokuba sincinci. Abafundi bathi bakuba bekhokelwe kwinkqubo yokuhlela baze babonise iingqokelela ngexesha lokufunda ngamaqela,banokuziqhelanisa ngexesha elilelabo lokuzifundela. Abafundi bathi bakuba beziqhelanise nokubuza nokuphendula imibuzo ngeengqokelela,ungaqalisa ukubabuza ukuba bachaze iingqokelela zabo,ngaphandle kokuba ubakhokele ngemibuzo ethile.	Isifundo esi-1
5.2 **Bonisa ingqokelela yezinto ezihleliweyo**	**Bonisa ingqokelela yezinto ezihleliweyo** Zoba umfanekiso wengqokelela yezinto.	**Bonisa ingqokelela yezinto ezihleliweyo** Zoba umfanekiso wengqokelela yezinto.		
5.3 **Xoxa uze unike ingxelo ngengqokelela yezinto ezihleliweyo**	**Xoxa uze unike ingxelo ngengqokelela yezinto ezihleliweyo** • Nika isizathu sendlela yokuhlelwa kwengqokelela • Phendula imibuzo: - IUkuhlelwa kwenziwa njani (inkqubo) - Ingqokelela ehleliweyo ikhangeleka njani (isiphumo) • Chaza ingqokelela nemizobo • Chaza indlela ingqokelela ehlelwe ngayo.	**Xoxa uze unike ingxelo ngengqokelela yezinto ezihleliweyo** • Nika isizathu sendlela yokuhlelwa kwengqokelela • Phendula imibuzo ngoku: - IUkuhlelwa kwenziwa njani (inkqubo) - Ingqokelela ehleliweyo ikhangeleka njani (isiphumo) • Chaza ukuqokelelwa nokuzotywa • Chaza ingqokelela nemizobo • Chaza indlela ingqokelela ehlelwe ngayo.		
Kuyacetyiswa ukuba ukusebenza ngolwazi oluqokelelweyo ngumgqaliselo weKota yesi 3 neye -4.				

IBANGA LOKU-1 IKOTA YESI-3 1. AMANANI, II-OPAREYSHINI NOKUZALANA				
ISIHLOKO	**IINGQIQO KUNYE NEZAKHONO** **Okulindelekileyo ekupheleni konyaka**	**IINGQIQO KUNYE NEZAKHONO** **ugqaliselo lwekota yoku -1**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** **(kwisifundo seyure e-1 nemizuzu engama-24)**
UKUPHUHLISWA KWEKHONSEPTI YAMANANI: Bala ngamanani azeleyo				
1.1 **Bala izinto**	Bala izinto ngokuvakalayo Bala ngokuvakalayo nangokuthembekileyo ukuya ku-50 Nika uqikelelo ngengqiqo amanani ezinto anokuthi akhangelwe ngokubala.	Bala izinto ngokuvakalayo nangokuthembekileyo ukuya ku-40 Nika uqikelelo ngengqiqo amanani ezinto anokuthi akhangelwe ngokubala.	**Yintoni umahluko ukusuka kwiKota yesi-2?** KwiKota yesi 3 Abafundi bandisa uludwe lwabo wokubala.Kusekho ukugqaliselwa kukuqonda imithetho siseko yentsusa Kule kota Abafundi kufuneka bafunda ukubeka izinto ngendlela emisiweyo xa bebala ukwenzela ukuba xa khangela indlela ababale ngayo, isicwangciso siza kubanceda ukuba babale ngokulula. Umz izinto zokubala zingabekwa emgceni.  Kule Kota abafundi baqhubekeka besandisa izakhono zabo zokubala nokuziqhelanisa: uku • Bala konke; • Bala ubheka phambili.; • Imithetho siseko yentsusa yamanani • Ukusebenza ngezicatshulwa ezibhaliweyo. **Ukuxela inani lezinto ngokuchanekileyo ngokwamaqela ngaphandle kokuzibala nganye nganye.** Abafundi baqhubekeka beziqhelanisa ukunakana ingqokelela encinci yezinto. **Ukubala ngamaqela** Ukuze uncede Abafundi ukuba babale ngezithuba zezibini,izihlanu namashumi kufuneka benze amaqela ezinto ngezibini,izihlanu,amashumi ukuze bakwazi ukubala ingqokelela yezinto.Amakhadi amanani kufuneka aboniswe kwingqokelela nganye ukubonisa inani lezinto ezibaliweyo.Ukubala ngamaqela kuza kubalungisa abafundi ukuze baqonde iziphinda phindwa	

ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.1 **Bala izinto**	Bala izinto ngokuvakalayo Bala ngokuvakalayo nangokuthembekileyo ukuya ku-50 Nika uqikelelo ngengqiqo amanani ezinto anokuthi akhangelwe ngokubala.	Bala izinto ngokuvakalayo nangokuthembekileyo ukuya ku-40 Nika uqikelelo ngengqiqo amanani ezinto anokuthi akhangelwe ngokubala.	**Izixhobo zokuxhasa ukufunda nokufundisa:** Ingqwalasela mayinikwe kwiintlobo zezixhobo ezisetyenziswayo . • Izixhobo zokufundisa ezifana namaso okubala, zinokusetyenziswa. • I- abacus isenokusetyenziswa ukuziqhelanisa nokubala ngamashumi. • Banokwenza iinyandai zezibini,iinyandai zezihlanu,iinyandai zamashumi nemicinga yematshisi okanye amakhunana okubala baze bazibale zonke.	

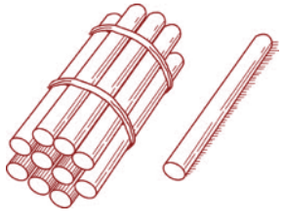
ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.2 **Ukubala usiya phambili nokubala ubuya umva**	**Ukubala usiya phambili nokubala ubuya umva** • Ngo-1 ukusuka nokuba kuleliphina inani phakathi kuka 0-100 **Ukubala usiya phambili nga/nge** • 10 ukusuka kwiziphinda phindwa zika10 phakathi kwe 0 ne100 • 5 ukusuka kwiziphinda phindwa zesi 5 phakathi kwe 0 ne100 • 2 ukusuka kwiziphinda phindwa zika2 phakathi kwe 0 0 ne 100	**Ukubala ubheka phambili nokubala ubuya umva** • Ngo-1 ukusuka nokuba kuleliphina inani phakathi kuka 0-80 **Ukubala usiya phambili nga/nge** • 10 ukusuka kwiziphinda phindwa zika10 phakathi kwe 0 nama-80 • 5 ukusuka kwiziphinda phindwa zesi 5 phakathi kwe 0 nama-80 • 2 ukusuka kwiziphinda phindwa zika2 phakathi kwe 0 nama-80	**Yintoni umahluko ukusuka kwiKota yoku -1 ?** Kwikota yesi -3, abafundi babala baye kutsho kuma 80 Baqhubekeka bebala ngeziphinda phindwa ze- 2, 5 ne 10. **Eminye imisebenzi:** **Imisebenzi yeklasi yonke** • Abafundi babala besiya phambili nokubala **bebuya umva ukuya kuma-**80 • Utitshala ulatha kumanani akwigridi yokubala njengokuba Abafundi bebala ukuya kutsho kuma-70 • Abafundi babala ngezi-5 ukuqala kuma -25 ukuya kuma-60. • Abafundi babala ngama-10 5 ukuqala kwi-0 ukuya kuma-80 • Bala utsiba tsiba usebenzisa izi-5,nama-10 ukuya kuma-80 • Abafundi babala ngama- 10 ukuya kuma - 50 njengokuba utitshala elatha kwitshati yamanani • Utitshala ulatha iziphinda-phindwa zesi- 5 kwitshati ye- 100 baze Abafundi babale • Abafund babala bebheka phambili baphinde babuye umva ngama-10 Besebenzisa itshati ye -100,banako ukuphendula kulemiyalelo ifana nale: • Bala ubheka phambili ngama-10 ukusuka ku-20. • Bala ubuya umva ng-1 ukusuka kuma-56 • 80, 70, 60: biza amanani amathathu alandelayo usebnzisa itshati ye-100 **Umsebenzi onokwenziwa ngabafundi ngokuzimeleyo** Isakhono sokubala utsiba tsiba kufuneka sisetyenziswe kwimisebenzi ebhalwayo: Abafundi banoku: • gqibezela ulandelelwano olulula baze: • bafakele amanani angekhoyo kwimizila yamanani kumgca manani bhala amanani ambini alandelayo 66, 65, 64,__, __,	

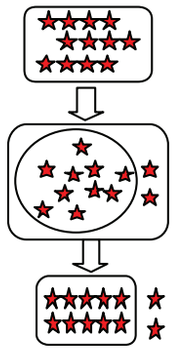
ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.3 **Iisimboli zamanani namagama amanani**	**Azi kwaye afunde amanani** Azi kwaye afunde iisimbolo zamanani • 0 - 100 • Abhale iisimboli zamanani • 0 – 100. • Azi kwaye afunde amagama amanani 1 – 10 • Bhala amagama amanani 1 -1 0	**Azi kwaye afunde amanani** Azi kwaye afunde iisimbolo zamanani • 0 - 80 • Bhala iisimboli zamanani 0-80 • Azi kwaye afund e amagama amanani 1 -10 • Bhala amagama amanani 1-10	**Yintoni umahluko ukusuka kwiKota yoku 1 ?** Kwikota yesi-3 uludwe lwamamanani wande waya ku-80.Ngoku kulindeleke ukuba Abafundi babhale iisimboli zamanani ukuya kuma-20.Kufuneka bekwazile oku kuba babala ukuya ku-20 kwaye babhala izivakalisi zamanani. Abafundi baqhubeka beziqhelanisa nokufunda nokubhala amagama amanani. Kufuneka bakwazi ukutshatisa isimboli negama lenani. Imisebenzi yeworkbook nokubhala eklasini –i work book inokwenziwa ngexesha elizimeleyo. Umzekelo womsebenzi obhalwayo: Tshatisa amagama nezinto Nye ✂ Bini ❋ ❋ ❋ ❋ Ntathu ✸✸ Ne ✶✶✶✶✶✶ Ntlanu ✖✖✖✖✖✖✖✖✖✖ Ntan-dathu ✺✺✺ Sixhenxe ✷✷✷✷✷✷✷ Sibhozo ※ ※ ※ ※ ※ Lishumi ✦✦✦✦✦✦✦✦✦✦ **Yintoni elindelekileyo kubafundi?** • Ukuba bakwazi ukufunda iisimboli zamanani ukuya kuma-50 • Ukuba bakwazi ukubhala iisimboli zamanani ukuya ku -20 • Ukuba bakwazi ukufunda amagama amanani ukuya kwi-10 • Ukuba bakwazi ukubhala amagama amanani ukuya kwi-10	

ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.4 **Chaza, thelekisa, Llandelelanisa amanani**	**Cwangcisa uze uthelekise izinto** • Thelekisa ingqokelela yezinto ngolu hlobo: ninzi, mbalwa, ninzi, ncinci ngaphezulu kune, ngaphantsi kune fana ne, ninzi njenge, hlukileyo • Cwangcisa igqokelela yezinto ukusuka kweyona incinci ukuya kweyona ininzi nokusuka kweyona ininzi ukuya kweyona incinci • Dwelisa ukuya kwizinto ezili-100 **Landelelanisa uze uthelekise amanani** • **Cwangcisa amanani** - Ukusuka kwelona lincinci ukuya kwelona likhulu nokusuka kwelona likhulu ukuya kwelona lincinci - Phambi, emva, phakathi - Sebenzisa umngca: 0-100 • Thelekisa amanani apheleleyo ngolu hlobo: ncinana kune, nkulwana kune, ngaphezulu kune, ngaphantsi kune, iyalingana	**Cwangcisa uze uthelekise izinto ezili -15** • Thelekisa ingqokelela yezinto ngolu hlobo:ninzi,mbalwa, ninzi,ncinci ngaphezulu kune, ngaphantsi kune fana ne, ninzi njenge, hlukileyo • Cwangcisa ingqokelela yezinto ukusuka kweyona incinci ukuya kweyona ininzi nokusuka kweyona ininzi ukuya kweyona incinci • Dwelisa ukuya kwizinto ezili-15 **Cwangcisa uze uthelekise amanani ukuya kwi-15** • **Cwangcisa amanani** - Ukusuka kwelona lincinci ukuya kwelona likhulu nokusuka kwelona likhulu ukuya kwelona lincinci - Phambi, emva,phakathi - Sebenzisa umngca: 0-80 • Thelekisa amanani apheleleyo ngolu hlobo:ncinana kune, nkulwana kune, ngaphezulu kune, ngaphantsi kune, iyalingana	**Yintoni umahluko ukusuka kwiKota yoku 1?** IKwikota yesi 3, Abafundi baqhubeka be: • Cwangcisa baze bathelekise ingqokelela yezinto • Cwangcisa baze bathelekise amanani; baze • Basebenzise ulwimi ukuhlela nokuthelekisa amanani. **Eminye imisebenzi:** Utitshala ubiza inani umz: 12. Utitshala ubuza umbuzo: Ingaba liphi eli nani kumgca manani? Leliphi inani eliza phambi kwe12? Leliphi inani eliza emva kwe- 12? 12 lingaphezulu ngo-1 kuno _____ 12 ungaphantsi ngo -1 kuno _____	

ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.4 **Chaza, thelekisa, Llandelelanisa amanani**	• Thelekisa amanani apheleleyo ngolu hlobo: ncinana kune, nkulwana kune, ngaphezulu kune, ngaphantsi kune, iyalingana • Ungqinelwano lwamanani • Dwelisa amanani ukuya kwi-100 **Ukusebenzisa amanani olandelelwano nendawo** • Thelekisa amanani apheleleyo ngolu hlobo: ncinana kune, nkulwana kune, ngaphezulu kune, ngaphantsi kune, iyalingana Ucwangciso lwamanani ngokuwadwelisa ukusa ku 1 ukuya ku 10.	• Thelekisa amanani apheleleyo ngolu hlobo:ncinana kune, nkulwana kune, ngaphezulu kune, ngaphantsi kune, iyalingana • Ungqinelwano lwamanani • Dwelisa amanani ukuya kwi-15 **Ukusebenzisa amanani olandelelwano nendawo** • Indawo yezinto emgceni ukusuka kwelokuqala ukuya kweleshumi umz. Elokuqala, elesibini, elesithathu..... eleshumi, elokugqibela (amanani alandelelanayo)		

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1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo lemivo emibini ukuya kuma- 20** • Hlula hlula inani elinedigithi ezimbini ngokwamashumi nemivo umz i- 12: 10 ne 2	**Nakana ixabiso lendawo lemivo emibini ukuya kwi 15** • Hlula hlula inani elinedigithi ezimbini ngokwamashumi nemivo ukuya kwi 15.	**Yintoni umahluko ukusuka kwiKota yoku 1?** Kule kota abafundi baqalisa ukohlula amanani ngokwamashumi nemivo besebenzisa: • Ukuhlula izinto ngokwamaqela amashumi kunye • nendlela ebhalwayo 14= 10 no 4. Ukuqonda okupheleleyo kwexabiso lamanani kuphuhliswa kwiMfundo esiSiseko. Xa abafundi bekwibanga lokuqala baqalisa ukucinga ngamaqela ezinto ezilishumi okanye izinto njengeyunithi. Baqalisa ukwenza inguqulelo yokubona ishumi njengento ekhululekileyo alibone njengeyunuthi okanye njenge shumi eli-1 Ukuqalisa ukqonda ixabiso lendawo yenani kule kota, abafundi kufuneka: • bawazi amagama amanani baze babale ngokulandelelanisa ngokuqinisekileyo ubuncinci ukuya kuma-20 • Bhale uze ufunde isimboli yenani • benze izibalo zokudibanisa nokuthabatha ezilula. • babale izinto ezibonakalayo ngokuthi uzohlule ngokwamaqela. • bakwazi ukubonakalisa amaqela . **Ukucslulwa kwamanani abe ngamashumi nemivo** Kwibanga lokuqala kugqaliselwe ekwenzeni amaqela amashumi nokwenza akhululekileyo. Phambi kokuba amanani aqhawulwe abe ngamashumi nemivo, abafundi kufuneka banikwe ithuba elaneleyo lokuba baziqhelanise nokuqhawula amanani ngeendlela ezahlukileyo kwiKota yoku- 1 neye 2.Oku bekufanele ukuba kwenziwe njengomsebenzi owenziwayo nanjegomsebenzi obhalwayo. **Ukusebenzisa izixhobo ezibonakalayo** Izinto ezibonakalao ziluncedo ekwakheni kubafundi ukukwazi amanani, nomthetho siseko wexabiso lendawo.Xa bebala ngamashumi abafundi baya kuqalisa ukuqonda ukuba iziphinda phindwa ze 10 zinika umchancatho xa bebala umz. 26, 27, 28, 29, **30,** 31. Kufuneka baqalise ukuqonda ukuba igama nesimboli ye-10 zimele iyuniti enye.	

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1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo lemivo emibini ukuya kuma- 20** • Hlula hlula inani elinedigithi ezimbini ngokwamashumi nemivo umz i- 12: 10 ne 2	**Nakana ixabiso lendawo lemivo emibini ukuya kwi 15** • Hlula hlula inani elinedigithi ezimbini ngokwamashumi nemivo ukuya kwi 15.	Ukusebenza ngezixhobo ezibonkalayo ngokohlula izinto ukwenza imivo elishumi nokuqonda ukuba ishumi liqela elinye lemivo elishumi engabambenanga. Ukubabonisa nje abafundi iqela lamashumi uze ubaxelele ukuba i-14 lishumi elinye elinemivo emine engabambekanga alinakuze lakhe uluvo lokuba i-14 lishumi elinye nemivo emine engabambekanga. Ukwenza iqela izinto ezingabambekanga ukuze wenze iqela lamashumi kunentsingiselo enkulu.  Ukusebenzisa i-abacus, abafundi kufuneka bakwazi ukubonisa oku: Ishumi elinye; Ishumi elinye nemivo emi-2; Ishumi elinye nemivo emit-3; ne Shumi elinye nemivo emi-4 Lindela abafundi ukuba babale ngo-1 ukwenza iqela lamashumi. Kwabaninzi iyakuba kuphela yindlela enye yokubiza amanani okanye ukutsho ukuba mangaphi. Abafundi bangakwazi ukwenza iinyanda zamashumi nemivo engabambekanga ukubonisa ukuba i-11 lingaqhawulwa libe yinkatha enye yamashumi neenyanda enye yemivo engabambekanga. 	

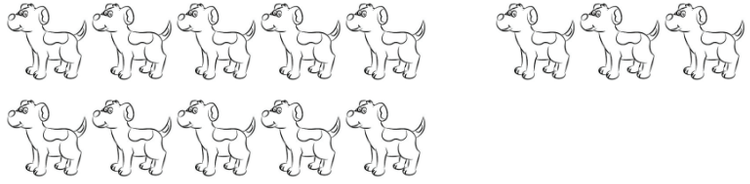
ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo lemivo emibini ukuya kuma- 20** • Hlula hlula inani elinedigithi ezimbini ngokwamashumi nemivo umz i- 12: 10 ne 2	**Nakana ixabiso lendawo lemivo emibini ukuya kwi 15** • Hlula hlula inani elinedigithi ezimbini ngokwamashumi nemivo ukuya kwi 15.	Ityhubhu ezithungelanayo zingapakishwa ukuze zenze isakhiwo esiphakamileyo okanye umqolo wama-10.  Amakhadi exabiso lendawo angasetyenziswa ukubonisa amashumi nemivo. **Ukuya kwitekisi ezibhaliweyo** **Ukubonisa amashumi nemivo usebenzisa imifanekiso.** Abafundi banokuboniswa imifanekiso ebonisa amaqela amashumi nomvo oshiyekileyo.Umz**:** Ekupheleni kwekota abafundi kufuneka bakwazi ukubhala: 13 = ishumi eli-1 nemivo emi-3 13 = 10 no 3 **Izixhobo zokufunda nokufundisa** Izinto zingacwangciswa ngokwamaqela • Izinti zokubala • Izinto zokubala ezinokubotshwa • Imicinga yematshisi • Izinti ze-ice cream • Ityhubhu ezithungelanayo • Amaso okubala • I- abacus 	

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1.6 **Ubuchule bokusombulula iingxaki zezibalo**	Sebenzisa obu buchule bulandela xa usombulula iingxaki ukwachaza izisombululo zezo ngxaki: • Izixhobo ezibambekayo umz izinto zokubala • Imifanekiso yokuzoba amabali ezibalo • Ukwakha nokucalula amanani • Ukuphinda kabini nokohlula kabini ngokulinganayo • Imigca manani	Sebenzisa obu buchule bulandelayo xa usombulula iingxaki ukwachaza izisombululo zezo ngxaki: • Izixhobo ezibambekayo umz izinto zokubala • Imifanekiso yokuzoba amabali ezibalo • Ukwakha nokucalula amanani • Ukuphinda phinda kabini nokohlula kabini ngokulinganayo • Imigca manani	**Yintoni umahluko ukusuka kwiKota yoku 2?** Makuqhutyekekwe nokuziqhelanisa nobuchule bokubala. Uphinda phindo nokohlulwa ngokulinganayo kunokusetyenziswa njengobuchule bokubala kulekota. Abafundi kufuneka baqhube beziqhelanisa nophinda phindo nokohlulwa ngokulinganayo kwiingxaki zamazwi nemeko ezingalawulwa nto. Ekupheleni kwekota abafundi baqalisa ukusombululo sengxaki zamazwi besebenzisa obu buchule: • Imizobo okanye izixhobo ezibonakalayo • Ukukwakha nokucalula amanani • Ukuphinda phinda kabini nokohlula kabini ngokulinganayo Jonga amanqaku kwiKota yesi-2	
1.7 **Ukudibanisa Ukuthabatha**	Sombulula iingxaki zamazwi kwiimeko ezithile uze uchaze izisombululo zakhe zezo ngxaki eziquka ukudibanisa nokuthabatha ezineempendulo ukuya kuma 20.	Sombulula iingxaki zamazwi kwiimeko ezithile uze uchaze izisombululo zakhe zezo ngxaki eziquka ukudibanisa nokuthabatha ezineempendulo ukuya kuma 20.	**Yintoni umahluko ukusuka kwiKota yesi 2?** Jonga amanqaku kwiKota yesi-2 kodwa sebenza ngamanani ukuya kwi-15.	
1.8 **Ukudibanisa okuphindiweyo okukhokelela kuphinda phindo**	Sombulula iingxaki zamazwi kwiimeko ezithile uze uchaze izisombululo zakhe zezo ngxaki eziquka ukudibanisa okuphindiweyo okukhokelwa kuphindaphindo ezineempendulo ukuya kuma 20.	Sombulula iingxaki zamazwi kwiimeko ezithile uze uchaze izisombululo zakhe zezo ngxaki eziquka ukudibanisa okuphindiweyo ezineempendulo ukuya kuma 15.	Jonga amanqaku kwiKota yesi-2 kodwa sebenza ngamanani ukuya kwi-15	

ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.9 **Ukwahlula ngokwamaqela nokwabelana ngokulinganayo okukhokelela kulwahlula-hlulo**	Sombulula uze uchaze izisombululo zengxaki ezenziwayo eziquka ukwaba ngokulinganayo nokwahlula ngokwamaqela anamanani azeleyo ukuya kuma -20 kunye neempendulo ezinokuba nentsalela.	Sombulula uze uchaze izisombululo zengxaki ezenziwayo eziquka ukwaba ngokulinganayo ngokwahlula ngokwamaqela anamanani ukuya kwi-15 kunye neempendulo ezinokuba nentsalela.	Jonga amanqaku kwiKota yesi-2 kodwa sebenza ngamanani ukuya kwi-15	
1.11 **Imali**	• Nakana uze uchonge imali yoMzantsi Afrika • Iinkozo : 5c, 10c, 20, 50c, R1, R2;R5 • amaphepha. R10 nama R20 • Sombulula iingxaki zemali eziquka imali iphelele/iyonke netshintshi esenti ukuya kuma 20 c okanye ama R20	• Nakana uze uchonge imali ezinkozo yoMzantsi Afrika • 5c, 10c, 20c, 50c, R1, R2; R5 • Sombulula iingxaki zemali eziquka imali iphelele/iyonke netshintshi yemali engama R20 kunye neesenti ukuya kuma 20c	**Iyonke/iphelele– iirandi kuphela** Abafundi basebenza nge R1, R2, R5, R10 nemali eliphepha eyi R20 .Badibanisa imali ukuya kuma R20 ngokwenza ngokusebenzisa imali yokudlala. Imizekelo: R5 + R10 = R15 R10 + R10 + R10 =R30 – ukudibanisa okuphinda phindayo R5 +R2 + R8 = R15 – zalisa ukuya 10 **Itshintshi – iirandi kuphela** Abafundi basebenza nge R1, R2, R5, R10 kunye ne R20. Bayathabatha ngokwenza ngokusebenzisa imali engamaphepha. Abafundi bagqibezela amaphepha omsebenzi apho babala itshintshi yezinto abazithenge ngama- R20 okanye ngaphantsi. Imizekelo: R10 – R8 =R2 R15 – R5 =R10	

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UKUBALA				
1.12 **Ubuchule (iindlela)**	Sebenzisa obu buchule xa ubala: • Izixhobo ezibambekayo • Ukwakha nokucalula amanani • Ukuphinda phinda kabini nokohlula kabini ngokulinganayo • Imigca manani	Sebenzisa obu buchule xa ubala: • Izixhobo ezibambekayo • Ukwakha nokucalula amanani • Ukuphinda phinda kabini nokohlula kabini ngokulinganayo • Umgca manani oxhaswa zizixhobo ezibambekayo umz. amaso okubala:	Abafundi balindeleke ukuba basombululo iingxaki zokubala ezingalawulwa meko besebenzisa ubuchule obulandelayo: Jonga kumanqaku eKota yesi-2 • Ukwakha nocalula amanani • Ukuphinda phinda kabini nokohlula kabini ngokulinganayo • Imigca manani	

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1.13 **Ukudibanisa nokuthabatha**	Uludwe lwamanani: 0 - 20 • Dibanisa ukuya kuma 20 • Thabatha kuma 20 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, □) • Ziqhelanise neebondi zamanani ukuya kwi-10	Uludwe lwamanani: 0 -15 • Dibanisa ukuya kwi 15 • Thabatha kwi 15 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, □) • Ziqhelanise neebondi zamanani ukuya kwi-9	**Yintoni umahluko ukusuka kwiKota yesi 2?** KwiKota yesi 2 uludwe lokubala lwandile ukusuka kwi 10 ukuya kwi-15I Ukuze bakwazi ukusebenza ngeesimboli zokudibanisa nokuthabatha abafundi kufuneka babe namava awoneleyo: • Sebenzisa aze aqonde ulwimi olusetyenziswa xa kudityaniswa naxa kuthatyathwa. • Bala konke • Bala ubheke phambili ukusuka kumanani amakhulu. • Cwangcisa uze uthelekise **Ubuchule bokubala xa udibanisa naxa uthabatha** Kule Kota abafundi baqhubekeka besebenzisa obu buchule bulandelayo: • Ukudibanisa ngokubala konke. • Ukudibanisa ngokubala ubheka phambili • Bala ubheke phambili ukusuka kumanani amakhulu • Ukuthabatha • Ukuthabatha ngokubala ubuya umva Kule Kota abafundi bazakwenza oku kulandelayo: **Tshintsha inani ukuya kwishumi uze ke uthabathe okanye udibanise izinye.** Obu buchule bunokufundiswa ku ludwe lwamanani angaphantsi lize lisetyenziswe kumanani angaphezulu Umz: 9 + 6 = □ Umfundi unokuthi: “Ndakusoloko ndithabatha kwisi-6 u-1 ndize ndimdibanise kwisi 9 ukwenza i-10. Ngooko 9 + 6 unokubhalwa 10 + 5 = 15 8 + 5 = □ Umfundi unokuthi: “Ndakuthatha isi-2 kwisi -5 ndize ndisidibanise kwisi-8 ukwenza i-10 Ngoko 8 + 5 unokubhalwa 10 + 3 = 13	

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1.13 **Ukudibanisa nokuthabatha**	Uludwe lwamanani: 0 - 20 • Dibanisa ukuya kuma 20 • Thabatha kuma 20 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, □) • Ziqhelanise neebondi zamanani ukuya kwi-10	Uludwe lwamanani: 0 -15 • Dibanisa ukuya kwi 15 • Thabatha kwi 15 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, □) • Ziqhelanise neebondi zamanani ukuya kwi-9	Xa befunda obu buchule abafundi baza kusebenzisa izixhobo ezibonakalayo ukuze bakwazi ukubuqonda obu buchule. Umz: Yenza iqela lezinja ukwenza i-10  **9 + 4**  **10 + 3** $9 + 4 = 10 + 3 = 13$ **Calula manani abe mancinci ukuze ubale ngokulula** Abafundi baza kucalula amanani abe ngamalungu amncinci. Baza kucalula amanani abe ngamalungu abazakuthi bakwazi ukusebenza ngawo. • Sebenzisa iintolo kunye namanani ukubonisa ingqiqo. 8 + 6 = □ 8 + 2 + 4 8 + 2 → 10 + 4 = 14 8 + 7 = □ 8 + 2 + 5 8 + 2 → 10 + 5 = 15 15 – 9 = □ 15 - (5+4) 15 – 5 → 10 - 4 = 6	

ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uludwe lwamanani: 0 - 20 • Dibanisa ukuya kuma 20 • Thabatha kuma 20 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, □) • Ziqhelanise neebondi zamanani ukuya kwi-10	Uludwe lwamanani: 0 -15 • Dibanisa ukuya kwi 15 • Thabatha kwi 15 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, □) • Ziqhelanise neebondi zamanani ukuya kwi-9	**Ukusebenzisa ulwazi lwangaphambili njengobuchule** Ubuchule obuboniswe ngasezantsi kuvumela abafundi ukuba babale ngokusesikweni kweye bawazi amanani. Ukuziqhelanisa nobuchule obungasezantsi kungakhuthaza abafundi ukuba bakwazi ukucinga ngokuzalana kwamanani kufundise Abafundi ukuba banokusebenzisa ulwazi lwabo ukuze bakwazi ukubala. **Beka inani elikhulu kuqala ukuze ukwazi ukubala usiya phambili okanye ubuya umva** 4 + 12 = □ Cwangcisa ngokutsha 4 + 12 njenge 12 + 2 uze ubale ubheke phambili 4 ukusuka ku 12. **Chonga uphindo kabini olusondeleyo** 7 + 6 Umfundi unokuchaza ukuba isibalo sinokubhalwa njengeThe 6 + 6 -1 (phinda +1) okanye 7 + 7 - 1 (phinda 7 -1). Abafundi kufuneka bazibhale babubhale phantsi ubuchule besebenzisa utolo. 6 + 6 → 12 + 1 = 13 **Sebenzisa ulwazi lolwalamano phakathi kokudibanisa nokuthabatha-enye ngumguqulelwa wenye** 15 – 9 = □ Umfundi uyayazi ukuba izibalo zinokubhalwa kwakhona njengezibalo zokudibanisa: “Ndiyazi ukuba isi- 9 + □ = 15.” Umfundi unokubala ebheka phambili ukuze akwazi ukubala. **Iibondi zamanani** Ukuze bakwazi ukuziqhelanisa neebondi zamanani abafundi mabanikwe iindidi ngeendidi zemsebenzi.Oku kunokwenziwa ngexesha elikhululekileyo. Umgca manani unokusetyenziswa ukuziqhelanisa neebondi zesi-9.	

ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	Uludwe lwamanani: 0 - 20 • Dibanisa ukuya kuma 20 • Thabatha kuma 20 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, □) • Ziqhelanise neebondi zamanani ukuya kwi-10	Uludwe lwamanani: 0 -15 • Dibanisa ukuya kwi 15 • Thabatha kwi 15 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, □) • Ziqhelanise neebondi zamanani ukuya kwi-9	**Ingqiqo yophindo kabini** Abafundi kufuneka babhale izivakalisi zamanani kule Kota. 1 + 1 = □ 2 – 1 = □ 2 + 2 = □ 4 – 2 = □ 3 + 3 = □ 6 – 3= □ 4 + 4 = □ 8 – 4 = □ Abafundi kufuneka babenako ukuphendula le mibuzo ilandelayo: • Phinda kabini isi- 3 • Ngubani izi-3 ezibini? • Ndiqengqa iziithandathu ezi-2. Ngubani amanqaku? • Zingaphi iikawusi kwiipere ezi-5?	
	• Ukudibanisa okuphinda phindiweyo (oko kukuthi inani elinye) ukuya kuma-20 • Sebenzisa isimbolo • efanelekileyo (+, =, □)	• Ukudibanisa okuphinda phindiweyo(oko kukuthi inani elinye) ukuya kwi 15 • Sebenzisa isimbolo efanelekileyo (+, =, □)	**Yintoni umahluko ukusuka kwiKota yesi 2?** KwiKota yesi -3 abafundi baqhubeka bephuhlisa ulwimi lokudibanisa okuphindiweyo. Umzekelo: • Izithathu ezi-2 • Amaqela am-4 ezi- 2 Abafundi baqhubeka bebhala izivakalisi zamanani ukuzibonisa emfanekisweni. Ukubala uqakatha makuqhubeke ukunceda ukuba babale izinto ezikumaqela emifanekiso.Ukuba umfanekiso okanye izinto zingamaqela ezibini abafundi kufuneka babale ngezibini bangabali ngo-1 ukuze bafumane inani lezinto zizonke.	

ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.16 **Izibalo zentloko**	**Uludwe lwama- 20** • Cwangcisa iseti ayinikiwe yamanani akhethiweyo. • Thelekisa amanani ukuya ku-20 ukuze atsho ukuba leliphi elingaphezulu okanye elingaphantsi. • Yazi ukuba leliphi inani elingaphezulu ngesi-1 okanye leliphi inani elingaphantsi ngo-1 • Yazi ukuba leliphi inani elingaphezulu ngesi-2 okanye leliphi inani elingaphantsi nge-2 • Yazi ukuba leliphi inani elingaphezulu nge-10,leliphi elingaphantsi nge -10 **Ukukhumbula ngokukhawuleza:** • Iibondi zamanani ukuya kwi-10 • Khumbula ukudibanisa nokuthabatha amanani i-10 elingena kuwo.	**Ingqiqo ngamanani: uludwe lwe-15** • Cwangcisa iseti ayinikiwe yamanani akhethiweyo. • Thelekisa amanani ukuya ku-20 ukuze atsho ukuba leliphi elingaphezulu okanye elingaphantsi. **Ukukhumbula ngokukhawuleza:** • Iibondi zamanani ukuya kwisi-5 • Khumbula ukudibanisa nokuthabatha amanani isi-5 esingena kuwo.	**Yintoni umahluko ukusuka kwiKota yesi -2?** Kwikota yesi-2, uludwe lwamanani luyaxananaza ukusuka kwi-1o ukuya kwi- 15. Imizekelo yemibuzo nemisebenzi enokubuzwa nenokwenziwa: • Qala ngei 3 uze ubale ubheka phambili ngo-1 ukuya kwi-10. • Abafundi bama ngomgca babuze: Ngubani owokuqala,owesibini,owesithathu okanye owokugqibela • Leliphi inani elingaphantsi kunelinye phakathi kwe-14 ne - 8? • Leliphi inani elikhulu isi-8 okanye u-4? • Ngubani i-13 ngaphantsi ngo 2? • Ngubani ongaphezulu kwesi 8 ngo 2 ? • Ndinike inani eliphakathi kuka -1 nesi-3. • Ndinike inani eliphakathi kwe -10 ne-14. Ingaba linani elinye kuphela? I • Beka la makhadi amanani ngendlela eyiyo ukusuka kwelona nani lincinci ukuya kwelona likhulu. **Khumbula ngokukhawuleza** Ndibonise ukuba inani elinokudityaniswa ukwenza isi-5 (bhala phantsi okanye usebenzise ixabiso lenani okanye unotsheluza) • 1 • 2 • 3 • 4 Ndibonise inani elishiyekileyo xa..... ethatyathwe kwisi -5 ((bhala phantsi okanye usebenzise ixabiso lenani okanye unotsheluza) • 1 • 2 • 3 • 4 1 + 2 = 3 ngubani isi- 2 + 1? Ingaba impendulo iyafana? 3 + 1 = 4ngubani u 1 + 3? Ingaba impendulo iyafana?	

ISIHLOKO	IINGQIQO KUNYE NEZAKHONO Okulindelekileyo ekupheleni konyaka	IINGQIQO KUNYE NEZAKHONO ugqaliselo lwekota yoku -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24)
1.16 **Izibalo zentloko**	**Ingqiqo ngamanani: Ubuchule bokubala** Sebenzisa ubuchule ukudibanisa nokuthabatha ngokufanelekile: • Beka inani elikhulu kuqala ukuze ukwazi ukubala usiya phambili okanye usiya emva • Umgca manani • Ukuphinda phinda kabini nokohlula kabini ngokulinganayo • Ukwakha okanye ukucalula amanani.	**Ubuchule bokubala** Sebenzisa ubuchule ukudibanisa nokuthabatha ngokufanelekile: • Beka inani elikhulu kuqala ukuze ukwazi ukubala ubheka phambili okanye usiya ngasemva • Umgca manani • Ukuphinda kabini nokohlula kabini ngokulinganayo • Ukwakha okanye ukucalula amanani.	**Ubuchule bokubala:** Sebenzisa ubuchule ukudibanisa nokuthabatha ngokufanelekileyo Dibanisa oku kulandelayo ngokubeka inani elikhulu kuqala ubale usiya phambili: 1 + 2 2 + 3 1 + 4 Phinda kabini u-1. Ngubani oombini aba -2? Yintoni isiqingatha sika-4? Usebenzisa umgca manani Mingaphi imitsi ukusuka kwi-3 ukuya kwisi-5? Mingaphi imitsi ngasemva kwesi-5 ukuya kwisi-2?	

IBANGA LOKU -1 IKOTA YESI- 3 2. IIPATENI, IIFANKSHINI NE- ALJIBRA				
IZIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**UMGQALISO WEENGQIQO NEZAKHONO ZEKOTA YESI- 3**	**AMANQAKU NGEENGCACISO NEZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ze yure e- 1 nemizuzu engama- 24
2.1 **Iipateni zeJiyometri**	**Ukukhuphela, ukwandisa, nokuchaza** Khuphela, wandise uchaze ngamagama • Iipateni ezulula ezenziwe ngezinto ezibonakalayo • Iipateni ezilula ezenziwe ngemizobo yemigca, imilo okanye iizinto **Ukuyila iipateni zakho** Ukuyila iipateni zakho zejiyometri • Ngezinto ezibonwayo • Ngokuzoba imigca, imilo nezinto **Iipateni ezisingqongileyo** Chonga, chaza ngamagama ukhuphele iipateni zejiyometri • Endalweni • Kwintlalo yemihla nemihla yalemihla • Kwezenkcubeko	**Ukukhuphela, ukwandisa nokuchaza** Khuphela, wandise uchaze ngamagama • Iipateni ezilula ezenziwe ngezinto ezibonakalayo • Iipateni ezilula ezenziwe ngemizobo yemigca, imilo okanye iizinto **Ukuyila iipateni zakho** Ukuyila iipateni zakho zegoemetri • Ngezinto ezibonwayo • Ngokuzoba imigca, imilo nezinto	Kubanga loku -1 abafundi mabagxininise kwiipateni apho izinto ziphindaphindwayo. Bona amangqaku Ikota 2.	Isifundo esi- 1

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UMGQALISO WEENGQIQO NEZAKHONO ZEKOTA YESI- 3	AMANQAKU NGEENGCACISO NEZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e- 1 nemizuzu engama- 24
2.2 **Iipateni zamanani**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, wandise uchaze isigama esilula samanani ukuya ku-100. **Ukuyila iipateni zakho** Yila ezakho iipateni.	**Ukukopa, ukwandisa nokuchaza** Ukukopa, wandise uchaze isigama esilula samanani ukuya ku-80. Ukulandelelana makubonakale xa kubalwa ukuya phambili nokubuya umva: • Oo-nye ukusuka nakweliphina inani phakathi kuka - 1 no -80 ebalela phambili nge: • 10 ukusuka kwisiphinda phindi se -10 phakathi kwe - 0 no- 80 • 5 ukusuka kwisiphinda phindi sika 5 phakathi kwe -0 no -80 • 2 ukusuka kwisiphinda phindi sika -2 phakathi kwe -0 no -80 **Ukuyila ezakho iipateni** Yila ezakho iipateni zamanani	Ukulandelelana kwamanani kungamataniswa nokubala. Xa izakhono zabafundi zokubala zitshintsha nokukhula neendidi zokulandelelana zamanani zabafundi zingakhula. Ukulandelelana kufuneka kubonise ukubala usiya phambili nokubala ubuya umva: • Ngoo -1 ukusuka nakweliphina phakathi kuka 1 no 80 • Ngama -10 ukusuka kwisiphinda phindi sika 10 phakathi 0 no 80 • Isi -5 ukusuka kwisiphinda phindi sika -5phakathi kuka - 0 no -80 • Isi -2 ukusuka kwisiphinda phindi sika -2 phakathi kuka - 0 no- 80 Xa abafundi bebala ngomlomo bangaboniswa ukulandelelana kwamanani kubhalwe phantsi ngeendlela ezahlukileyo. bangakhomba kwinani elibalwayo. **Umzekelo:** Ukusebenzisa itshati yamanani 1 **2** 3 **4** 5 **6** 7 **8** 9 **10** 11 **12** 13 **14** 15 **16** 17 **18** 19 (**20**) 21 **22** 23 **24** 25 **26** 27 **28** 29 **30** 31 **32** 33 **34** 35 **36** 37 **38** 39 **40** **Umzekelo 2:** Ukusebenzisa umgca-manani ukuchonga ipateni. Ukubala ngama -10 ukusuka kuma -50 ukuya ku- 80 Abafundi babala amanani ukuya ku -80, kodwa bebhala amanani 1 - 15 kuphela. Iipateni zamanani ezinamanani angaphezu ko -15 angenziwa ngoku: • Faka umbala kumanani akwi pateni kwiridi yamanani ; • rhanqa amanani akwipateni, akwigrid yamanani okanye kumngca manani; • ukusebenzisa oonotsheluza bamanani ukupakisha ukulandelelana kwamanani; • ukusebenzisa oonotsheluza bamanani ukubonisa amanani abhalwe ngokulandelelana kwamanani ; okanye • ukusebenzisa uluhlu lweesimboli zamanani olunikiweyo ukukrwela umgca ukusuka kwinani elikhethiweyo ukuya kwindawo emalibe kuyo .	Izifundo ezi- 3

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UMGQALISO WEENGQIQO NEZAKHONO ZEKOTA YESI- 3	AMANQAKU NGEENGCACISO NEZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e- 1 nemizuzu engama- 24
2.2 **Iipateni zamanani**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, wandise uchaze isigama esilula samanani ukuya ku-100. **Ukuyila iipateni zakho** Yila ezakho iipateni.	**Ukukopa, ukwandisa nokuchaza** Ukukopa, wandise uchaze isigama esilula samanani ukuya ku-80. Ukulandelelana makubonakale xa kubalwa ukuya phambili nokubuya umva: • Oo-nye ukusuka nakweliphina inani phakathi kuka-1 no-80 ebalela phambili nge: • 10 ukusuka kwisiphinda phindi se -10 phakathi kwe - 0 no- 80 • 5 ukusuka kwisiphinda phindi sika 5 phakathi kwe -0 no -80 • 2 ukusuka kwisiphinda phindi sika -2 phakathi kwe-0 no-80 **Ukuyila ezakho iipateni** Yila ezakho iipateni zamanani	Abafundi banganikwa ukulandelelana kwamanani okubhaliweyo kube namanani angekhoyo. Mabanikwe uluhlu olunamanani, apho bazakukhetha khona iimpendulo ezizizo. Abafundi mabafake amanani angekhoyo kuzo zonke iimo zolandelelano ezingaphezulu, nokufakela amanani angekhoyo kulandelelano lwamanani abhaliweyo/ umzekelo, 2, 12, 22, ___, 42, 52, 62.	

IBANGA LOKU -1 IKOTA YESI- 3 3. ISITHUBA NEMILO (IJIYOMETRI)				
IZIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**UGQALISO KWIINGQIQO NEZAKHONO ZEKOTA 3**	**AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ze yure e-1 nemizuzu e -24)
3.1 **Indawo -bumilo, ukufumana indawo nombono**	**Ulwimi lendawo** Chaza indawo yonto enye nolwalamano kwenye, umzekelo, . phezu kwe, phambili kwe, ngemva, ekhohlo, ekunene, phezulu, phantsi, ecaleni kwe **Indawo-bumilo nombono** Tshatisa iindidi zemibono yezinto zemihla ngemihla . **Indawo- bumilo nezalathiso** Landela izalathiso ukuhamba hamba eklasini. Landela izalathiso ukubeka into enye ngokwalamana nenye, umzekelo, faka ipensile phakth ebhoksini. .		Ulwimi lwendawo eliphuhliswe kwikota 1 maluqhelaniswe rhoqo ngexesha lokufundisa nangexesha lokufundisa ngogqaliso ikota yonke: chitha ixesha elifuthsane uqhelisana nolwimi. Olunye ulwimi lwendawo lungaqhelaniswa xa abafundi besebenza ngezinto ezinikwakheka kuka 3-D. Imisebenzi yendawo nesalathiso ingadityaniswa ngokurekhodisha okubhaliweyo, njengokuzoba, ngokusebenza ngemibala okanye ngokutshatisa imizobo namagama. Oku kungenziwa ngexesha labo.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGQALISO KWIINGQIQO NEZAKHONO ZEKOTA 3	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu e -24)
3.2 **Izinto ezinokwa kheka kuka 3-D**	**Uludwe lwezinto** Ukunakana nokuchaza iizinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Ezingqukuva • Iimilo yebhokisi (prisms) **Iimpawu zezinto** Chaza, hlela uthelekise izinto ezinokwakheka kuka 3-D ngoko: • Bukhulu • Umbala • Izinto eziqengqelekayo • zinto ezitshebelezayo **Imisebenzi emakugqaliselwe kuyo** Qwalasela wakhe izinto ezinokwakheka kuka 3-D usebenzisa imatheriyali ephathekayo njengezitena, imatheriyali yezinto ebezisetyenzisiweizixhobo zokwakha	**Uludwe lwezinto** Ukunakana nokuchaza iizinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Ezingqukumba (spheres) • Iimilo yebhokisi (prisms) **Iimpawu zezinto** Chaza, hlela uthelekise izinto ezinikwakheka kuka 3-D ngoko: • Bukhulu • Umbala • Izinto eziqengqelekayo • zinto ezitshebelezayo	**Ukugqalisa iimpawu zezinto ezinokwakheka kuka 3-D** Abafundi bahamba neebhola nezinto ezingqukuva, neendidi zeebhokisi nezinye izinto ezinemilo engamaxande okanye ityhubu. Abafundi bangenza umtyibilizi wokudlala okanye ithambeka ngokubeka ibhokisi phantsi kwecala lwencwadi enkulu. Abafundi baphanda ukuba yeyiphi into eqengqelekayo iqengqelekela kweliphi icala.  Abafundi bangaphanda ukuba bangenza iingcochoyi ngokusebenzisa ibhola zodwa okanye ibhokisi zodwa na. Ngexesha labo abafundi bangaqhubekeka ngoku • hlela izinto ngokobukhulu; • hlela izinto ngokombala; • kwakha ngezinto; no • kwenza ibhola okany iibhokisi ngodongwe okanye udongwe lokudlala. **Ukunakana nokuxela iibhola (oongqukuva) neebhokisi (prisms)** Abafundi bayaqhubeleka ngokuchonga bachaze ijiyometri nezinto zemihla nemihla ngokutsho ukuba na zime okwe bhola okanye okwebhokisi, umzekelo, esisitena zime okwe bhokisi okanye leorenji ime okwebhola. **Imisebenzi ebhalwayo** Umsebenzi owenziwayo kwiizinto ezinokwakheka kuka 3-D mawudityaniswe nemisebenzi ebhaliweyo.	Izifundo ezi-2

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGQALISO KWIINGQIQO NEZAKHONO ZEKOTA 3	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu e -24)
3.3 **Imilo ezinokwa kheka kuka 2-D**	**Uluhlu lwemilo** Ukunakana nokuchaza imilo ezinokwakheka kuka 2-D • izangqa • oongxa-ntathu • izikwere **iimpawu zemilo** chaza, hlela uthelekise imilo enokwakheka kuka 2-D ngo: • bukhulu • mibala • milo • amacala athe tse • amacala angqukuva	Alukho ugqaliso kwimilo enokwakheka kuka 2-D olucetyisiweyo kwikota3. Naxa kunjalo abafundi mabaqhubekeke nokwenza imifanekiso ngemilo esikiweyo enokwakheka kuka 2-D okanye benze umsebenzi obhaliweyo ngexesha labo kuMathemetika okanye kwiZakhono zoBomi.		
3.4 **Ulingano-macala (isimetri)**	**Ulingano-macala** • Ukunakana ulingano-macala kumzimba wakho • ukunakana nokukrwela umgca wolingano-macala kwimilo engeyoye Jiiyografi neye Jiyografi enokwakheka kuka 2-D	**Ulingano-macala** • Ukunakana ulingano-macala kumzimba wakho • ukunakana nokurhwela umgca wolingano-macala kwimilo engeyoye Jiyografi neye Jiyografi enokwakheka kuka 2-D	Abafundi mabakhangele imigca yolingano –macala kwizinto eziphathekayo nemifanekiso. Imisebenzi ebhalwayo mayingazotywa kwicala elinye lodwa, mabafakele imizekelo apho Abafundi barhwela imigca yolingano-macala kumacala omabini emilo yeJiyografi, umzekelo, oongxa-ntathu,nemilo engeyo yeJiyometri, umzekelo, ukuzoba umntu .	Isifundo esi-1

IBANGA LOKU -1 IKOTA YESI -3 4.UMLINGANISELO				
IZIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3**	**AMANGQAKU ENGCACISO NEZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ze yure e-1 nemizuzu e-24)
4.1 **Ixesha**	**Ukudlula kwexesha** Makuthethwe ngokudlula kwexesha • landelelanisa iziganeko zemihla nemihla ebomini babo • thelekisa ubude bexesha usebenzisa ilwimi, umzekelo, ndana, mfutshanana, msinya,cothayo • landelelanisa iziganeko usebenzisa ulwimi njenge izolo, namhlanje, ngomso **Ukuchaza ixesha** • chaza xa kusenzeka into usebenzisa ulwimi, umzekelo, kusasa, emva kwemini, ebusuku, phambi kwexesha, emva kwexesha • yazi iintsuku zeveki • yazi inyanga zonyaka • Beka intsuku zokuzalwa ekhalendeni		Abafundi mabafundi ukuthetha nge • Ukulandelelaniswa kweziganeko ; ne • Ubude bexesha . Abafundi mabaqhubekeke ukudibanisa iindlela zokuthetha ngexesha imihla ngemihla ngexesha lokufundiswa okanye ngexesha lokugqalisa kwiqela. Abafundi bathetha bephendula imibuzo ngexesha lokwenzeka kwezinto, besebenzisa ulwimi olunjenge kusasa, emva kwemini, ebusuku, phambi kwexesha nasemva kwexesha. Abafundi balandelelanisa iziganeko ezinjenge izolo, namhlanje, ngomso, iintsuku zeveki neenyanga zonyaka.. Abafundi bathelekisa ubude besebenzisa ilwimi olunjengo bude okanye ubufutshane noku khawuleza nokucotha . Abafundi bathetha ngokulandelelanisa iziganeko zobomi babo.balandelelanisa nemifanekiso enjenge • Amangqanaba kwenza isengwitshi okanye ikomiki yeti. • Iifoto ezibonisa umntana ekhula ukuba ngumntu omdala ; • Umjikelo wobomi wezilwanyanba, umzekelo, iqanda ukuba yinkukhu okanye iqanda ukuba lixoxo okanye iqanda ukiuba libhabhathane • Iziganeko ezenzeka rhoqo emini (ukuvuka, ukuba sesikolweni, ukudlala, ukutya isidlo sangokuhlwa,ukulala) Ukuqhubekeka ukubeka iintsuku zokuzalwa kwikhalenda unyaka wonke.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3	AMANGQAKU ENGCACISO NEZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu e-24)
4.2 **Ubude**	**Umlinganiselo ongekho seSikweni** • Thelekisa ulandelelanise ubude, ukuphakama okanye ububanzi bezinto ezimbini okanye azininzi ngokuzibeka enye acaleni kwenye • Sebenzisa ulwimi ukuthetha ngokuthelekisa, umzekelo, endana, emfutshanana, ebanzana, • Qikelela, linganisa, landelelanisa urekhodishe ubude usebenzisa imilinganiselo engekho seSikweni, umzekelo, umlinganiselo ngesandla, amanyathelo, ubude beepensile, izibali njl njl.	**Umlinganiselo ongekho seSikweni** • Qikelela, linganisa, landelelanisa urekhodishe ubude usebenzisa imilinganiselo engekho seSikweni, umzekelo, umlinganiselo ngesandla, amanyathelo, ubude beepensile, izibali njl njl.	**Yintoni eyahlukileyo kwikota 3?** Wonke umlinganiselo kwiBanga -1 alukho seSikweni. Umlinganiselo oseSikweni wobude awenziwa kwiyuniti eziseSikweni. Kwikota -1 kucetyiswe ukuba abafundi mabagqalise kwi • Thelekiso oluthe ngqo lobude bezinto ngokuzibeka enye ecaleni kwenye ; • Ukulandelelanisa nokuthelekisa ubude nomphakamo okanye ububanzi bento ezintathu nangaphezulu, ngokubeka izinto ngambini ezinye ecaleni kwezinye, de zonke izinto zilandelelaniswe • Ukwakha ulwimi ngokuthetha ngomahluko wobude, umphakamo, ububanzi, njl njl. Ngexesha labo lokusebenza bodwa kwikota, abafundi mabaziqhelanise badibanise ukulandelelanisa nokuthelekisa ubude okanye umphakamo okanye ububanzi bezinto ezintathu nangaphezulu, ngokubeka izinto ngambini enye ecaleni kwenye, zide zonke izinto zilandelelanisiwe. Umsebenzi wonke mawurekhodishwe. Kwikota 3 abafundi mabagqalise ekwenzeni umlinganiselo okungekho seSikweni neeyuniti ezingekho seSikweni zobude. **Umlinganiselo wobude ongekho seSikweni kusetyenziswa iiyuniti zobude esingamiselekanga** Abafundi bangafunda yonke imithetho-siseko yomlinganiselo besebenzisa iiyuniti ezingamiselekanga. Umlinganiselo weeyunithi ezingamiselekanga mazingacingelwa ukuba zingaphantsi kumlinganiselo omiselekileyo. Umlinganiselo wobude ngeeyuniti ezingamiselekanga, kuquka ukubala ukuba zingaphi iiyuniti ezilinganayo ngobude kwezikhethiweyo ngelixesha zilinganiswayo, umzekelo, ubude bedesika ngu-8 ngobalo lwezandla. Abafundi mabalinganise iindidi ngeendidi zezinto kusetyenziswa uluhlu lwezinto njengeeyuniti ezingamiselekanga . Zintathu iindlela zokusebenzisa iiyuniti ezingamiselekanga; • Pakisha izinto ezinobude obulinganayo ngokuxwesileyo phezu kwento elinganiswayo, njenge bhokisi yomatshisi, iziciko zeebotile ezimile ngokufanayo okanye izinto zokubala, iipensile ezintsha, njl njl, umzekelo, ukulinganisa ububanzi bedesika, iipensile ezintsha zingapakishwa ngokuxwesileyo edesikeni.	Isifundo 2

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3	AMANGQAKU ENGCACISO NEZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu e-24)
4.2 **Ubude**	**Umlinganiselo ongekho seSikweni** • Thelekisa ulandelelanise ubude, ukuphakama okanye ububanzi bezinto ezimbini okanye azininzi ngokuzibeka enye acaleni kwenye • Sebenzisa ulwimi ukuthetha ngokuthelekisa, umzekelo, endana, emfutshanana, ebanzana, • Qikelela, linganisa, landelelanisa urekhodishe ubude usebenzisa imilinganiselo engekho seSikweni, umzekelo, umlinganiselo ngesandla, amanyathelo, ubude beepensile, izibali njl njl.	**Umlinganiselo ongekho seSikweni** • Qikelela, linganisa, landelelanisa urekhodishe ubude usebenzisa imilinganiselo engekho seSikweni, umzekelo, umlinganiselo ngesandla, amanyathelo, ubude beepensile, izibali njl njl.	Apha kubalulekile ukuba ; • Zonke izinto ziyalingana ngobude. Awukwazi ukuthi incwadi yakho ibubanzi obunga ngeziciko zebotile xa iziciko zeebotile zingalingani, umzekelo, iziciko zeebotile zobisi ezinomlinganiselo oziilitha ezi -2, iziciko zeebotile zesiselo zeplastiki, iziciko zeebotile zenkcenkce, njl njl • Akukho zikhewu ezishiyiweyo phakathi kwezinto: kufuneka zipakishwe ngendlela yokuba zidibane. • Sebenzisa izinto ezimbini zeeyuniti ezingamiselekanga ezifanayo. Beka enye ecaleni kwenye, uze uhambise eyokuqala kwicala leyesibini .oku kwenziwa xa kulinganiswa ngomlinganiso wezandla, ubude beenyawo okanye amanyathelo. • Ukusebenzisa into enye njengomlinganiso ongamiselekanga ngokuyiphequla okanye ukuphawula elinye icala phambi kokuyitshebelezisa. Abafundi mabasoloko befundiswa ukuchaza iyuniti, incwadi inobubanzi beziciko zeebotile ezi-12, iklasi inamanyathelo a-38. Xa abafundi belinganise ngeyuniti amatyeli amabini, mabaqikelele ukuba zingaphi iiyuniti ezinobude baloyuniti emazilinganiswe. Uqikelelo phambi komlinganiselo ubalulekile kodwa ingenziwa benze umlinganiso ngalo yuniti. Abafundi mabafundiswe ukuba ukuze bathelekise ubude umphakamo, nobubanzi kufuneka kusetyenziswe iyunuti enye, umzekelo, xa ububanzi bocango buyi-20 ngokomlinganiso wezandla nobubanzi bedesika bulingana nobude bepensile ezi-8, awunakwazi ukuba ucango lubanzi kunedesika. Abafundi mabalinganise ngoluhlu lweyuniti ezingekho seSikweni ukuze ba • Qalise ukuqonda ukuba xa iyunuti incinci, izakusetynziswa amatyeli amaninzi,umzekelo ububanzi beklasi bungaba ngamanyethelo a-20 kodwa ibenobude benyawo be- 48 • Qala ukusebenzisa iiyuniti ezifanelekileyo kuloo nto bayilinganisayo, umzekelo, ukulinganisa ububanzi beklasi ngeziciko zebotile kukumosha ixesha. **Ukurekhodisha umlinganiselo** Nangona ukulinganisa kusisakhono esisetyenziswayo, abafundi mabarekhodishe ngamaxesha onke.	Isifundo 2

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3	AMANGQAKU ENGCACISO NEZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu e-24)
4.2 Ubude	**Umlinganiselo ongekho seSikweni** • Thelekisa ulandelelanise ubude, ukuphakama okanye ububanzi bezinto ezimbini okanye azininzi ngokuzibeka enye acaleni kwenye • Sebenzisa ulwimi ukuthetha ngokuthelekisa, umzekelo, endana, emfutshanana, ebanzana, • Qikelela, linganisa, landelelanisa urekhodishe ubude usebenzisa imilinganiselo engekho seSikweni, umzekelo, umlinganiselo ngesandla, amanyathelo, ubude beepensile, izibali njl njl.	**Umlinganiselo ongekho seSikweni** • Qikelela, linganisa, landelelanisa urekhodishe ubude usebenzisa imilinganiselo engekho seSikweni, umzekelo, umlinganiselo ngesandla, amanyathelo, ubude beepensile, izibali njl njl.	**Imlinganiselo wobude njengomxholo ukusombulula iingxaki nokubala** Ngokwexesha elabelwe Amanani, uKubala noLwalamano abafundi bangasombulula iingxaki zokubala ezisebenzisa umlinganiso wobude ongekho sesikweni,umzekelo, ibhokisi yomgubo wesepa inomphakamo wemicinga eyi- 18 . Ibhokisi yesiriyeli inomphakamo wemicinga eyi-13. Ibhokisi yesiriyeli iphakame kangakanani kune yesepha engumgubo? Thatha ingqalelo yoluhlu lwamanani afanelekileyo ngekota, noluhlu lweendidi zeengxaki ezifanelekileyo ngekota .	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3	AMANGQAKU ENGCACISO NEZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu e-24)
4.3 Ubunzima	**Umlinganiselo ongekho seSikweni** • Qikelela, linganisa, thelekisa, landelelanisa urekhodishe ubunzima usebenzisa imilinganiselo engekho seSikweni nebhalansi, umzekelo, iibhlokhi, izitena njl njl. • Sebenzisa ulwimi ukuthetha ngothelekiso, umzekelo, lula, nzima, lulana, nzinyana		Wonke umlinganiselo kwibanga loku-1 awukho seSikweni. Akukho mlinganiselo wobunzima kwiyuniti emiselekileyo enziwayo. Kwikota yoku-1 kucetyiswe ukuba abafundi bagqalise eku: • Thelekisani ngqo ubunzima bezinto ; • Landelelaniseni nasekuthelekiseni ubunzima bezinto ezintathu okanye ezininzi, ngokubeka izinto ngambini eskalini, zide zonke izinto zibe zilandelelanisiwe • Phuhliseni ulwimi ngokuthetha ngomahluko kubunzima . Ngexesha lokudlala kwikota, abafundi mabaziqhelanise badibanise ukulandelelanisa nokuhlela ubunzima bezinto ezintathu nezininzi, ngoku beka izinto ngambini eskalini, zide zonke izinto zibe zilandelelanisiwe .	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3	AMANGQAKU ENGCACISO NEZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu e-24)
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho seSikweni** • Thelekisa ulandelelanise uthamo wamanzi kwizikhongozeli ezimbini ezibekwe enye ecaleni kwenye . Abafundi baza kukhangela ngokugalela kwisikhongozeli sesithathu xa kukho imfuneko • Thelekisa ulandelelanise umthamo wamanzi onokuzalisa izikhongozeli ezimbini • Sebenzisa ulwimi ukuthetha ngokuthelekisa, umzekelo, ninzi kune, ncinci kune, gcwele, akukho nto • Qikelela ulinganise, nokulandelelanisa umthamo wezikhongozeli ngokusebenzisa imilinganiselo engekho sesikweni, umzekelo, amacephe neemagi		Wonke umlinganiselo kwibanga loku- 1 awukho seSikweni . Akukho mlinganiselo wobunzima kwiyunithi emiselekileyo owenziwayo. Okwangoku phakathi enyakeni ugqaliso kumthamo beluse ku • Phuhliseni ulwimi ngokuthetha ngomthamo ; • Thlekiseni umthamo kwizikhongozeli ezimbini ezifanayo • Thlekiseni umthamo kwizikhongozeli zobubanzi obahlukileyo ngokugalela kwisikhongozeli sesithathu . • Bona amanqaku ekota yesi- 2. Abafundi banga ziqhelanisa badibanise iingqiqo ngexesha labo lokudlala.	

IBANGA LOKU- 1 IKOTA YESI- 3 5.UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3**	**AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ze yure e- 1 nemizuzu engama-24)
Ukusebenza ngengqokelela yezinto				
5.1 **Ukuqokelela nokuhlela izinto**	**Ukuqokelela nokucwangcisa izinto** Ukuqokelela nokuhlela izinto eziphathekayo zemihla ngemihla	Ukuhlela ingqokelela yezinto akusenalo ugqaliso kwikota yesibini yonyaka. Naxa kunjalo inganikwa imisebenzi emincinci ngexesha labo lokusebenza. Ugqaliso olucetyisiweyo kwikota yesithathu lulwazi olusetyenziselwa ukuhlalutya: bona ngezantsi.		
5.2 **Ukunikezela ingqokelela yezinto ezihleliweyo**	**Ukuxoxa uxele ingqokelela yezinto ezihleliweyo** Zoba umfanekiso wezinto eziqokelelweyo			
5.3 **Ukuxoxa uxele ingqokelela yezinto ezihleliweyo**	**Ukuxoxa uxele ingqokelela yezinto ezihleliweyo** • Nika izizathu zokuba ingqokelela ihlelwe njani • Phendula imibuzo ngokuba - Ukuhlela kwenziwe njani (inkqubo) - Ingqokelela ehleliweyo ejongeka njani (isiphumo) • Chaza ingqokelela nomzobo. • Cacisa ukuba ingqokelela ihlelwe njani			

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e- 1 nemizuzu engama-24)
Ukusebenza ngolwazi				
5.4 **Ukuqokelela nokucwangcisa ulwazi**	**Ukuqokelela nokucwangcisa ulwazi** • Ukuqokelela ulwazi ngesikolo okanye iklasi ukuphendula imibuzo ebuzwe ngutitshala	**Ukuqokelela nokucwangcisa ulwazi.** • Ukuqokelela ulwazi ngesikolo okanye iklasi ukuphendula imibuzo ebuzwe ngutitshala **Ukunikezela ulwazi** • Ukunikezela ngegrafu yemifanekiso **Ukucwangcisa nokutolika ulwazi** • ukuphendula imibuzo ngolwazi kwiigrafu yemifanekiso	**Ugqaliso olucetyisiweyo: umjikelo opheleleyo wolwazi olusetyenziselwa ukucwangcisa** Kumjikelo opheleleyo wolwazi olusetyenziselwa ukucwangcisa • Abafundi baqokelela ulwazi ukuphendula imibuzo. KwisiGaba esiQalayo nesiPhakathi lombuzo udla ngokunikwa ngutitshala okanye incwadi yomfundi ; • Abafundi bahlela banikezele ulwazi ngeendlela ezilula zokucwangcisa. Indlela yonikezelo esetyenziswa ngabafundi beBanga lokuQala yigrafu yemifanekiso ; • Abafundi bacwangcisa ulwazi olukwigrafu yemifanekiso ngokuphendula imibuzo ebuzwe ngutitshala. Igrafu yemifanekiso yaseklasini KwiBanga lokuQala kubalulekile ukuqala ulwazi olusentyenziselwa ukucwangcisa ngokwenza igrafu yomfanekiso waseklasini Ukusebenza beyiklasi kuluncedo kubantwana ukuze babe nenxaxheba kumanqanaba onke enkqubo ngaphandle kokulahlekwa ziinkcukacha zalo naliphi na inqanaba. Ukwenza igrafu yemifanekiso kwenza ukuba utitshala agqalise abafundi kwezona nto zingundoqo kulwazi oluqokelelweyo, nezinto amabazazi ngeempawu eziphambili zegrafu yemifanekiso. ▪ Indlela nendawo yokufakela amagama/ulwazi kwigrafu ▪ Indlela nendawo yokuleyibhela iindidi ▪ Igrafu yemifanekiso kufanele ukuba ibenengcaciso ecacisa okuboniswa ngumfanekiso ngamnye ▪ Imifanekiso okanye izithuba mazilingane ngobukhulu ▪ Ukubeka imifanekiso ngokulinganayo emigceni ▪ Indlela yokufunda igrafu Ukusebenza kuwo wonke umjikelo wolwazi olusetyenziselwa ukucwangcisa ungathatha izifundo ezininzi.	Lzifundo ezi- 3
5.5 **Ukunikezela ulwazi**	**Ukunikezela ulwazi** Ukubonisa ulwazi ngegrafu yemifanekiso			
5.6 **Ukucwangcisa nokutolika ulwazi**	**Ukucwangcisa nokutolika ulwazi** • ukuphendula imibuzo ngolwazi kwiigrafu yemifanekiso			

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e- 1 nemizuzu engama-24)
5.6 **Ukucwangcisa nokutolika ulwazi**	**Ukucwangcisa nokutolika ulwazi** • ukuphendula imibuzo ngolwazi kwiigrafu yemifanekiso	**Ukuqokelela nokucwangcisa ulwazi.** • Ukuqokelela ulwazi ngesikolo okanye iklasi ukuphendula imibuzo ebuzwe ngutitshala **Ukunikezela ulwazi** • Ukunikezela ngegrafu yemifanekiso **Ukucwangcisa nokutolika ulwazi** • ukuphendula imibuzo ngolwazi kwiigrafu yemifanekiso	**Ukuqokelela, ukucwangcisa nokubonisa ulwazi** Ootitshala besigaba mabaqinisekise ukuba izihloko ezahlukileyo zikhethelwe ingqokelela nocwangciso kwiBanga ngalinye. Imizekelo efanelekileyo iquka ukucwangcisa itshati yemozulu yenyanga edlulileyo ukwenza iigrafu zemifanekiso okanye iigrafu zemifanekiso zeentsuku zabafundi zokuzalwa. **Ukucalula ulwazi** Abafundi baphendula imibuzo enjenge landelayo: “ Yimozulu enjani exhaphakileyo kule nyanga?” Yimozul;u enjani enqabileyo kule nyanga ?” “Zingaphi iintsuku ezishushu ebesinazo kwezibandayo ?” Kungathatha izifundo ezininzi ukufundisa umjikelo wolwazi	Lzifundo ezi- 3

IBANGA LOKU- 1 IKOTA YESI- 4 1.AMANANI, II-OPAREYSHINI NOLWALAMANO				
IZIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4**	**AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ze 1 iyure 24 imizuzu)
INGQIQO YOKUPHULHISA AMANANI:Bala ngamanani apheleleyo				
1.1 **Bala izinto**	Ukubala izinto ukuya kuma-50 ngokuvakalayo nangokuthembekileyo. Ukunika uqikelelo olukholelekayo lwenani lezinto ezinokukhangelwa ngokubala	Ukubala izinto ukuya kuma-50 ngokuvakalayo nangokuthembekileyo. Ukunika uqikelelo olukholelekayo lwenani lezinto ezinokukhangelwa ngokubala	**Zintozini ezahlukileyo kwikota 3?** Kwikota yesi- 4,abafundi bandisa ummandla wokubala. Kusekho ugqaliso ekuqondeni umgaqo wenani lentsusa(inani lezinto/ amanani kwiseti). Kule kota abafundi mabafunde ukumisa izinto ngendlela emisiweyo xa bebala ukuze bakhangele ukubala kwabo, ucwangciso lubanceda ukuba babale ngokulula, umzekelo, izinto zokubala zingabekwa ngemigca. Kule kota abafundi mabaqhubekeke ukwandisa izakhono zokubala nokuziqhelanisa: • ngokubala konke ; • ukubala ngokongeza ; • inani lentsusa lichaza inani lezinto kwiseti • ukusebenza ngeetekisi ezibhaliweyo . Abafundi mabanxulumanise ukubala amanani olandelwano namanani entsusa. Oku kufumaneka xa beqwalasela ukuba ukuyeka ukubala izinto ezingama- 50 kuthetha ukuba babale izinto ezi-50. Ngaxeshanye bazi ukuba ulandelelaniso ababala ngalo izinto aluchaphazeli ubalo. **Ukubala ngamaqela** Ukuncedisa abafundi ukubala ngezithuba zezibini, zezihlanu nezezishumi kufuneka baqukanise izinto ngezibini, izihlanu nangezishumi. Ikhadi lamanani maliboniswe kwingqokelela nganye ukubonisa inani elibaliweyo. Ukubala ngamaqela kuzakulungiselela abafundi ukuqonda uphindaphindo nokubala. Xa kuphela ikota abafundi mabakwazi ukunakana ingqokelela ngokwahlula inani, umzekelo, “ Ndiyazi ukuba li-10 ngoba ndibeke u-4 kwelinye icala no-6 kwelinye “ . **Izixhobo:** Izixhobo mazinikwe iingcamango ngocoselelo . • izixhobo ezakhiweyo ezinjengamaso okubala . • I- abacus ingasetyenziswa kubalwa ngamaqela e- 10 • Abafundi bangenza iinyanda zesi-2, iinyandai zesi-5 neze-10 bazibale zonke	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
1.2 **Ukubala usiya phambili nokubala ubuya umva**	**Ukubala usiya phambili nokubala ubuya umva** • izi-1 ukusuka nakweliphi na inani phakapthi kuku 0 no 100 **ukubala usiya phambili nge** • izi-10 ukusuka nakwesiphi na isiphinda phindi se- 10 phakathi kwe- 0 ne-100 • izi-5 ukusuka kwisiphinda phindi sika - 5 phakathi kwe- 0 ne- 100 • izi-2 ukusuka kwisiphinda phindi sika - 2 phakathi kwe- 0 ne-100	**Ukubala usiya phambili nokubala ubuya umva** • izi-1 ikusuka kwi- 0-100 **Bala usiya phambili nge** • izi-10 uphindaphindo ukusuka ku 10 phakathi kwe- 0 ne-100 • izi-5 ukusuka kwisiphinda phindi ukusuka ku - 5 phakathi kwe- 0 ne-100 • izi-2 ukusuka kwisiphinda phindi ukusuka ku - 2 phakathi kwe- 0 ne-100	**Ziintoni ezahlukileyo kwikota yoku- 1?** Kwikota ye- 4, ngoku abafundi bangabala ngezithuba ze- 10, -5 ne -2 ukuya kwi- 100. Ukubala kwizithuba kuba sisakhono esibalulekileyo. Abafundi bazakusisebenzisa kwiBanga le- 2 nele - 3 kuncede nabafundi ukubala . Xa kuphela ikota abafundi mabakwazi uku: Bala ngomlomo ukuphendula imibuzo njenge: • qala kuma- 52, ubale ngezinye ukuya kuma-72 . • qala kuma- 88 ubale ukubuya umva ngezinye ukuya kuma- 70. • Qala kuma-38 ubale ngezibini ukuya kuma- 50. • Qala kuma-45 ubale ukuya kuma- 100. • Qala kwi- 10 ubale ukuya kwi- 100. Abafundi mabasebenzise izakhono zokubala emisebenzini ebhalwayo . umzekelo: • Kopa wandise ukulandelelana kwamananii alula uye kuma kwi-100. Jonga kusahluko sepateni yamanani .	

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1.3 **Iisimboli namagama amanani**	**Yazi uze ufunde amanani** • Yazi uze ufunde iisimboli zamanani ukusuka kwi-0 ukuya kwi-100 • Bhala iisimboli zamanani ukusuka kwi - 0 ukuya kuma-20 • Kwazi ukufunda amagama amanani ukusuka ku-1 ukuya kwi-10. • Bhala amagama amananani- 1 ukuya kwi-10.	**Yazi uze funde amanani** • Yaz i ufunde iisimboli zamanani i-0 ukuya kwi- 100. • Bhala iisimboli zamanani i-0 ukuya ku- 20 • Yazi uze ufunde amagama amanani ukusuka ku-1 ukuya kwi-10 • Bhala amagama amanani ukusuka ku -1ukuya kwi-10.	**Yahluke ngantoni kwiKota yesi- 3?** Kwikota yesibini, uluhlu luyandiswa luyokuma kwi-100. Ukubhala iisimboli namagama amanani kuya kuqukunjelwa kule kota. Akukhi lwazi lutsha lufundwayo. Kubalulekile ukuba ukwazi ukuxela manani ngokwamaqela ngendlela echanekileyo ungakhange uwabale, kuxhomekeke ekusebenziseni amagama ngocoselelo. Abafundi kufanele ukuba basebenzise, bathethe ze babhale amagama amanani ngeendlela ezahlekeneyo. **Ekupheleni kwekota kulindeleke ukuba bakwazi ukwenza ezi ndidi zemisebenzi:** **Ukutshatisa iisimboli zamagama, zemifanekiso okanye imifanekiso yezinto.** Eli khadi libhalwe -6 6 Libhalwe ntoni eli ikhadi? 11 Tshatisa la magama nezi zinto Nye ✂ Bini ✱ ✱ ✱ ✱ Thathu ✱✱ Ne ✶✶✶✶✶ Hlanu ✖✖✖✖✖✖✖✖✖ Thandathu ✵✵✵ Sixhenxe ✷✷✷✷✷✷ Sibhozo ※ ※ ※ ※ ※ Lithoba ✦✦✦✦✦✦✦	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
1.4 **Chaza, thelekisa ze ulandelelanise amanani**	**Landelelanisa uphinde uthelekise izinto de uyokufika ku-20.** • **Thelekisa** ingqokelela yezinto ngoko: ninzi, mbalwa, ncinane, ngaphezulu kwe, ngaphantsi kwe-, ilingana ne- ininzi ngokwe-, hlukileyo • **Landelelanisa** ingqokelela yezinto ukusuka kwezona zininzi ukuya kwezona zimbalwa, nokusuka kwezona ezimbalwa ukuya kwezona zininzi. • **Landelelanisa kwizinto ezingama-20.** **Landelelanisa uze uthelekise amanani** • **Landelelanisa** amanani - Ukusuka kwelona lincinci ukuya kwelona likhulu, nokusuka kwelona likhulu ukuya kwelona lincinci . - Phambi, emva, phakathi - Usebenzisa umgca-manani ukusuka kwi- 0 ukuya kuma-20.		Ngokulandelelanisa nokuthelekisa amanani ezinto nezamanani, abafundi bafunda ukuba: • Inani lentsusa lichaza inani kwisethi. **Yahluke ngantoni kwiKota yesi-3?** Abafundi bafundiswa ulandelelwano lwamanani Ekupheleni kwekota nasekupheleni konyaka abafundi kulindeleke ukuba bakwazi ukusebenzisa isigama sokulandelelanisa nokuthelekisa amanani ngokwezi ndlela zilandelayo: • Eyokuqala, eyesibini, eyesithathu, eyesine, eyesihlanu, eyesithandathu..... • Zingaphi..... • Ininzi ngokwe-, linani elinye ne- • Ilingana ne-, ingaphezulu kune-, ingaphantsi kune-, zimbalwa kune-, inkulu kune-, • Zilingana ne-, ngaphezu kwa-, ngaphantsi kwa-, zimbalwa kune-, zinkulu kuna-, ncinane kuna-, nkulu kuna-, …… • Dwelisa, eyokuqala, eyokugqibela, phambi kwe-, emva kwe-, elandelayo, phakathi kwe-, ne- . • Amanani • Elokuqala, elesibini, elesithathu, elesine, elesihlanu, elesithandathu…….. • Mangaphi…… • Amaninzi njenga-, inani elifana ne-..... • Zilingana ne-, ngaphezu kwe-, ngaphantsi kwe-, zimbalwa kune-, zininzi kuna-, ncinane kune-, khulu kuna-…… • Landelelanisa, elokuqala, elokugqibela, phambi kwe-, emva kwe-, elilandelayo, phakathi ko-.....  • Faka umbala otyheli kwisangqa sesihlanu. • Faka umbala obomvu kwisangqa sokuqala. • Faka umbala obhlowu kwisangqa sesibhozo.	

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1.4 **Chaza, thelekisa ze ulandelelanise amanani**	• **Thelekisa** amanani azeleleyo ngoko: ncinane kuno, khulu kuno, ngaphezulu kuno ngaphantsi kuno, lingana no . • Ukuhambelana kwamanani. • **Uludwe** ukuya kuma-20 **Sebenzisa amanani olandelelwano ukubonisa ulandelelwano, indawo** • **Beka** izinto emgceni ukusuka kweyokuqala ukuya kweyeshumi, okanye kweyokuqala, ukuya kweyokugqibela umzekelo; eyokuqala, eyesibini, eyesithathu … eyeshumi, eyokugqibela (amanani olandelelwano) **Ulandelelwano** lwamananin kuludwe lokuqala ukuya kweleshumi.		Abafundi mabaphendule imibuzo enje: Ngubani owokuqala emgceni? Ngubani owesibini emgceni? UMthunzi uneekhrayoni ezi- 5. UKhali uneekhrayoni ezisibhozo. Ngubani oneekhrayoni ezimbalwa? Kha nindinike inani eliphakathi kwe- 15 ne -17 ? Bhala phantsi amanani phakathi kwesi – 4 ne- 10. 1, 2, 3, 4, _, _, _, _, _, 10 Zalisa izikhewu ngamanani ashiyiweyo:	

Phambi kwe-	Amanani	Emva kwe-
	17	
	12	
	14	
	9	
	6	

Landelelanisa la manani ukusuka kwelona likhulu ukuya kwelona lincinane.

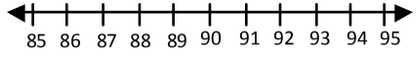
Bhala la manani ukusuka kwelona lincinane ukuya kwelona likhulu.

Kopa uze uvale isikhewu usebenzisa amagama ngaphantsi kuka-, no ngaphezu kuka-:

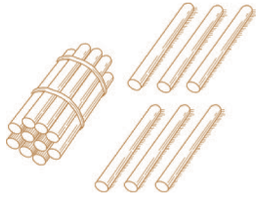
- Ama-35 ma _____ kunama 38
- Ama-79 ma _____kunama 65

Ngokwaz i ukuba inani phambi kwe-, lingaphantsi ngo- nye, nelingemva kwe-, lingaphezulu ngo- nye, abafundi mabakwazi ukuphendula imibuzo enjengo-:

- Liliphi inani eliphambi kwe - 17?
- Liliphi inani elisemva kwa - 82?
- Zalisa amanani ashiyiweyo kumgca-manani:



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1.4 **Chaza, thelekisa ze ulandelelanise amanani**	• **Thelekisa** amanani azeleleyo ngoko: ncinane kuno, khulu kuno, ngaphezulu kuno ngaphantsi kuno, lingana no . • Ukuhambelana kwamanani. • **Uludwe** ukuya kuma-20 **Sebenzisa amanani olandelelwano ukubonisa ulandelelwano, indawo** • **Beka** izinto emgceni ukusuka kweyokuqala ukuya kweyeshumi, okanye kweyokuqala, ukuya kweyokugqibela umzekelo; eyokuqala, eyesibini, eyesithathu … eyeshumi, eyokugqibela (amanani olandelelwano) **Ulandelelwano** lwamananin kuludwe lokuqala ukuya kweleshumi.		Landelelanisa la makhadi amanani alandelayo: • Ngawaphi amanani aphakathi kwama- 25 nama - 30? • Xela inani elingaphezulu kwama- 76 ngo- 1. • Xela inani elingaphezulu kwama- 76 ngesi – 2. • Liliphi inani elingaphantsi kwama -45 ngo – 1? • Liliphi inani elingaphantsi kwama – 39 ngesi – 2?	

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1.5 **Ixabiso lendawo elimi kuyo inani.**	**Ukunakana ixabiso lendawo lenani elineedigthi ezimbini ukuya kuma - 20** • Hlula amanani aneedigithi ezimbini abe ngamashumi odwa, nemivo yodwa umzekelo: i – 12 li -10 nesi- 2.		**Yintoni engumahluko kwiKota yesi - 3?** Kule Kota abafundi baqhubeleka nokwakha bakhulise ingqiqo yexabiso lendawo.. KwiKota yesine, abafundi basebenza ngommandla omkhulu wamanani baze baqhubeleke uku: • Bala benze ingqokelela yamashumi neimivo; • Ukubhala 18 = ishumi eli-1 nemivo esi- 8; baze • Barekhodishe 14 = 10 kunye nesi- 4. Abafundi baqhubeleka nokusebenzisa izinto eziphathekayo ngokwenza ingqokelela yezinto ezilishumi baze bakhulise ingqondo yokwazi ukuba i- 10 lenziwa ngengqokelela yezinto ezinganye ezilishumi.  Abafundi xa besebenzisa i- abacus, mabakwazi ukubonisa: • Ishumi elinye; • Ishumi elinye nemivo emi- 5. • Ishumi elinye nemivo emi- 6; Lindela ukuba abafundi basabala ngezinye ukwenza ingqokelela yeshumi. Kwabaninzi ise yeyona ndlela bakwazi ngayo ukuxela inani, okanye ukuxela ukuba zingaphi.	

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1.5 **Ixabiso lendawo elimi kuyo inani.**	**Ukunakana ixabiso lendawo lenani elineedigthi ezimbini ukuya kuma - 20** • Hlula amanani aneedigithi ezimbini abe ngamashumi odwa, nemivo yodwa umzekelo: i – 12 li -10 nesi- 2.		**Amakhadi exabiso lendawo / amakhadi eeFladi** Amakhadi exabiso lendawo makasetyenziswe kule Kota ukubonisa indlela amanani akhiwe ngayo. Amakhadi exabiso lendawo angaboniswa kunye neenyanda okanye ingqokelela yezinto.  **Izixhobo** Izinto ezinokwenziwa ingqokelela: • Izinti zokubala • Izinto zokubala ezinokuhlohlwa • Izinti zematshisi • Izinti zeayisi khrim • Iityhubhu eziqagamshelanayo • Amakhadi exabiso lendawo • Imali yokudlala Kuluncedo ukuba neengqokelela zamashumi ezihleli zenziwe ngabafundi, zaza zagcinwa kwizingxobo zazo.	

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1.6 **Ubuchule bokusombula iingxaki zezibalo**	Sebenzisa obu buchule bulandelayo Xa usombulula iingxaki naxa unika ingcaciso yesisombululo. Sebenzisa obu buchule bulandelayo xa usebenza ngezibalo zamazwi uze uchaze nendlela osombulule ngayo: • Izixhobo eziphathekayo • Umzekelo:izixhobo zokubala • Imifanekiso yokuzoba iziphumo zamabali • Ukwakha nokucalula amanani. • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo • Umgca manani **Yahluke ngantoni kwiKota**		**Yintoni engumahluko kwiKota yesi- 3?** Ekupheleni kwale Kotabafundi baqalisa ukusebenza ngezibalo zamazwi besebenzisa obu buchule bulandelayo: • Imizobo okanye izixhobo eziphathekayo • Ukwakha nokwahlula amanani • Ukuphinda inani kabini nokulahlula kabini ngokulinganayo • Imigca-manani Jonga amanqaku eKota yesi- 2.	

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1.7 **Ukudibanisa nokuthabatha.**	Sombulula izibalo zamazwi ngokwemeko leyo, uze uchaze indlela osombulule ngayo kuquka ukudibanisa, ukuthabatha neziphumo ukuya kuma-20.		Ekupheleni kweKota abafundi mabakwazi ukusombulula izibalo zamanani ezinjengezi zingezantsi: Ukutshintsha UNoluthando ube nee-apile ezi- 5. USilo wamnika ezisi- 8. Zingaphi ii-apile anazo zizonke ngoku? UNoluthando ube nee-apile ezili- 13. Unike uSilo ezi- 5. Zingaphi ii-apile anazo ngoku? Hlanganisa UNosisi ube neemayibhile eziluhlaza ezi- 5 nezibhlowu ezisi- 8. Zingaphi iimayibhile anazo? UNosisi uneemayibhile ezili- 13. Ezi- 5 ziluhlaza, ezinye zibhlowu. Ingaba zingaphi iimayibhile ezibhlowu anazo uNosisi? Thelekisa UNosisi uneebhanana ezili- 13. UThemba uneebhanana ezi- 5. Ingaba uNosisi uneebhanana ezingaphi ngaphezu kukaThemba?	
1.8 **Ukudibanisa okuphin diweyo okukhokelela kuphinda-phindo.**	Sombulula izibalo zamazwi ngokwemeko leyo, uze uchaze indlela osombulule ngayo kuquka ukudibanisa okuphindiweyo neziphumo ukuya kuma- 20.		Ekupheleni kweKota abafundi mabakwazi ukubala izibalo zamanani ezifana nezi zingezantsi: Ukudibanisa okuphindwayo Ingaba mangaphi amavili eebhayisikile ezi- 4? **Hlela** UThami usela iikomityi ezimbini zobisi yonke imihla. Zingaphi iikomityi aziselayo zobisi ngeveki? Iigridi UMnu. Khumalo utyala imigca emithathu yezityalo zekhaphetshu. Kumgca ngamnye izityalo zi- 5. Ingaba zingaphi izityalo zekhaphetshu zizonke?	

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1.9 **Ukwahlula ngokwamaqela nokwaba ngokulinga nayo okukhokelela kuhlula hlulo**	Sombulula uze uchaze izisombululo kwiingxaki ezibandakanya ukwaba ngokulinganayo nokwahlula amanani azeleyo ukuya kuma 20 kunye neempendulo ezinentsalela.		Ekupheleni kwale kota abafundi kufuneka babenako ukusombulula ezingxaki zifana nezi zingezantsi. **Ukwahlula ngokwamaqela** Ukwahlula, ukulahla intsalela • UStella uthengisa ama-apile ngeengxowa ezinama apile ama 3 ingxowa nganye. Unama apile ali 14. Kufuneka abe neengxowa ezinga phi ukuba ufuna ukufaka ama apile ama- 3 engxoweni nganye? **Ulwahlulo olubandakanya intsalela**. • UThabo ufuna ukusa amaqanda ali 15 kumakhulu wakhe. Zingaphi iibhokisi ezinokuthatha amaqanda ama 6 azifunayo uThabo ukuze akwazi ukupakisha amaqnda onke? **Ukwaba ngokulinganayo** Ukwaba ngokulinganayo,ukulahla intsalela • Yaba iilekese ezingama uzabele abahlobo abali- 14 ngokulinganayo ukuze bafumane inani elilinganayo leelekese. Ukwaba ngokulinganayo ukukhokelela kumaqhezu • Yabela abahlobo aba- 3 isitena iitshokolethi ezi-4 ukuze bafumane ngokulinganayo kungabikho ntsalela. (Akukho mfuneko yokuba abafundi bachaze igama leqhezu. Banokuwachaza ngokuthi intwana encinci.) Amaqhezu engqokelela	
1.11 **IMALI**	• Nakana uze uchonge imali ezinkozo yaseMzantsi Afrika, 5c, 10c, 20c, 50c, R1, R2, R5, iimali ezingamaphepha. • Sombulula iingxaki zeemali ezibandakanya iitotali kunye netshintshi ukuya kwi R20 kwakunye neesenti ukuya kwi isenti ezingama -20.		Ekupheleni kwekota abafundi kufuneka bakwazi ukwenza ezi ngxaki zezibalo ezikhankanywe ngasezantsi. USisa uthenge isonka nge R8. Usibhatele ngemali eliphepha ezi R10.Yimalini itshintshi yakhe? Umama kaNomvula uthenge isikhafu see R17.Ubhatele ngemali engamaphepha ezimbini ezi randi ezilishumi ezi -2. Yimalini itshintshi yakhe? Umhla wokuzalwa kaJudy ubungeCawa. Uphiwe ngudade wabo imali engane R5, ii R2 uyiphiwe ngumntakwabo waza waphiwa i R10 ngumzala wakhe. Yimalini imali yakhe iyonke?	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
IZIBALO				
1.12 **Ubuchule (iindlela)**	Sebenzisa obu buchule bulandela xa usenza izibalo: • Ukuzoba okanye ukusebenzisa izixhobo ezibambekayo umz izinto zokubala • Ukwakaha nokwahlula amanani • Ukuphinda phinda kabini nokwenza iziqingatha • Imigca manani		**Yintoni eyahlukileyo kwikota yesi 3?** Abafundi kulindeleke ukuba basombulule iingxa ezingalawulwa meko besebenzisa obu buchule bulandelayo: • Ukuzoba nezixhobo eziphathekayo - Imizobo yabafundi iyaqala ukukhangeleka ngendlela emisiweyo kwaye kufuneka babenako ukuchaza indlela ababale ngayo ngokusekelwe kwimizobo yabo. • Ukwakha nokwahlula amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo • Imigca manani Jonga kumanqaku eKota yesi-2.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uye kuma kuma -20 • Thabatha uye kuma kuma -20 • Sebenzisa iimpawu ezifanelekileyo (+, –, =, □) • Ziqhelanise neebhondi zamanani ukuya kwi 10		Ukudibanisa nokuthabatha kummandla we 0 – 20 kuthetha ukuba abafundi bazaku: • khulisa ingqiqo yexabiso lendawo yamashumi nemivo; • baqhubeke bebala ngemivo; • baqalisa ukuqonda ukuba ukubala ngemivo ayindlela ibubuchule. Abafundi baza kuqhubeka be: • bala izinto; • nakana; befunda,bebhala amanani kwaye • bethelekisa amanani. Ukuze bakwazi ukusebenza imiqondiso yokudibanisa nokuthabatha, Abafundi kufuneka babenamava awoneleyo uku: • bala onke amanani ?; • Bala ubheka phambili usuka kumanani amakhulu; • Sebenzisa uze uqonde ulwimi lokudibanisa nokuthabatha • Landelelanisa uze uthelekise amanani. Abafundi baqhubeka bekhulisa ukuqonda kwabo ukudibanisa nokuthabatha. Ekupheleni konyaka abafundi kufuneka bakwazi ukwenza oku kulandelayo: • Sebenzisa ulwimi olusetyenziswa xa kudityaniswa naxa kuthatyathwa nemiqondiso yokuchaza nokubhala phantsi izivakalisi zamanani zokudibanisa nokuthabatha; • Ukusebenzisa iindlela zokwenza nokubhala okungekho seSikweni ukudibanisa nokuthabatha; • Ukusombulula izibalo zokudibanisa nokuthabatha kwaye banokubhala iimpendulo zabo ngezivakalisi zamanani; • Qonda ukuba ukuthabatha yinguqulelo yokudibanisa nokudibanisa ngokunjalo. Mababe nokukwazi ukusebenzisa oku ukubala.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uye kuma kuma -20 • Thabatha uye kuma kuma -20 • Sebenzisa iimpawu ezifanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuya kwi 10		Ukuqonda ukuthabatha nokudibanisa Abafundi kufuneka bakwazi oku kulandelayo • Bazi kwaye basebenzise ulwazi lokuba akukhathaliseki nokuba siwadibanise ngayiphi indlela amani ;oko kukuthi akukhatahliseki nokuba siwalanelelanise njani amanani • Sebenzisa iimpawu u +, - no =; • Yazi ukuba i - ☐ imele inani elingaziwayo; • Qonda ukuthabatha “njengokuthatha” nokufumana umahluko phakathi kwe ne; aze • Atsho aze abhale inani elihambelana nezo zibalo azinikiweyo Umz:8 + 6 = 14 kuthetha 14 – 6 = 8. Ukubhala imiqondiso yokudibanisa nokuthabatha: Kunokuthi kanti abanye abafundi basafuna ukubhala baze babale ngemivo. Kufuneka bancediswe babhale kwaye babale ngamaqela. Abafundi kufuneka babenako uku: Zoba imifanekiso uze usebenzise amanani ngokukodwa abonisa amaqela. **Ukwahlula amanani abe zizahlulo ezincinci ukuze bakwazi ukubala ngokulula** Abafundi baya kwahlula amanani abe zizahlulo ezahlukileyo.Baya kukhangela iindlela eziza kuba lula kubo xa besohlula amanani.Ekuqaleni abafundi bohlula isixhenxe sibe yimivo.Bathi bakube bewaqonda kakuhle amanani ukuya kwi -10 ngaphandle kokucingisisa kwaye bawaqonde ngaphandle kokusebenzisa izinto ezibambekayo bakwazi ukusebenza ngayo.Baya kuthi bakwazi ukwahlula isi -7 sibe zizahlulo ezahlukileyo. Sebenzisa iintolo namanani ukubonisa ingqiqo 11 + 7 = ☐ 11 + 4 + 3 11 + 4 → 15 + 3 = 18 11 + 7 = ☐ 11 + 5 + 2	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uye kuma kuma -20 • Thabatha uye kuma kuma -20 • Sebenzisa iimpawu ezifanelekileyo (+, –, =, □) • Ziqhelanise neebhondi zamanani ukuya kwi 10		11 + 5 → 16 + 2 = 18 17 – 9 = □ 17 - (7 + 2) 17 – 7 → 10 - 2 = 8 **Iibhondi zamanani** Ukuze bakwazi ukuziqhelanisa neebhondi zamanani abafundi mabanikwe iintlobo ngeentlobo zemisebenzi.Elona xesha lilungileyo lokwenza oku kuxa abafundi bezisebenzela bebodwa. Umgca manani unokusetyenziswa xa beziqhelanisa neebhondi ukuya ku 10. **Ukusebenzisa ulwazi lwangaphambili njengobuchule bokubala** Ubuchule obuboniswe ngasezantsi buvumela abafundi ukuba babale kwaye bawazi amanani ngokusebenzisa indlela esesikweni. Ukusebenzisa obu buchule bungezantsi buza kukhuthaza abafundi ukuba bajonge nzulu ulwalamano phakathi kwamanani kwaye ibafundise ukuba banako ukusebenzisa ulwazi lwabo xa bebala. **Beka inani elikhulu kuqala ukuze ukwazi ukubala usongeza okanye ubuya umva.** 4 + 12 = □ Lungisa kwakhona 4 + 12 njengo 12 + 4 uze ubale ukuya kwi 12. **Bala ngokongeza ukusuka kwinani elikhulu** Abafundi kufuneka bakwazi ukubala ngokongeza ukusuka kwinani elikhulu. Obu bobona buchule kunokubala ngemivo ukuya kwi -14 uze ubale amani amahlanu ngaphezulu 14 + 5 = □ Abafundi babala ukusuka kwi-14, baze badlulele kwi- 15, 16, 17, 18, 19. **Chonga uphindo kabini olusondeleyo** 8 + 7 Abafundi bangakwazi ukuchaza ukuba isibalo sinokubhalwa ngolu hlobo 8 + 8 -1 (phinda kabini isi-8 dibanisa no- 1) okanye 7 + 7 + 1 (phinda kabini isi- 7 dibanisa no- 1).	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uye kuma kuma -20 • Thabatha uye kuma kuma -20 • Sebenzisa iimpawu ezifanelekileyo (+, –, =, □) • Ziqhelanise neebhondi zamanani ukuya kwi 10		Abafundi banokubhala ubuchule babo besebenzisa utolo: 8 + 8 → 16 + 1 = 17 **Tshintsha inani ulise kwishumi uze uthabathe okanye udibanise imivo** Obu buchule bunokufundiswa kusetyenziswa kumda wamanani osezantsi baze oko bakufunde bakusebenzise kumanani amakhulu. 9 + 6 = □ Abafundi banokuthi " Ndiza kuthabatha u 1 kwisi 6 ndize ndisidibanise kwisi 9 ukuze ndifumane i 10." Isi 9 + 6 sinokubhalwa nolu hlobo 10 + 5 = 15 8 + 5 = □ Abafundi banokuthi: " Ndiza kuthabatha kwisi- 5 ndize ndidibanise kwisi- 8 ukwenza i -10." There 8 + 5 can be written as 10 + 3 = 13 **Sebenzisa ulwazi lokuba kukho ukuzala phakathi kokudibanisa nokuthabatha kuba zombini ezi ntlobo zingumguqulelwa wenye** 15 – 9 = □ Umfundi wazi ukuba isibalo sinokubhalwa kwakhona njengesibalo sokudibanisa: "Ndiyazi ukuba 9 + □ = 15." Abafundi banokusebenzisa indlela yokubala ngokongeza ukuze bakwazi ukwenza izibalo. **Imigca manani** Kufuneka bakwazi ukusebenzisa imigca manani ukuxhasa izibalo zabo: 13 + 6	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
1.14 **Ukudibanisa ngokuphindiweyo okukhokelela kuphinda phindo**	• Dibanisa inani elinye ngokuphindiweyo ukuya kuma -- 20 • Sebenzisa iisimboli ezifanelekileyo (+, =, □)		**Yintoni engumahluko kwiKota yesi -3?** KwiKota yesine abafundi baqhubekeka bekhulisa ulwimi lokudibanisa okuphindiweyo: • Izi -3 ezi- 2 • Amaqela ama -4 ezi -2 Abafundi baqhubekeka bebhala isivakalisi samanani ukuze bakubonise oku ngomfanekiso. Ukubala uqakatha kunceda abafundi ukuba babale amaqela ezinto ezisemifanekisweni. Ukuba umfanekiso okanye izinto zibekwe ngokwamaqela ezi-2 abafundi kufuneka babale izinto ezibekwe ngokwamaqela emfanekisweni.Ukuba umfanekiso okanye izinto zibekwe ngokwamaqela ezibini abafundi kufuneka babale ngezibini bangabali ngemivo ukufumana inani lezinto. Ekupheleni kwekota abafundi kufuneka bakwazi uku: • Qonda ukuba ukudibanisa okuphindwe kabini kwenza amaqela alinganayo; • Bonisa okuphindwe kabini usebenzisa izinto ezibonakalayo nemizobo; • Bhala izivakalisi zamanani ezihambelanayo kwimizobo okanye kwizinto ezibonakalayo • Sebenzisa umgca manani ukufika kwisiphumo	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	UGXININISO LWEENGQIQO NEZAKHONO ZEKOTA 4	AMANQAKU ACACISIWEYO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze 1 iyure 24 imizuzu)
1.16 **Izibalo zentloko**	**Ingqiqo ngamanani: ummandla wamanani ophela kuma- 20** • Xela inani eliza phambi nangasemva kwenanai elixeliweyo. Landelelanisa iseti yamanani oyinikiweyo. • Thelekisa amanani ukuya kuma- 20 uze utsho ukuba leliphi elingaphezulu ileliphi elingaphantsi. • Yazi ukuba leliphi inani elingaphezulu ngo -1 okanye leliphi elingaphantsi ngo 1 . • Yazi ukuba leliphi inani elingaphezulu ngo- 2 okanye leliphi elingaphantsi ngo -2 . **Khumbula ngokukhawuleza:** • Ukudibanisa nokuthabatha uye10		**Yintoni engumahluko kwiKota yesi 3?** KwiKota yesi-4 ummandla wamanani uyaxanda ukusuka kwi-15 ukuya kuma-20. Imizekelo yemibuzo nemisebenzi enokubuzwa nenokwenziwa: • Qala kwi-3 ubale usiya phambili ngoo-1 ukuya kwi -10 • Abafundi bama ngomgca baze babuze imibuzo:Ngubani owokuqala,owesibini,owesithathu okanye owokugqibela • Leliphi inani elingaphantsi i-14 okanye i-8? • Leliphi inani elingaphezulu isi-8 oknye isi-4? • Ngubani u-2 ngaphantsi ko -13? • Ngubani u-2 ngaphantsi ko-8 ? • Nika inani phakathi kwe-1 no-3 • Nika inani phakathi ko-10 ne14. Ingaba kukho inani elinye ? • Beka lamakhadi amanani ukusuka kwelincinci ukuya kwelikhulu. Khumbula ngokukhawuleza Ndibonise inani endinokulidibanisa ukwenza i-10 (bhala phantsi okanye sebenzisa ixabiso lendawo okanye ifladi khadi) • 1 • 2 • 3 • 4 Ndibonise inani elishiyekayo xa .....ethatyathwe kwi 10 (bhala phantsi okanye sebenzisa ixabiso lendawo okanye ifladi khadi) • 1 • 2 • 3 • 4 6 + 4 = 10 Ngubani u- 4 + 6? ingaba isiphumo siyafana ? 5+2=7 ngubani u-2+5 ? ingaba impendulo inye ?	

1.16 **Izibalo zentloko**	**Iindlela zokubala** Sebenzisa iindlela zokubala ukudibanisa nokuthabatha ngokufanellekileyo: • Beka inani elikhulu kuqala ukubala ubheka phambili nokubala ubuya umva • Umgca manani • Uphindo phindo kabini nokwenza iziqingatha • Ukwakha nokwahlula amanani		**Ubuchule bokubala:** Sebenzisa ubuchule bokubala ukudibanisa nokuthabatha ngokufanelekileyo. • Dibanisa la manani alandelayo ngokubeka inani elikhulu kuqala uze ubale ngokongeza 1 + 9 2 + 6 1 + 4 • Phinda kabini u-1 Benza eliphi inani oo-2 ababini? Ngubani isiqingatha sika-4? • Sebenzisa umgca manani Mingaphi imitsi ukusuka ku-3 ukuya kwisi-5? Mingaphi imitsi ukubuya umva ukusuka kwisi- 5 ukusuya ku -2?	

IBANGA LOKU-1 IKOTA YESI-4 2. IIPATENI, IIFANKSHINI NEALJIBRA				
ISIHLOKO	**IINGQIQO NEZAKHONO** **OKULINDELEKILEYO UKUPHELA KONYAKA**	**IINGQIQO NEZAKHONO** **UGXININISO KWIKOTA YESI-4**	**AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA**
2.1 **Iipateni zejiyometri**	**Kopa, yandisa uchaze** Kopa, yandisa uchaze ngamazwi • Iipateni ezilula ezenziwa ngezinto ezibonwayo • Iipateni ezilula ezenziwe ngemizobo yemigca, iimilo nezixhobo **Yenza iipateni zakho** Yenza iipateni zakho zejiyometri • ngezixhobo ezibonakalayo • ngokuzoba imigca, iimilo nezixhobo **Iipateni ezisingqongileyo** Chonga, uchaze ngamazwi uze ukope iipateni zejiyometri • kwindalo • kwintlalo yemihla ngemihla • kwinkcubeko yethu	**Iipateni ezisingqongileyo** Chonga, uchaze ngamazwi ukope iipateni zejiyometri • kwintlalo yemihla ngemihla • kwinkcubeko yethu **yenza iipateni zakho** Yenza iipateni zakho zejiyometri • ngezinto eziphathekayo ngokuzoba imigca, iimilo nezinto	Abafundi basebenza ngeepateni ezivela kwindalo nakwintlalo yemihla ngemihla ukuqalela kwiBanga loku-1 ukuya kwele-6. Oku kuthetha ukuthi akusayi kuthabatha ixesha elide kwesi sihloko. Kuya kufuneka ukhethe imisebenzi neepateni ezichanekileyo kwibanga ngalinye. Kwibanga loku-1 abafundi bangakhuhla iipateni. Imizekelo esebenzisekayo yeyeepateni zamagqabi, amaxolo omthi, iipateni ezifumaneka kwizithende zezihlangu, kumavili, iziciko zeendawo eziphuma amanzi . neepavumente njl. Olunye udidi lwepateni abafundi abanokufumana kuyo ipateni lulingano-macala umz. uninzi lwamagqabi lunamacala alinganayo Abafundi bangajonga ipateni nakwezi zinto zilandelayo ucingo (iintambo, amaplanga okanye …….); izinto ezenziwe ngezitena nee…….. zaphantsi; impahla namalaphu; izitya, iikomityi neesosari; iibhola zomdlalo webhola ekhatywayo; izilwanyana ezifana neenkomo, iingcongconi namabhabhathane, iqwarhashe, indlulamthi, ihlosi, iintaka, nezinambuzane iintyatyambo namagqabi; iintsimbi zakwantu nezale mihla; nezitya zodongwe zakwantu okanye iimantyi. Kukho iindlela ezahlukileyo zokuchaza iipateni esizibona kwindawo ezisingqongileyo. Uninzi lweepateni ezisingqongileyo lwenziwe ngemigca, ngeemilo nangezixhobo. Iimilo okanye izinto akukho mfuneko yokuba zinxulumaniswe nezinto zejiyometri ezinemilo ezinokwakheka kuka -2-D nezinto ezinokwakheka kuka -3-D ekusetyenzwe ngazo kwiBanga loku-1.	Isifundo esi-1

ISIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO UKUPHELA KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA YESI-4	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
2.1 **Iipateni zejiyometri**	**Kopa, yandisa uchaze** Kopa, yandisa uchaze ngamazwi • Iipateni ezilula ezenziwa ngezinto ezibonwayo • Iipateni ezilula ezenziwe ngemizobo yemigca, iimilo nezixhobo **Yenza iipateni zakho** Yenza iipateni zakho zejiyometri • ngezixhobo ezibonakalayo • ngokuzoba imigca, iimilo nezixhobo **Iipateni ezisingqongileyo** Chonga, uchaze ngamazwi uze ukope iipateni zejiyometri • kwindalo • kwintlalo yemihla ngemihla • kwinkcubeko yethu	**Iipateni ezisingqongileyo** Chonga, uchaze ngamazwi ukope iipateni zejiyometri • kwintlalo yemihla ngemihla • kwinkcubeko yethu **yenza iipateni zakho** Yenza iipateni zakho zejiyometri • ngezinto eziphathekayo ngokuzoba imigca, iimilo nezinto	Abafundi bangajonga bachaze • izinto eziphinda-phindiweyo umz. amachaphaza, imigca, nayiphi na imilo; • nendlela ephinda-phindwe ngayo umz., ingaba imigca iyanqumlana (njengakwilaphu lokusula izitya), ingaba onke amachaphaza ayalingana, isasazeke ngokulinganayo, ingaba zonke iimilo ziyalingana ngobukhulu, ziyafana ngombala, ingaba ajonge kwicala elinye, umz. xa usika iorenji yonke imibele yeorenji ibuncipha phakathi ize ibemikhulu emacaleni.	Isifundo esi-1

ISIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO UKUPHELA KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA YESI-4	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
2.2 **Iipateni zamanani**	**Kopa, wandise uchaze** Kopa, wandise uchaze ukulandelelana kwamanani alula uye kuma kwi-100 **Yenza iipateni zakho** Yenza iipateni zakho zamanani	**Kopa, wandise uchaze** Kopa, wandise uchaze ukulandelelana kwamanani alula uye kuma kwi-100 Makulandelelaniswe ngolu hlobo • ukubala usiya phambili nokubala ubuya umva ngoo-1 uqale nakweliphi na inani phakathi ku-1 ukuya ku-100 • Ukubala usiya phambili: - Ngoo-10 uqale nakwesiphina isphinda-phindi se-10 uqale kwi-0 ukuya ku-100 - Ngoo-5 uqale nakwesiphina isphinda-phindi sikazi-5 phakathi kwe-0 ne-100 - Ngoo-2 uqale nakwesphi na isphinda-phindi sikazi-2 phakathi kwe-0 ne-100 **Ukuyila iipateni zakho** Ukuyila iipateni zakho ngamanani akho	Ukulandelelana kwamanani kungadityaniswa nokubala. Ngokutshintsha nokukhula kwezakhono zabafundi zokubala, iindlela zokulandelelana kwamanani abasebenza ngawo abafundi kungaya kuba qatha. Ulandelelwano malubonise ukubala ubheka phambili uphinde ubale ubuye umva koo: • 1 ukuqala nakweliphi inani phakathi ko-1 ukuya ku-100 • 10 ukuqala nakoluphi na uphinda-phindo luka-10 phakathi kuka-0 no-100 • 5 ukuqala nakoluphi na uphinda-phindo luka-5 phakathi kuka- 0 no-100 • 2 ukuqala nakoluphi na uphinda-phindo luka-2 phakathi kuka- 0 no-100 Abafundi bangakhomba amanani kumgca-manani, kwigridi yamanani, okanye ulandelelwano olubhaliweyo xa bebala Abafundi bangawagquma amanani ngezinto zokubala okanye umbala okanye arhangqe amanani kumgca-manani, kwigridi yamanani, okanye ulandelelwano olubhaliweyo xa bebala Abafundi bangafakela amanani kulandelelwano olubhaliweyo, kumgca manani okanye kwigridi yamanani ukuziqhelanisa nokubala. Khumbula abafundi babhala baye kuma-20. Jonga amanqaku eKota yesi-3 ubone indlela abafundi abanokusebenza ngawo ngolandelelwano lwamagama xa bedlulela ngaphaya koma-20	Izifundo ezi-3

IBANGA LOKU-1 IKOTA YESI-4 3. ISITHUBA NEMILO (JIYOMETRI)				
ISIHLOKO	**IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4**	**AMANQAKU NENGCACISO OKANYE NEZIKHOKELO ZOKUFUNDISA**	**UBUDE BEXESHA** (kwizifundo zeyure nemizuzu engama-24)
3.1 **Indawo-bumilo, ukufumana indawo nembonakalo**	**Ulwimi lwendawo-bumilo** Chaza ukuma kwento nokunxulumene nenye umz. phezu kwe, phambi kwe, emva kwe, ngasekhohlo, ngasekunene, phezulu, ezantsi ecaleni kwe **Ulwimi lwendawo-bumilo nezalathiso** • Landela imiyalelo ukuze uhamba-hambe eklasini • Landela imiyalelo ukuze ubeke into ngokunxulume nenye umz. beka ipensile phakathi ebhokisini **Ulwimi lwendawo-bumilo nendlela esibona ngayo izinto** Thelekisa iindlela esibona ngazo into enye imihla ngemihla	**Ulwimi lwendawo-bumilo** Chaza ukuma kwezinto enye xa uyithelekisa nenye umz. phezu kwenye, phambi kwenye, emva kwenye, ngasekhohlo, ngasekunene, ukunyuka ukwehla, ecaleni kwenye **Indawo –bumilo nezalathiso** • Ukulandela imiyalelo yokuhamba-hamba apha eklasini • Ukulandela imiyalelo yokubeka izinto inxulumane nenye umz. ukubeka ipensile phakathi ebhokisini **Ulwimi lwendawo-bumilo nendlela esibona ngayo izinto** Thelekisa iindlela esibona ngazo into enye imihla ngemihla	**Indawo-bumilo nezalathiso** Jonga amanqaku kwiKota yoku-1. Naluphi na ulwimi lokuchaza indawo olutsha kufanele luqalwe ngemisetyenzana eyenziwayo equka intshukumo yomzimba eyenziwa ngabafundi. Oku kungenziwa ngexesha lokufundisa eklasini okanye ngexesha lokugxininisa kumaqela. Izalathiso mazifundwe ngemisebenzi eyenziwayo apho abafundi bazihambisa ngokwabo izinto belandela imiyalelo. Oku kungenziwa ngexesha lokufundisa eklasini okanye ngexesha lokusebenza ngokwamaqela. Ukusebenza ngendawo -bumilo nangezalathiso ungabethelelwa ngokurekhodishwa umz. imizobo, ukufaka imibala okanye ukuthelekisa imizo namagama. Oku bangakwenza ngexesha labo. **Indawo bumilo neendlela esibona ngayo izinto** Abafundi abakwisiGaba esisisiSeko kufanele baqonde ukuba izinto azifani xa sizijonga kwiindawo bumilo ezahlukileyo. Abafundi banganga thatheli ngqalelo ukuba izinto ezifana neemoto zijongeka zincinane xa zikude. Njengoko abafundi besebenza kakhulu ngeencwadi nemizobo kwiincwadi, kufanele baqonde ukuba into engaphambili ibonakala inkulu kunento engasemva. Ngexesha lokusebenza ngamaqela abafundi bangakulinga oku ngokuthi babeke izandla zabo ngaphambili, ukuze bangaziboni izinto ezinkulu ezikude kubo. KwiBanga loku-1 abafundi mabanikwe imisetyenzana apho banokuthelekisa iindlela zokubona ezahlukeneyo (ukubona phezulu, ecaleni, ngaphambili) zemihla ngemihla Oku kuya kuphela kunceda abafundi ukuba bakwazi ukutolika imifanekiso yezinto zejiyometri ezenziwa ngeendlela ezahlukeneyo zokubona.	Isifundo esi-1

ISIHLOKO	IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4	AMANQAKU NENGCACISO OKANYE NEZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure nemizuzu engama-24)
3.2 **Izinto ezinokwa kheka kuka -3-D**	**Uludwe lwezinto** Ukunakana nokubiza izinto ezinokwakheka kuka 3-D eklasini nakwimifanekiso • iimilo zeebhola (ezingqukuva) • iimilo zeebhokisi (iiprizim) **Iimpawu zezinto** Chaza, hlela , uthelekise izinto ezinokwakheka kuka -3-D ngo; • kobukhulu • kombala • kwezinto eziqengqelekayo • kwezinto ezityibilikayo **Imisetyenzana ekugqaliswe kuyo** Qwalasela wakhe izinto ezinokwakheka kuka -3-D usebenzisa izinto ephathekayo umz. iibhloko zokwakha, izinto ezisebenzileyo, izixhobo zokwakha	**Uludwe lwezinto** Ukunakana nokubiza izinto ezinokwakheka kuka -3-D eklasini nakwimifanekiso • iimilo zeebhola (ezingqukuva) • iimilo zeebhokisi (iiprizim) **Iimpawu zezinto** Chaza, hlela , uthelekise izinto ezinokwakheka kuka -3-D ngo; • kobukhulu • kombala • kwezinto eziqengqelekayo • kwezinto ezitshebelezao	Ukusebenza ngeezinto ezinokwakheka kuka -3-D kungafakwa nakwimisetyenzana ebhalwayo.	Isifundo esi-1

ISIHLOKO	IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4	AMANQAKU NENGCACISO OKANYE NEZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifundo zeyure nemizuzu engama-24)
3.3 **Iimilo ezinokwa kheka** **Kuka -2-D**	**Uludwe lweemilo** Ukunakana nokubiza iimilo ezinokakheka kuka -2-D • izangqa • oonxa-ntathu • Izikwere **Iimpawu zeemilo** Chaza, hlela, uthelekise iimilo ezinokwakheka kuka -2-D ngo; • Kobukhulu • kombala • kwecala elithe ngqo • Kwecala elingqukuva	**Uludwe lweemilo** Ukunakana nokubiza iimilo ezinokwakheka kuka - 2-D • izangqa • oonxa-ntathu • Izikwere **Iimpawu zeemilo** Chaza, hlela, uthelekise iimilo ezinokwakheka kuka -2-D ngo; • Kobukhulu • kombala • kwecala elithe ngqo • Kwecala elingqukuva	Jonga amanqaku kwiKota yesi-2. Abafundi basebenza ngezangqa nangezikwere zobukhulu obahlukeneyo nezangqa zeemilo ezahlukeneyo. Bazihlela ngokubeka ezinamacala athe ngqo zodwa nezinamacala angqukuva zodwa. Abafundi mabahlele baze babeke ngokwamaqela iimilo ezingoonxa-ntathu, ezizizikwere okanye izangqa. Makugxininiswe kwimisebenzi ebhalwayo.	Izifundo ezi-3
3.4 **Ulingano macala**	**Ulingano-macala** • Ukunakana ulingano-macala kumzimba wakho • Ukunakana nokuzoba umgca onolingano-macala kwiimilo zejiyometri nezingezizo ezejiyometri ezinokwakheka kuka -2-D	**Ulingano-macala** • Ukunakana nokuzoba umgca onolingano-macala kwiimilo zejiyometri nezingezizo ezejiyometri ezinokwakheka kuka -2-D	Abafundi mabajonge imigca ulingano-macala kwizinto ezibambekayo nemifanekiso. Imisetyenzana ebhalwalayo • Mabangazobi icala elinye kuphela: kodwa • Mabaquke nemizekelo apho bazoba kumgca wolingano-macala. Umgca wolingano –macala awunakusoloko uthe nkqo (vertical)	Isifundo esi-1

IBANGA LIKA- 1 IKOTA YESI-4 4. IMILINGANISELO				
IZIHLOKO	**IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**UBUDE BEXESHA** (kwizifun e-1 nemizuzu engama-24)
4.1 **Ixesha**	**Ukudlula kwexesha** Makuthethwe ngokudlula kwexesha • Bacinga ngeziganeko eziqhubeka rhoqo kubomi babo • Thelekise ubude bexesha usebenzisa ulwimi umz. ubude, ubufutshane, ukukhawuleza, ukucotha • Ukulandelelanisa iziganeko usebenzisa ulwimi umz. izolo, namhlanje, ngomso **Ukuxela ixesha** • Chaza xa kwenzeka into usebenzisa ulwimi umz. kusasa, emva kwemini, ebusuku, ekuseni, malanga • Zazi iintsuku zeveki • Zazi iinyanga zonyaka • Beka imihla yokuzalwa kwikhalenda	**Ukudlula kwexesha** Makuthethwa ngokudlula kwexesha • Bacinga ngeziganeko eziqhubeka rhoqo kubomi babo • Thelekise ubude bexesha usebenzisa ulwimi umz. ubude, ubufutshane, ukukhawuleza, ukucotha • Ukulandelelanisa iziganeko usebenzisa ulwimi umz. izolo, namhlanje, ngomso **Ukuxela ixesha** • Chaza xa kwenzeka into usebenzisa ulwimi umz. kusasa, emva kwemini, ebusuku, ekuseni, malanga • Zazi iintsuku zeveki • Zazi iinyanga zonyaka • Beka imihla yokuzalwa kwikhalenda	Abafundi mabafunde ukuthetha ngo: • kulandelelana kweziganeko; • bude bexesha. Abafundi baqhubeka bebethelela iindlela zokuthetha ngexeshai ntsuku zonke, ngexesha lukofundisa eklasini okanye ngexesha lokusebenza ngamaqela Abafundi mabathetha baze baphendule imibuzo ngexesha lokwenzeka kwezinto, usebenzisa ulwimi umz. kusasa, emva kwemini, ebusuku, ekuseni nasemalanga. Abafundi balandelelanisa iziganeko besebenzisa ulwimi umz. izolo, namhlanje, ngomso; iintsuku zeveki neenyanga zonyaka. Abafundi bathelekisa ubude bamaxesha besebenzisa ulwimi umz. ubude okanye ubufutshane ukukhawuleza okanye ukucotha. Abafundi bathetha ngokulandelelana kweziganeko ebomini babo. Bathetha ngokulandelelana kwemifanekiso umz. • amanqanaba okwenza isonka okanye ikomityi yeti; • iifoto ezibonisa ukukhula komntwana ukuya ebuntwini obudala; • umjikelo wobomi bezilwanyana umz. ukusuka kwiqanda ukuya kwintshontsho lenkukhu, okanye ukusuka eqandeni ukuya kwisele okanye iqanda ukuya kwibhabhathane; • neziganeko eziqhubeka rhoqo emini (ukuvuka, ukuya esikolweni, ukudlala, ukutya isidlo sangokuhlwa, ukulala). Qhubeka ubeke iintsuku zokuzalwa kwikhalenda unyaka wonke.	Izifundo ezi-2

IZIHLOKO	IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifun e-1 nemizuzu engama-24)
4.2 **Ubude**	**Umlinganiselo ongekho seSikweni** • Qikelela, thelekisa ucwangcise ubude okanye ububanzi bezinto ezimbini nangaphezulu ngokubeka enye ecaleni kwenye • Sebenzisa ulwimi ukuthetha ngothelekiso umz. indana, imfutshanana, ukuphakama, ububanzi • Qikelela, thatha umlinganiselo, thelekisa ulandelelanise uze urekhodishe ubude usebenzisa ulinganiso olungamiselekanga umz. Izandla, amanyathelo, ubude bepensile, izinto zokubala njl.	Yonke imilinganiselo kwiBanga loku-1 ayikho seSikweni. Umlinganiselo oseSikweni osebenzisa iiyunithi ezimiselekileyo awenziwa kweli Banga. Ngexesha lokuba bezisebenzela bebodwa abafundi bangaziqhelanisa babethelele imilinganiselo yobude, ububanzi nokuphakama ngeeyunithi ezingamiselekanga. Wonke umsebenzi mawurekhodishwe. Jonga amanqaku kwiKota yesi-3.		

IZIHLOKO	IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifun e-1 nemizuzu engama-24)
4.3 **Ubunzima**	**Umlinganiselo ongekho seSikweni** • Qikelela, uthathe umlinganiselo, uthelekise ucwangcise, urekhodishe ubunzima usebenzisa iiyunithi ezingamiselekanga umz. iibhloko nezitena • Usebenzisa ulwimi ukuthelekisa umz. ilula, inzima, ilulana, inzinyana	**Umlinganiselo ongekho seSikweni** • Qikelela, uthathe umlinganiselo, uthelekise ucwangcise, urekhodishe ubunzima usebenzisa iiyunithi ezingamiselekanga umz. iibhloko nezitena • Usebenzisa ulwimi ukuthelekisa umz. ilula, inzima, ilulana, inzinyana	Yonke imilinganiselo kwiBanga loku-1 ayikho seSikweni. Awenziwa umlinganiselo wobunzima oseSikweni ngeeyunithi ezimiselekileyo. **Yintoni eyahlukileyo kwiKota yes-4?** KwiKota yoku-1 kucetyiswe ukuba abafundi bagqalise • Ekuthelekiseni ngqo ubunzima bezinto; • Ukulandelelanisa nokuthelekisa ubunzina bezinto ezintathu nangaphezulu ngokuthi uzibeke kwisikali uzilandelelanise zonke • Phuhlisa ulwimi lokuthetha ngomohluko kubunzima. KwiKota yesi-4 abafundi mabagqalise ekuthatheni umlinganiselo ongekho seSikweni ngeeyunithi ezingamiselekanga zobunzima. **Umlinganiselo wobunzima ongekho seSikweni usebenzisa iyunithi engamiselekanga** Abafundi mabafunde imithetho yomlinganiselo besebenzisa iiyunithi ezingamiselekanga . Ukuthatha umlinganiselo ngeeyunithi ezingamiselekanga makungadelelwa xa kuthelekiswa nokuthatha umlinganiselo ngeeyunithi ezimiselekileyo . Umlinganiselo wobunzima ngeeyunithi ezingamiselekang a uquka ukubala ukuba zingaphi iiyunithi ezikhethiweyo ezinobunzima obulinganay nobento leyo ithathwa umlinganiselo umz. irula inonzima obunye neebhloko ezili-9. Abafundi mabathethe umlinganiselo wezinto ezahlukileyo besebenzisa uludwe lwezinto njengeeyunithi ezingamiselekanga. Abafundi mabafundiswe ukuba mabasoloko beyixela iyunithi xa benika ubunzima umz. incwadi inobunzima obulinganayo namabhaztile angama-34. Xa abafundi bathe bathatha umlinganiselo ngeyunithi ethile kaninzi, kulindeleke ukuba bakwazi ukuqikelela ukuba zingaphi kulo yunithi ezinokuba nobunzima obulingana naloo nto ithathwa umlinganiselo. Uqikelelo phambi kokulinganisa kubalulekile kodwa kungenziwa xa abafundi sele begqibile ukusebenza ngaloo yunithi. Abafundi kufuneka bafundiswe ukuba ukuze bathelekise ubunzima bezinto ezahlukeneyo, makusetyenziswa iyunithi enye. Umz. ukuba irula inobunzima beebhloko eziyi-20 ze isikere sibe nobunzima bamabhastile angama-20, asinakutsho ukuthi zinobunzima obunye okanye yiyiphi enzima kunenye.	Izifundo ezi-2

IZIHLOKO	IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifun e-1 nemizuzu engama-24)
4.3 **Ubunzima**	**Umlinganiselo ongekho seSikweni** • Qikelela, uthathe umlinganiselo, uthelekise ucwangcise, urekhodishe ubunzima usebenzisa iiyunithi ezingamiselekanga umz. iibhloko nezitena • Usebenzisa ulwimi ukuthelekisa umz. ilula, inzima, ilulana, inzinyana	**Umlinganiselo ongekho seSikweni** • Qikelela, uthathe umlinganiselo, uthelekise ucwangcise, urekhodishe ubunzima usebenzisa iiyunithi ezingamiselekanga umz. iibhloko nezitena • Usebenzisa ulwimi ukuthelekisa umz. ilula, inzima, ilulana, inzinyana	**Ukurekhodisha imilinganiselo** Noxa ukuthatha umlinganiselo isisakhono esenziwayo, abafundi mabarekhodishe imilinganiselo ngalo lonke ixesha **Ukuthatha umlinganiselo wobunzima njengemeko yokusombulula iingxaki zokubala** Ngexesha elabelwe Amanani, Ukubala noLwalamano, abafundi bangasombulula ingxaki besebenzisa imeko yomlinganiselo wobunzima ongekho seSikweni. Umz. Idasta inobunzima banamabhastile ali-11. Ibhokisi yeekhrayoni inobunzima banabhastile asi-8. Xa zidityanisiwe ziya kunika ubunzima bamabhastile amangaphi? Qaphela uluhlu lwamanani oluchanekileyo kuloo Kota, ndawonye noluhlu lweendidi zeengxaki kuloo Kota.	

IZIHLOKO	IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifun e-1 nemizuzu engama-24)
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho seSikweni** Thelekisa ulandelelanise ubungakanani bamanzi (umthamo) kwizikhongezeli ezibini ezibekwe esinye ecaleni kwesinye. Abafundi baqinisekisa ngokugalela kwisikhongozeli sesithathu xa kuyimfuneko • Thelekisa ulandelelanise umthamo wamanzi anokungena kwizikhongozeli ezibini (umthamo) • Sebenzisa ulwimi ukuthelekisa umz. ngaphezulu kune, ngaphantsi kune, izele, ayinanto • Qikelela uthathe umlinganiselo, thelekisa ulandelelanise umthamo wezikhongozeli usebenzisa imilinganiselo engamiselekanga umz. amacephe neekomityi	**Umlinganiso ongekho seSikweni** • Qikelela uthathe umlinganiselo, thelekisa ulandelelanise umthamo wezikhongozeli usebenzisa imilinganiselo engamiselekanga umz. amacephe neekomityi	Yonke imilinganiselo kwiBanga loku-1 ayikho seSikweni.Akukho mlinganiselo useSikweni womthamo osebenzisa iiyunithi ezimiselekileyo mawenziwe. . **Yintoni eyahlukileyo kwiKota yes-4?** KwiKota yoku-1 kucetyiswe ukuba abafundi bagxininise • ekuphuhliseni ulwimi lokuthetha ngeyantlukwano kumthamo; • ekuthelekiseni imithamo kwizikhongozeli ezibini ezifanayo; • nokuthelekisa imithamo kwizikhongozeli ezibini ezingafaniyo, esinye sivuleke kakhulu esinye sivuleke kancinci KwiKota yesi-4 abafundi bangagqalisa ekuthatheni umlinganiselo ongekho sesikweni ngeeyunithi ezingamiselekanga **zo**mthamo. **Yintoni umthamo?** Ibhotile ingathatha umthamo weekomityi ezine, kodwa isenokungagcwaliswa, umz. inganomthamo wekomityi enye ngexesha. Umthamo (icapacity) bubungakanani bento enokuqulathwa seso sikhongozeli (okanye ubungakanani besithuba esingaphakathi kwisiqulatho). Ivolumu) bubunganani besithuba esithathwa yinto. Maxa wambi abafundi bangathatha umlinganiselo wobungakanani bamanzi (okanye isanti) akwisikhongozeli. Oko kukuthatha umlinganiselo wento ekwisikhongozeli. Ngamanye amaxesha abafundi bangathatha umlinganiselo womthamo wesikhongozeli xa sizalisiwe. **Umlinganiselo ongekho seSikweni womthamo usebenzisa iiyunithi ezingamiselekanga zomthamo** Abafundi mabafunde yonke imithetho yomlinganiselo besebenzisa iiyunithi ezingamiselekanga. Ukuthatha umlinganiselo ngeeyunithi ezingamiselekanga akufanelanga ukuba kudelelwe xa kuthelekiswa nokuthatha umlinganiselo ngeeyunithi ezimiselekileyo. Abafundi mabanikwe ithuba lokwenza imilinganiselo yomthamo besebenzisa izinto ezahlukeneyo njengeeyunithi ezingamiselekanga umz. iikomityi (ingeyiyo leyo ilungiselelwe ukuthatha umlinganiselo),amacephe (ingeyiyo leyo ilungiselelwe ukuthatha umlinganiselo), iziciko zeebhotile njenge iziciko zeebhotile zeelitha ezi-2, iitoti ezincinci, iibhotile ezincinci njl.Ukuthatha umlinganiselo womthamo ngeeyunithi ezingamiselekanga kuquka ukubala ukuba ugalela kangaphi kweso sikhongozeli phambi kokuba sizale.	

IZIHLOKO	IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	UBUDE BEXESHA (kwizifun e-1 nemizuzu engama-24)
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho seSikweni** Thelekisa ulandelelanise ubungakanani bamanzi (umthamo) kwizikhongezeli ezibini ezibekwe esinye ecaleni kwesinye. Abafundi baqinisekisa ngokugalela kwisikhongozeli sesithathu xa kuyimfuneko • Thelekisa ulandelelanise umthamo wamanzi anokungena kwizikhongozeli ezibini (umthamo) • Sebenzisa ulwimi ukuthelekisa umz. ngaphezulu kune, ngaphantsi kune, izele, ayinanto • Qikelela uthathe umlinganiselo, thelekisa ulandelelanise umthamo wezikhongozeli usebenzisa imilinganiselo engamiselekanga umz. amacephe neekomityi	**Umlinganiso ongekho seSikweni** • Qikelela uthathe umlinganiselo, thelekisa ulandelelanise umthamo wezikhongozeli usebenzisa imilinganiselo engamiselekanga umz. amacephe neekomityi	Abafundi mabafundiswe ukusoloko beyikhankanya iyunithi umz. kukho amacephe angama -48 azele ngamanzi kwibhotile okanye kukho ngaphantsi nje kwekomityi yamanzi kwibhotile. Xa abafundi benze umlinganiselo ngeyunithi ethile kaninzi, kufanele bakwazi ukuqikelela umthamo besebenzisa loo yunithi. Uqikelelo phambi kokuba kuthathwe umlinganiselo lubalulekile, kodwa lungenziwa xa abafundi sele bekhe bayisebenzisa loo yunithi. Abafund i mabafundiswe ukuba ukuze ukwazi ukuthelekisa umthamo kufanele usebenzise iyunithi efanayo. Umzekelo, ukuba iglasi iqulatha iitispuni ezingama -20 amanzi, ikomityi iqulatha amacephe ali-10 amanzi, awunakuthi iglasi inomthamo omkhulu. Abafundi kufanele bathathe umlinganiselo besebenzisa uludwe lweeyunithi ezingamiselekanga ukuze • baqonde ukuba okona zincinci iiyunithi kokona uza kufuna ixesha elininzi ukuyizalisa, umz. umthamo okwibhotile ungangamacephe angama -20 okanye ikomityi enye; • basebenzise iiyunithi ezifanele loo nto bathatha umlinganselo wayo, umz.ukuthatha umlinganiselo webhotile ezinomthamo ozilitha ezi-2 ngeetispuni yinkcitha xesha **Ukurekhodisha imilinganiselo** Nangona ukulinganisa kusisakhono esenziwayo, abafundi mabarekhodishe imilinganiselo yabo rhoqo. **Ukuthatha umlinganiselo womthamo njengemeko yokusombulula iingxaki zokubala** Ngexesha elabelwe Amanani, Ukubala noLwalamano abafundi basombulula ingxaki besebenzisa imeko ypkuthatha umlinganiselo womthamo ngokungekho seSikweni. umzekelo uGogo usebenzisa iikomityi ezimbini ukwenza ipudingi. Ukuba uyiphinda kabini loo resipi uya kudinga ubisi olungakanani? Qaphela uluhlu lwamanani nolweendidi zeengxaki ezifanele le Kota.	Isifundo soku-1

IBANGA LOKU- 1 IKOTA YESI-4 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** **(Isifundo seyure e-1 nemizuzuz engama-24)**
Ukusebenza ngengqokelela yezinto				
5.1 **Qokelela uhlele izinto**	**Qokelela uze ulungise izinto** Qokelela uhlele izinto ezibambekayo ezisetyenziswa imihla ngemihla		Ukuhlela nokuqokelela izinto akusagxininiswa kuzo kweli xesha lonyaka. Kodwa lo msebenzi unganikwa ngamaxesha athile abafundi bawenze ngexesha labo. Ugqaliso olucetyiswayo kwiKota yesi-4 lusekufundeni nokucalula iigrafu zemifanekiso.	
5.2 **Bonisa ingqokelela ehleliweyo yezinto**	**Bonisa ingqokelela ehleliweyo yezinto** Bonisa ulwazi kwigrafu yemifanekiso			
5.3 **Xoxa unike ingxelo ngengqokelela yezinto ezihleliweyo**	**Xoxa unike ingxelo ngengqokelela yezinto ezihleliweyo** • Nika izizathu zendlela ehlelwe ngayo le ngqokelela • Phendula imibuzo - ngendlela olwenziwe ngayo uhlelo - ngendlela ekhangeleka ngayo le ngqokelela • Chaza ingqokelela nemizobo • Cacisa indlela ehlelwe ngayo le ngqokelela			

IZIHLOKO	IINGQIQO NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO LWEKOTA YESI-4	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
Ukusebenza ngolwazi				
5.4 **Qokelela ulungise ulwazi oluqokelelweyo**	**Qokelela ulungise ulwazi oluqokelelweyo** Qokelela ulwazi oluqokelelweyo ngeklasi okanye ngesikolo uphendule imibuzo ebuzwa ngutitshala			
5.5 **Ukubonisa ulwazi oluqokelelweyo**	**Ukubonisa ulwazi oluqokelelweyo** Ukubonisa ulwazi oluqokelelweyo kwiigrafu zemifanekiso			
5.6 **Ukucalula nokutolika ulwazi oluqokelelweyo**	**Ukucalula nokutolika ulwazi oluqokelelweyo** Phendula imibuzo ngolwazi kwiigrafu zemifanekiso	Ukucalula ulwazi oluqokelelweyo kwigrafu oyinikiweyo.	Xa abafundi befunde ngalo lonke ulwazi oluqokelelweyo (becetyisiweyo kwiKota yesi-3), mabagxininise ekuhlalutyeni imisebenzi abayinikiweyo. Kucetyiswa ukuba kwiKota yesi-4 abafundi bahlalutya imifanekiso yegrafu emibini ubuncinane.	Izifundo ezi-2

3.5.2 Ingcaciso ngomxholo ibanga lesi- 2

IBANGA LESI -2 IKOTA YOKU -1 1. AMANANI, II-OPAREYSHINI NOLWALAMANO				
ISIHLOKO	**IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1**	**AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA**	**IXESHA** **(Isifundo seyure e-1 nemizuzuz engama-24)**
Ukukhulisa iingqiqo zamanani:bala amanani azeleyo				
1.1 ukubala	**Ukubala izinto ezibambekayo** Qikelela uze ubale ngokuthembekileyo ubuncinane izinto zemihla ngemihla ezingama- 200. Ubuchule bokwahlula ngokwamaqela buyakhuthazwa.	Bala ngokuthembekileyo uye ubuncinane kwi-100 izinto ozibona rhoqo. Nika uqikelelooluthembekileyo lwamanani ezinto ezinokuqinisekiswa ngokubala.	**Jonga kumanqaku ebanga loku -1, ikota yesi -3 neye- 4** Ikota yoku- 1 kwiBanga lesi -2 lithuba lokubethelela umsebenzi owenziwe kwikota yesi- 4 yeBanga loku- 1. **Ukubala ngamaqela** Ugqaliselo kule kota malube sekubaleni usiya phambili nasekubaleni ngokwamaqela. Ncedisa abafundi ukuba babale iqela lezinto ezinkulu ngokuthi ubakhuthaze ukuba bohlule izinto ngokwamaqela ngezibini,ngezihlanu nangamashumi. Beka amakhadi amanani kwingqokelela nganye ukubonisa inani lezinto ezibaliweyo. Ukubala ngamaqela kulungisa abafundi ukuba baqonde iziphinda phindi. Abafundi mabanikwe ithuba lokuba babone ukuba iqela lamakhulu linokwenziwa ngendlela ezininzi: • Amaqela ali-10 ama- 10. • Imivo eli- 100 engabekwanga ngokwamaqela • Amaqela ama- 2 amashumi ama- 50. **Ukubala ngokongeza** Abafundi basafuna amava okusebenza ngengqokelela yezinto ukuze babale ukusuka kwinani elithile ukuya phamblili.. **Izixhobo:** Kufuneka kuthathelwe ingqalelo uhlobo lwezixhobo ezisetyenzisiweyo ukukhuthaza abafundi ukuba babale ngamaqela.Izixhobo ezifanelekileyo zingabandakanya ezi zilandelayo: • Izixhobo ezinokwakheka okuthile umz. uludwe lwamaso okubala • I-abacus yokuziqhelanisa neqela lama- 10. • Ukwenza iinyanda zezi-2, iinyanda zezi- 5 kunye nezamshumi uze ubale konke usebenzisa izintana zokubala okanye imicinga yematshisi. • Imali yokudlala.	

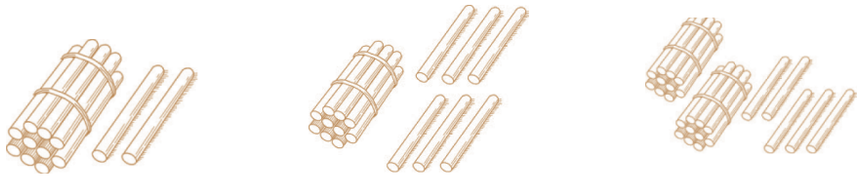
ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.1 ukubala	**Ukubala izinto ezibambekayo** Qikelela uze ubale ngokuthembekileyo ubuncinane izinto zemihla ngemihla ezingama- 200. Ubuchule bokwahlula ngokwamaqela buyakhuthazwa.	Bala ngokuthembekileyo uye ubuncinane kwi-100 izinto ozibona rhoqo. Nika uqikelelooluthembekileyo lwamanani ezinto ezinokuqinisekiswa ngokubala.	Bayakuthi abafundi xa sele bebone izixhobo zokubala esezilungiswe ngokwamaqela kwangaphambili ubakhuthaze ukuba bohlule izinto ngokwamaqela xa bebala. Abafundi kufuneka benze unxibelelwano phakathi kwendawo elikuyo inani/izinto kwiseti kunye nenani lezinto/amanani kwiseti. Oku kuphunyezwa xa bethe baqonda ukuba ukunqamla ukubala xa ufike kuma -50, kuthetha ukuba babale izinto ezingama -50. Ekupheleni kwale kota abafundi kufuneka ukuba babe bayakwazi uku: • Bala izinto abakwazi ukuzibamba okanye uuziphatha; • Bala izinto zokubala ngamaqela ezi- 5 nama- 10 uze; • Uwalungise wandule ukuwabala kwakhona. Abafundi kufuneka bakwazi ukuphendula le mibuzo:Ingaba usenelaa nani lezinto zokubala ubunazo?” **Eminye imisebenzi:** Abafundi kufuneka bakwazi ukuphendula olu hlobo lwemiyalelo nemibuzo: • Nazi izinto zokubala ezili-100. Zibale ngokuzahlula zibe ngama- 10. Ngoku qinisekisa ngokubala ngemivo. Phambi kokuba uqale, ingaba ucinga ukuba inani lezinto zokubala zizonke liza kufana ? • Ukuze ubale zonke izinto zokubala ezili - 100, ingaba ukhetha ukuzibala usebenzisa amaqela ama- 20 okanye ama- 25? Kutheni? • Gqiba ekubeni yiyiphi eyo na ndlela iyiyo yokubala ingqokelela yeepensile. • Nazi izinto zokubala ezingama- 80.Ukuba sibala ngezibini okanye ngamashumi, ingaba inani lezinto zokubala liya kuhlala lifana? • Bala izinto zokubala ezingama- 46 ngokuthi uzohlule ngezibini.	

<table>
<tr><th>ISIHLOKO</th><th>IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA</th><th>IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1</th><th>AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA</th><th>IXESHA
(Isifundo seyure e-1 nemizuzuz engama-24)</th></tr>
<tr><td>1.2
Bala usiya phambili ubale ubuya umva</td><td>Bala usiya phambili okanye ubale ubuya umva ngo:
• - 1 ukususka nokuba kuleliphi inani phakathi kwe- 0 nama-200
• -10 ukususka nokuba kusesiphi isiphinda phindi se- 10 phakathi kwe-0 nama- 200.
• -5 ukususka nokuba kusesiphi isiphinda phindi sesi -5 phakathi kwe- 0 nama- 200.
• -2 ukususka nokuba kusesiphi isiphinda phindi sesi -2 phakathi kwe- 0 nama -200
• -3 ukususka nokuba kusesiphi isiphinda phindi sesi -3 phakathi kwe- 0 nama- 200
• -4 ukususka nokuba kusesiphi isiphinda phindi sesi -4 phakathi kwe- 0 nama -200.</td><td>Bala usiya phambili okanye ubale ubuya umva ngo:
• -1ukususka nokuba kuleliphi inani phakathi kwe- 0 nama-200.
• -10 ukususka nokuba kusesiphi isiphinda phindi se - 10phakathi kwe -0 nama-200.
• -5 ukususka nokuba kusesiphi isiphinda phindi sesi -5 phakathi kwe- 0 nama -200.
• -2 ukususka nokuba kusesiphi isiphinda phindi sesi – 2 phakathi kwe- 0 nama – 200.</td><td>Ikota yoku -1 kwiBanga lesi- 2 ilithuba lokubethethelela umsebenzi owenziwe kwikota yesi - 4 yeBanga loku -1.
Ukubala uqakatha kuhlala kusisakhono esibalulekileyo esiza kunceda abafundi xa bebala.Ukucengceleza ulandelelwano lwamanani lusisakhono esibalulekileyo esifunekayo sokubala.Ukubala kufuneka kuqhubeke kuyinxalenye yobomi babafundi ngoko izicengcelezo,iingoma kunye namabali nazo mazibe yinxalenye yamava nendlela yokufundisa ukubala.
KwiBanga loku-1 abafundi bakhulise ingqiqo yabo yokubala ngolu hlobo;
• Ulwazi lwamanani, ukukwazi ukunaka nokungqamanisa inani nexabiso lalo ngokuchanekileyo nakuyiph ina imeko elifumaneka kulo (izinto zokubala ezi-5,negama lenani,nesimboli yenani)
• Inani lezinto okanye amanani kwiseti – ukuxela ingqokelela
• Ukunika isiphumo sezinto ezihlanganisiweyo ngokuchanekileyo ngaphandle kokuzibala nganye nganye .
• Ukuhambelana kwezinto/amanani .
Ukubala uqakatha
Ukubala uqakatha lelinye igama lokubala ngamaqela.Kuyanceda ukukhulisa ukuqonda iipateni zamanani.Ukubala uqakatha kukhuthaza abafundi ukubala nokucinga ngokwamaqela, nto ke leyo ibubuchule.Oku kukwanceda ekukhuliseni isakhono sabo sokuthelekelela.
Ukubala ngokwamaqela kwenza ukuba abafundi baqonde ulwalamano phakathi kwamanani angalandelelaniyo xa bebala.Oku kwenza isiseko seepateni zamanani kunye nophinda phindo.
<table><tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr><tr><td>12</td><td>14</td><td>16</td><td>18</td><td>20</td></tr><tr><td>22</td><td>24</td><td>26</td><td>8</td><td>30</td></tr><tr><td>32</td><td>34</td><td>36</td><td>38</td><td>40</td></tr><tr><td>42</td><td>44</td><td>46</td><td>48</td><td>50</td></tr><tr><td>52</td><td>54</td><td>56</td><td>58</td><td>60</td></tr><tr><td>62</td><td>64</td><td>66</td><td>68</td><td>70</td></tr><tr><td>72</td><td>74</td><td>76</td><td>78</td><td>80</td></tr><tr><td>82</td><td>84</td><td>86</td><td>88</td><td>90</td></tr><tr><td>92</td><td>94</td><td>96</td><td>98</td><td>100</td></tr></table></td><td></td></tr>
</table>

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.2 **Bala usiya phambili ubale ubuya umva**	Bala usiya phambili okanye ubale ubuya umva ngo: • - 1 ukususka nokuba kuleliphi inani phakathi kwe- 0 nama-200 • -10 ukususka nokuba kusesiphi isiphinda phindi se- 10 phakathi kwe-0 nama- 200. • -5 ukususka nokuba kusesiphi isiphinda phindi sesi -5 phakathi kwe- 0 nama- 200. • -2 ukususka nokuba kusesiphi isiphinda phindi sesi -2 phakathi kwe- 0 nama -200 • -3 ukususka nokuba kusesiphi isiphinda phindi sesi -3 phakathi kwe- 0 nama- 200 • -4 ukususka nokuba kusesiphi isiphinda phindi sesi -4 phakathi kwe- 0 nama -200.	Bala usiya phambili okanye ubale ubuya umva ngo: • -1ukususka nokuba kuleliphi inani phakathi kwe- 0 nama-200. • -10 ukususka nokuba kusesiphi isiphinda phindi se - 10phakathi kwe -0 nama-200. • -5 ukususka nokuba kusesiphi isiphinda phindi sesi -5 phakathi kwe- 0 nama -200. • -2 ukususka nokuba kusesiphi isiphinda phindi sesi – 2 phakathi kwe- 0 nama – 200.	Abafundi mabaqhubeke ukuxhaswa ngemifanekiso ukubanceda ukuba babale beqakatha. Umz: **Eminye imisebenzi:** Ukubala usiya phambili nokubala ubuya umva, ukuya -00 usebenzisa itshati yama -100: (imizuzu emi -5 ukuya kwe- 7 ngemini) Qala ubale neklasi yonke, yima kwinani elithile umz ama- 24. Abafundi banikana amathuba bebala besiya phambili ukususka kwelo nani, kwiqela/kwizibini/nganye njengoko kubonisiwe ngutitshala. Kubhalwa elo nani xa kumiwe. Buza imibuzo efana nale: Ubona eyiphi ipateni ?Ipateni yokuqala iphela phi ? (Umz: ipateni yokubala ngezi 2: 2; 4; 6; 8; 10) Ekupheleni kwale kota abafundi kufuneka bakwazi: Ukubala ngomlomo baze baphendule imibuzo efana nale: • Qala kuma-52,bala usiya phambili ngemivo uye kuma -72. • Qala kuma -88,bala ubuya umva ngemivo uye kuma- 70 • Qala kuma-38,bala ngezibini uye kuma-50. • Qala kuma -45,bala ngezihlanu uye kwi- 100. • Qala kwi -10,bala ngamashumi uye kuma kwi -100. Abafundi kufuneka bakwazi ukusebenzisa izakhono zokubala kwimisebenzi ebhalwayo.umzekelo, xa bezisebenzela bebodwa banokugqibezela olu landelelwano lamanani: Abafundi bakopa baze bandise ulandelelwano lwamanani olwahlukileyo.umz. • 76; 75; 74; __; 72; __; __; __; 68 (buya umva ngonye) • 27; 28; 29; __; __; 32; __ (ngemivo usiya phambili) • 8; 10; __; 14, __ (ngezibini) • 5; 10, 15 ;20;25; ____ (ngezihlanu) • 90; __; 70 60; __ (ukubala ubuya umva ngezishumi) • 10, 20, 30, 40, ___, 60, 70, ___ (ukubala usiya phambili ngezishumi).	

<table>
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(Isifundo seyure e-1 nemizuzuz engama-24)</th></tr>
<tr>
<td>1.3
Iisimboli namagama amanani</td>
<td>Wazi uze ufunde amanani
• Wazi uze ufunde iisimboli zamanani ukusuka kwi- 0 – ukuya kuma- 200
• Bhala iisimboli zamanani ukuqala kwi- 0 – ukuya kuma-200
• Wazi uze ufunde amagama amanani ukusuka kwi- 0 ukuya kwi-100
• Bhala amagama amanani ukuqala kwi - 0 ukuya kwi- 100</td>
<td>Wazi uze ufunde amanani
• Wazi uze ufunde iisimboli zamanani 0 - 100
• Bhala iisimboli zamanani 0-100
• Wazi uze ufunde amagama amanani ukusuka kwi -0 uye kuma-25
• Bhala amagama amanani ukusuka kwi- 0 ukuya kuma-25</td>
<td>Kule kota abafundi baqhubeleka besenza oku:
• Funda bebhala iisimboli zamanani ukuya kwi - 100; noku
• Funda uze ubhale amagama amanani ukuya kuma- 25.
Ekupheleni kwekota abafundi kufuneka bakwazi ukwenza oku:
Bhala iisimboli zala magama amanani alandelayo:
• ishumi elinesixhenxe
• amashumi amabini anesithathu
Tshatisa isimboli kunye negama lenani
<table>
<tr><td>66</td><td>Amakhulu asithoba ananye</td></tr>
<tr><td>8</td><td>Amashumi amahlanu anesithathu</td></tr>
<tr><td>172</td><td>Amashumi amane</td></tr>
<tr><td>109</td><td>Amashumi amathathu anesibhozo</td></tr>
<tr><td>91</td><td>Ikhulu elinye linamashumi asixhenxe anesibini</td></tr>
<tr><td>40</td><td>Amashumi amathandathu anesithandathu</td></tr>
<tr><td>53</td><td>Sibhozo</td></tr>
<tr><td>38</td><td>Ikhulu elinye linesithoba</td></tr>
</table>
Funda ngokukhwaza la manani akula makhadi:
83 47
</td>
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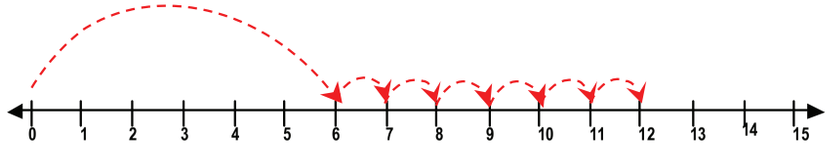
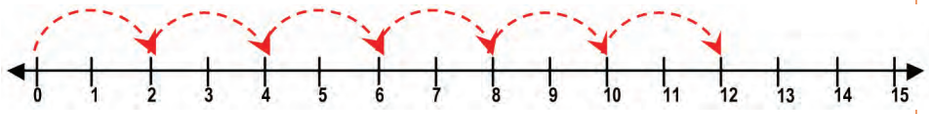
ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.4 **Chaza uthelekise uze uhlele amanani**	**Landelelanisa uze uthelekise amanani ukuya kuma-99** • Landelelanisa amanani azeleleyo ukuya kuma-99. • Hlela amanani azelelyo ukuya kuma-99 uqala kwelona lincinci ukuya kwelona likhulu uze usuke kwelona likhulu ukuya kwelona lincinci. • Thelekisa amanani azeleyo ukuya kuma --- 99 usebenzisa ukuya kuma-99 usebenzisa uncinci kuno-, nonkulu kuno- Thelekisa amanani ukuya kuma- 99 usebenzisa uncinci kune, nkulu kune, ngaphezulu kune, ngaphantsi kune,lingana ne- **Sebenzisa amanani olandelelwano ukubonisa ulandelelwano nendawo** Beka izinto ngomgca ukusuka kweyokuqala ukuya kweyokugqibela umz. Eyokuqala,eyesini,ey esithathu.....eyamashumi amabini.....	**Landelelanisa uze uthelekise amanani ukuya kuma- 25** • Landelelanisa amanani ukusuka kwelona lincinci ukuya kwelona likhulu,nokusuka kwelona likhulu ukuya kwelona lincinci. • Thelekisa amanani usebenzisa ncinci kune, khulu kune,ninzi kune, ngaphantsi kune,lingana ne- **Sebenzisa amanani olandelwano ukubonisa ulandelelwano nendawo** Beka izinto ngomgca ukusuka kweyokuqala ukuya kweyokugqibela umz. Eyokuqala,eyesini,ey esithathu.....	Uludwe lwamanani okulandelelanisa nokuthelekisa ayahambelana noludwe wamanani okubala. Oku kuthetha ukuba ukuze ubale ukuya ku- 99 ulwazi lokubala lwamanani kufuneka lube lukhulile ukuze bakwazi ukufikelela ezigqibeni ezizizo. Ukuba abafundi banokukwazi ukulandelelanisa amanani ngokuzithemba ngokugqibeleleyo, ulwazi lwabo lwamanani nendlela yokubala iya kwanda. Abafundi kufuneka baqhubeke besebenzisa ulwimi lolandelelwano nokuthelekisa: • Elokuqala, elesibini, elesithathu, elesine, elesihlanu, elesithandathu…….. • Zingaphi…… • Ninzi nje, inani elinye nje … • Ilingana ne-, ingaphezulu kune, lingaphantsi kune, mbalwa kune, ncinci kune, nkulu kune…… • Eyokuqala, eyokugqibela, phambi, emva, ecaleni, phakathi Ngokulandelelanisa nokuthelekisa izinto namanani abafundi bafunde oku kulandelayo: • Inani lentsusa linani elibhekiselele kwinani lezinto/amanani kwiseti • Inani londelelwano libhekiselele kwindawo yenani kwiseti. umzekelo: Faka umbala otyheli kwisangqa sesithathu. **Eminye imisebenzi** • Amanani olandelelwano: Xoxa ngomahluko phakathi kwala magama: nye nowokuqala,bini nowesibini‘ njal-njalo • Hlula iklasii ibe ngamaqela alinganayo amathathu okanye amane.Iqela ngalinye. Umntwana ngamnye ufumana ikhadi apho abhala khona igama lakhe.Iqela ngalinye libeka amakhadi amagama alo ngokokulandelelana kwe alfabhethi. Utitshala nabafundi banokubuza imibuzo. Umz.ngubani ongowesine eqeleni ?	

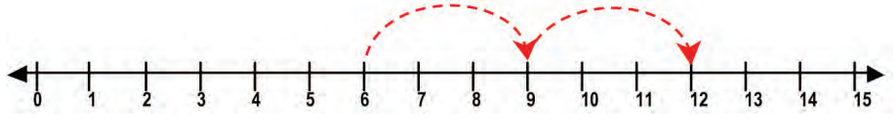
ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.5 **Ixabiso lenani**	**Nakana ixabiso lendawo lamanani ubuncinci aneedijithi ezi-2 ukuya kuma-25** • Yazi ukuba idijithi nganye imele ntoni • Hlula hlula amanani aneedijithi ezi -2 ukuya kuma- 99 abe ziziphindaphindi ze -10 nemivo • Chonga uze uxele ixabiso ledijithi nganye.	**Nakana ixabiso lendawo lamanani ubuncinci aneedijithi ezi-2 ukuya kuma-25** • Yazi ukuba idijithi nganye imele ntoni • Hlula hlula amanani aneedijithi ezi-2 abe zizphindaphindi ze -10 nemivo • Chonga uze uxele ixabiso ledijithi nganye.	**Yintoni engumahluko kwiBanga loku -1?** Kwikota yoku-1 abafundi basebenza ngommandla wamanani ophezulu baze baqhubeke ukubala nokwahlula amanani ngokwamaqela kunye nemivo engohlulwanga ngokwamaqela baze benze oku kulandelayo: • Bhala 18 = ishumi eli-1 nemivo engohlulwanga ngokwamaqela esi- 8 13 = 10 kunye ne- 3. Kule kota abafundi kufuneka baqhubeke namava amaninzi ukuqonda ukuba i -10 linani elisetyenziselwa ukuthelekisa amanye amanani kwaye yiyunthi. I-10 lishumi elinye elinemivo elishumi. Amagama afana neshumi nomvo (ama-24 ngamaqela ama-2 amashumi okanye amashumi ama 2 nemivo emi- 4)kufuneka asetyenziswe rhoqo ukumisela ulwimi olungumqondiso wokwahlula hlula nokwakha. **Sebenza ngezinto eziphathekayo** • Izinti zokubala/imicinga yematshisi • Izinti okanye imicinga yematshisi ingabekwa ngokwamaqela ukubonisa inyanda yamashumi nemivo engohlulwanga ngokwamaqela. **Imizekelo:** **Ukubonisa i- 12** **Ukubonisa i- 18** **Ukubonisa ama- 25**  • I-abacus Abafundi maqhubeke besebenzisa izinto eziphathekayo ukwenza imivo elishumi nokuqonda ukuba i-10 liqela lemivo elishumi eyahlukeneyo.	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.5 **Ixabiso lenani**	**Nakana ixabiso lendawo lamanani ubuncinci aneedijithi ezi-2 ukuya kuma-25** • Yazi ukuba idijithi nganye imele ntoni • Hlula hlula amanani aneedijithi ezi -2 ukuya kuma- 99 abe ziziphindaphindi ze -10 nemivo • Chonga uze uxele ixabiso ledijithi nganye.	**Nakana ixabiso lendawo lamanani ubuncinci aneedijithi ezi-2 ukuya kuma-25** • Yazi ukuba idijithi nganye imele ntoni • Hlula hlula amanani aneedijithi ezi-2 abe zizphindaphindi ze -10 nemivo • Chonga uze uxele ixabiso ledijithi nganye.	Ngokusebenzisa i-abacus abafundi kufuneka bakwazi ukubonakalisa ukuba: • Ishumi elinye • Ishumi elinye nemivo emi-5 • Ishumi elinye nemivo emi-6 • Ishumi elinye nemivo esi-7 • Ishumi elinye nemivo esi-8 • Ishumi elinye nemivo eli-9 • Iibhloko ze - Dienes (Dienes blocks) Kule kota izixhobo zokufundisa ixabiso lendawo zingandiwas.Umzantsi weebloko ezili-10(inxalenye yeebloko zeDienes) ingafundiswa ukuphuhlisa uluvo lwe-10 njengento enye kwaye kuyo: - Imivo eli- 10 yenza ishumi eli- 1; - imivo engama- 20 yenza amashumi ama- 2; kunye - nemivo eli- 16 yenza ishumi eli- 1 kunye nemivo emi- 6 enganye nganye.. Nangona abafundi kusafuneka babale baze benze amaqela ngamashumi, bangabonisa i-18 ngokubeka umzantsi weebhloko ezi- 10 neebhloko ezisibhozo ezinganye nganye ukubonisa inani. Abafundi mabahlanganise ukubonisa ama -20. • **Umelo olulinginayo** Kule kota ugqaliso lukubonakalisa umelo olulinganayo lenani elinye.Ama -20 makachazwe njengamashumi ama-2 (esebenzisa iinyanda okanye amaqela ezinto) okanye amaqela ama-2 amashumi. Kubalulekile ukubonisa abafundi ukuba ama -20 angakhangeleka ahlukile. Lilonke mababonise izinto ezinganye nganye ezingama-20, iqela le -10 elinye kunye nemivo eli-10 enganye nganye kunye namaqela e-10 ama-2. Abafundi mabanikwe ithuba lokuchaza olu linganiso baze baxele okufanayo nokwahlukileyo. • **Amakhadi axela ixabiso lenani** Amakhadi abonisa ixabiso lenani makaqaliswe ukufundiswa aze asetyenziswe kule kota ukubonisa ukuba amanani akhiwe njani. Amakhadi amele inani angaboniswa xa kuboniswa iinyanda okanye amaqela ezinto.	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.5 **Ixabiso lenani**	**Nakana ixabiso lendawo lamanani ubuncinci aneedijithi ezi-2 ukuya kuma-25** • Yazi ukuba idijithi nganye imele ntoni • Hlula hlula amanani aneedijithi ezi -2 ukuya kuma- 99 abe ziziphindaphindi ze -10 nemivo • Chonga uze uxele ixabiso ledijithi nganye.	**Nakana ixabiso lendawo lamanani ubuncinci aneedijithi ezi-2 ukuya kuma-25** • Yazi ukuba idijithi nganye imele ntoni • Hlula hlula amanani aneedijithi ezi-2 abe zizphindaphindi ze -10 nemivo • Chonga uze uxele ixabiso ledijithi nganye.	• **Ixabiso leedijithi** Abafundi mabaqale ukuxela ukuba idijithi nganye imele ntoni . Buza abafundi: - Liliphi inani elimelwe sisi-7 kuma -27? - Liliphi inani elimelwe sisi -2 kuma -29? Abafundi mabasebenzise amakhadi abonakalisa ixabiso lendawo kwinani ukubonakalisa ubunyani boko bathi sisiphumo. • **Ukuya kwiitekisi ezibhaliweyo** Ngexesha lokuzenzela umsebenzi abafundi mabenze imisebenzi ebhalwayo encedisa ukukhulisa nokubethelelea: - ingqiqo yamaqela e-10 nemivo enganye nganye; kunye ne- - xabiso ledijithi. **Umzekelo:** Faka umbala amaso ali -12  Faka umbala amaso ali -16  Faka inani elingekhoyo (Le ingasetyenziswa okanye icaciswe kusetyenziswa izinto eziphathekayo) 18 = 1 ishumi kunye ne ____semivo 23 = __ amashumi nesi- 3 semivo **Izixhobo ezicetyiswayo** Izinto ezinokuhlanganiswa: • Izinti zokubala • Izinto zokubala ezinokuhlohlwa • Imicinga yematshisi • Izinti ze-ayisi khrim • Iibhokisi ezisikwere ezihlangeneyo	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.6 **lindlela zokusombulula iingxaki zokubala**	Sebenzisa ezi ndlela xa usombulula iingxaki zezibalo uze ucacise izisombululo ezo.: • Imizobo okanye izinto zokubala eziphathekayo. umz. izinto zokubala • Ukwakha nokucalucalula amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo. • umgca manani	Sebenzisa ezi ndlela xa usombulula iingxaki zezibalo uze ucacise izisombululo zazo.: • Imizobo okanye izinto zokubala eziphathekayo. umz. izinto zokubala • Ukwakha nokucalucalula amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo. • umgca manani	Kulindeleke ukuba abafundi basombulule iingxaki zokubala zamagama ngoku: • khwakha nokucalula amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo. • Umgca manani **Imizobo okanye izinto eziphathekayo zokubala** Abafundi baza kuqhubekeka ukuzoba imifanekiso basebenzise izinto zokubala eziphathekayo ukusombulula iingxaki zezibalo. Kubalulekile ukuba imifanekiso okanye imizobo ibe namanani kunye nezivakalisi zamanani. **Ukwakha nokwahlula amanani** Le yenye yeendlela ezibalulekileyo ezinokusetyenziswa kwisigaba esisisiseko. Ukusebenzisa le ndlela kuvumela abafundi ukuba bawahlukanise baphinde bawadibanise amanani ukunceda ukwenza izibalo zibe lula. Baza kuyisebenzisa kakhulu le ndlela kwisigaba esiphakathi. **Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo** Le ndlela yeyona inobucukubhede kwaye ifuna umntwana abe nesakhono sokusebenzisa amanani. Abafundi abanako ukusebenzisa le ndlela kuba lula kubo ukusebenzisa ezinye iindlela. Umzekelo: Umsebenzi wokubala wamagama: Ngenye imini ekliniki abafundi abali-17 bagonyelwe ifiva. Kusuku olulandelayo kwagonywa abanye abali-16. Bangaphi abafundi abagonyiweyo bebonke? Le ngxaki ingasonjululwa ngokusebenzisa ukuphinda phinda kabini. Umntwana angathi xa abala aphinde i-16 aze adibanise isi-1 okanye aphinde i-17 aze athabathe isi-1. **Umgca manani** Ukusebenzisa umgca manani ukwenzela ukuncedisa ukubala kuya kuvumela abafundi indlela yokurekhodisha ukucinga baze bakhumbule lula. Ibanceda abafundi ekubeni babe nomfanekiso wokurekhodisha abanokuwusebenzisa ukucacisa indlela abasombulule ngayo ingxaki.	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.6 **lindlela zokusombulula iingxaki zokubala**	Sebenzisa ezi ndlela xa usombulula iingxaki zezibalo uze ucacise izisombululo ezo.: • Imizobo okanye izinto zokubala eziphathekayo. umz. izinto zokubala • Ukwakha nokucalucalula amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo. • umgca manani	Sebenzisa ezi ndlela xa usombulula iingxaki zezibalo uze ucacise izisombululo zazo.: • Imizobo okanye izinto zokubala eziphathekayo. umz. izinto zokubala • Ukwakha nokucalucalula amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo. • umgca manani	Abafundi basoloko besebenzisa umgca manani ukususela kwiBanga loku- 1. Bekumelwe ukuba ngoku sele benako ukwenza umgca manani ongenanto apho babeka inani abaqala ngalo baze bazigqibele ukuba badlula njani ukusuka kwelinye ukuya kwelinye. Apha phakathi kwikota kulindeleke ukuba kubonakale inkqubela kwindlela abalandela ngayo ukwakhiwa komgca manani. Umzekelo wendlela abanokuwusebenzisa ngayo umgca manani ukurekhodisha iindlela zabo zokubala: UZonke unezinto zokudlala ezimfumamfuma ezi-6. UZiya unezi-6 ngaphezulu kwezikaZonke. Zingaphi izinto zokudlala anazo ke uZiya? Umfundi uza kwakha le migca manani ilandelayo eza kumnceda afikelele kwimpendulo eyiyo.  Abafundi bangohlula isi-6 abe ngamaqela amabini. Umgca manani uza kubonisa imitsi yezi-2 ukusuka kwisi-6. **Umzekelo:**  Bakuba abafundi beqinisekile ngokubala ngokongeza ukusuka kwinani elithile, umgca manani wabo mawuqale ku-6. Indlela lo mgca manani wakhiwe ngayo uhambelana ngokucacileyo nengqiqo yokubala ngokongeza. Kubalulekile ukuba abafundi bawubone umgca manani uqala kumanani awohlukileyo xa bewusebenzisela ukubala ngokongeza okanye ngokulandelelanisa amanani. Umntwana angahlula isi-6 abe ngamaqela ezi-2 aze aqale ukudibanisa ukusukela ku-6. **Umzekelo:**  	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.6 **lindlela zokusombulula iingxaki zokubala**	Sebenzisa ezi ndlela xa usombulula iingxaki zezibalo uze ucacise izisombululo ezo.: • Imizobo okanye izinto zokubala eziphathekayo. umz. izinto zokubala • Ukwakha nokucalucalula amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo. • umgca manani	Sebenzisa ezi ndlela xa usombulula iingxaki zezibalo uze ucacise izisombululo zazo.: • Imizobo okanye izinto zokubala eziphathekayo. umz. izinto zokubala • Ukwakha nokucalucalula amanani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo. • umgca manani	U- 12 angahlulwa kabini kuze kurekhodishwe imitsi emi-2 ka-3. **Umzekelo:**  Abafundi mabanikwe amathuba amaninzi okuxela indlela yokufikelela kwinani elithile esebenzisa umgca manani. Umntu angabuza: yiyiphi imitsi enokwenziwa ukuze kufikelelwe kwi -15? Ukuze utsibele ngakumanani abafundi kufuneka bazazi iibhondi ukuya kuma kwi -15 okanye babe nako ukusebenzisa umgca manani ukuze afikelele kwisiphumo.Kubalulekile ukuba abafundi bathethe ngokuba kunjani oku kutsiba. Ukuziqhelanisa nolu hlobo lomsebenzi kulungiselela abafundi ukuba basebenze ngemigca engenanto. Xa usebenza ngomgca manani, abanye abafundi kungafuneka babambe umtya owenziwe ngamaso ngaphezulu okanye ngezantsi komgca manani ukubancedisa ukubala. Bavumele abafundi ukuba bazikhethele eyona ndlela ibalungeleyo. Kunjalo, ukuba abafundi basebenzisa iindlela ezingeloncedo kufuneka bancediswe ukusebenzisa iindlela ezibancedisayo. Abafundi baziqhelisa ukusebenzisa ezi ndlela. Akukho mfuneko yokuba bade babe ngamachule okusebenzisa le ndlela. Qaphela ukuba basebenzisa iindlela ezahlukeneyo zokusombulula iingxaki zezibalo asenokungazilindeli utitshala. Umzekelo, Ingxaki yokwahlula ingasonjululwa ngoku thabatha okuphindiweyo, ukudibanisa, okanye ukuphinda-phinda. Iindlela ezisetyenziswa ngabafundi ziza kutshintsha apha enyakeni njengoko ukuqonda kwabo nokuqhela kwabo iindidi zeengxaki kukhula kwaye naxa ingqiqo yabo yamanani isiya ikhula ngokukhula.	

<table>
<tr><th>ISIHLOKO</th><th>IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA</th><th>IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1</th><th>AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA</th><th>IXESHA
(Isifundo seyure e-1 nemizuzuz engama-24)</th></tr>
<tr><td>1.7
Ukudibanisa okuthabatha.</td><td>Sombulula iingxaki ezisebenzisa amagama kumxholo owunikiweyo uze unike inkcaza malunga neempendulo okanye isiphumo kwiingxaki ezinesisombululo esifuna ukudibanisa nokuthabatha okuneempendulo eziphela ngama-99..</td><td>Sombulula iingxaki ezisebenzisa amagama kumxholo owunikiweyo uze unike inkcaza malunga neempendulo okanye isiphumo kwiingxaki ezinesisombululo esifuna ukudibanisa nokuthabatha okuneempendulo eziphela ngama-20.</td><td>Lahluke ngantoni eli Banga kweloku- 1
Kule kota abafundi baqheliswa ukwenza iingxaki zezibalo ezibandakanya izivakalisi baze bakhulise ukuzithemba ngokusebenzisa ezi ndlela zilandelayo zokusombulula iingxaki:
• Imizobo okanye izinto eziphathekayo zokubala.
• Ukwakha nokwahlula amanani
• Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo
• Umgca manani
Kule kota, nika abafundi inkxaso eninzi kumalinge abo okurekhodisha nokubonisa ukubala kwabo. Abafundi mababhale izivakalisi zamanani njengobungqina bokuba bakwazile ukuza nesisombululo kwiingxaki abazinikwayo. Kubalulekile ukuqaphela ukuba ngabaphi abafundi abasokolayo ukubhala izivakalisi zamanani nokuqaphela iingxaki ezithile.
<table>
<tr><th colspan="3">bo lwengxaki yoku- 1: Tshintsha</th></tr>
<tr><th></th><th>Dibanisa</th><th>Hlukanisa</th></tr>
<tr><td>Isiphumo esingaziwayo</td><td>UZamile uneelekese ezi-6 ULungile umongeza ngezi-9 Zingaphi ngoku iilekese zika Zamile zizonke?</td><td>Kukho iilekese ezili-15. UZamile utya ezi- 6. Zingaphi ezisalele uLungile?</td></tr>
<tr><td>Utshintsho olungaziwayo</td><td>UZamile uneelekese ezi-6. Ufuna zibe ngaphi ukuze zibeli-15? Uhlo</td><td>UZamile une- 15 leelekese. ULungile utya ezinye. Kusele zili-9. ULungile utye zangaphi lilonke?</td></tr>
<tr><td>Isiqalo esingaziwayo</td><td>UZamile uneelekese. ULungile umnika ezili-9 ukongeza. Ngoku une- 15. Bezingaphi iilekese zika Zamile ekuqaleni?</td><td>UZamile utya ezinye iilekese. Unike uLungile ezi-6. Ngoku usalelwe ziilekese ezi-8. Uqale enezingaphi?</td></tr>
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<table>
<tr><th>ISIHLOKO</th><th>IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA</th><th>IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1</th><th>AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA</th><th>IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)</th></tr>
<tr><td>1.7
Ukudibanisa okuthabatha.</td><td>Sombulula iingxaki ezisebenzisa amagama kumxholo owunikiweyo uze unike inkcaza malunga neempendulo okanye isiphumo kwiingxaki ezinesisombululo esifuna ukudibanisa nokuthabatha okuneempendulo eziphela ngama-99..</td><td>Sombulula iingxaki ezisebenzisa amagama kumxholo owunikiweyo uze unike inkcaza malunga neempendulo okanye isiphumo kwiingxaki ezinesisombululo esifuna ukudibanisa nokuthabatha okuneempendulo eziphela ngama-20.</td><td>
<table>
<tr><th colspan="3">Uhlobo lwengaxaki yesi-2: Thelekisa</th></tr>
<tr><th></th><th>Dibanisa</th><th>Hlukanisa</th></tr>
<tr><td>Isiphumo esingaziwayo</td><td>UZamile uneelekese ezi- 6.</td><td>ULungile uneelekese ezi- 15.</td></tr>
<tr><td>Utshintsho olungaziwayo</td><td>ULungile uneelekese ezili- 9. ULungile umogqitha ngeelekese ezingaphi uZamile?</td><td>ULungile unesi -6 seelekese. Iilekese zakhe zimbalwa kunezikaZamile nge-9. Uneelekese ezingaphi uLungile?</td></tr>
<tr><td>Isiqalo esingaziwayo</td><td>ULungile une- 15 leelekese. Ilekese zakhe zingaphezulu kwezikaZamile nge- 9. Zingaphi iilekese zikaZamile?</td><td>ULungile une- 16 leelekese. EzikaZamile zingaphantsi kwezikaLungile ngezi- 9. Zingaphi iilekese anazo uLungile?</td></tr>
</table>
<table>
<tr><th colspan="3">Uhlobo lwesi- 3 lwengxaki: Linganisa</th></tr>
<tr><th></th><th>Dibanisa</th><th>Hlukanisa</th></tr>
<tr><td>Isiphumo esingaziwayo</td><td>ULungile une-15 leelekese. UZamile –une- 6. Zingaphi ezinokongezwa ku Zamile ukuze ezakhe zibe ngange zika Lungile?</td><td>ULungile une- 16 leelekese. UZamile une- 6 seelekese. ULungile atye zibe ngaphi ukuze ezakhe zilingane nezikaZamile?</td></tr>
<tr><td>Utshintsho olungaziwayo</td><td>UZamile une-6 seelekese. Ukuba uthenga ezi - 9 iilekese uza kuba nezingangezika Lungile. Zingaphi ke ezika Lungile?</td><td>UZamile une-6 seelekese. Ukuba uLungile utya i- 9 leelekese zakhe zakuba ngangezika Zamile. Zingaphi iilekese anazo u Zamile?</td></tr>
<tr><td>Isiqalo esingaziwayo</td><td>ULungile une-15 leekese. Ukuba uZamile uthenga ezili-9 ngaphezu koku, uya kuba neelekese ezingangezikaLungile. Zingaphi ke iilekese anazo uZamile?</td><td>ULungile une-16 leelekese. Ukuba utya i- 9 leelekese uza kuba nenani leelekese elilingana nezika-Zamile. Zingaphi iilekese zikaZamile?</td></tr>
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ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.8 **Ukudibanisa okuphinda phindiweyo okukhokelela kuphinda phindo**	Sombulula iingxaki zezibalo zamazwi kwimeko ethile aze acacise izisombululo zakhe ezibandakanya ukudibanisa okuphindiweyo okanye uphinda-phindo oluneempendulo ukuya kuma-50.	Sombulula iingxaki zezibalo zamazwi kwimeko ethile aze acacise izisombululo zakhe ezibandakanya ukudibanisa okuphindiweyo okukhokelela kuphinda-phindo oluneempendulo ukuya kuma-20.	Uphinda-phindo Olona lwazi lusisiseko ekuqondeni uphindaphindo kukukwazi ukwahlula ngokwamaqela. Ukwenza amaqela kungamnceda umfundi ukubonisa iimeko zokuphinda phinda. Zintathu iintlobo zeengxaki zokubala ezibandakanya ukuphinda-phinda amanani azeleyo: • Amaqela alinganayo (umz. iitafile ezntathu, inye ibe nabafundi abane): ezibonakaliswa njengeesethi eziphindiweyo. • Ukuthelekisa uphindaphindo (umz. amakhwenkwe aphindwaphindwe kathathu kunamantombazana): eboniswa ngokuba ezinye zibe ninzi kolo hambelwano lwamanani lwenziweyo. • Ucwangciso /ulungelelaniso olubuxande (umz. imiqolo emithathu yabafundi abane): eboniswa ngemiqolo neekholam Inye kwezi meko ingayanyaniswa neendlela ezithile zokubuza imibuzo (Thatha umzekelo kwiindlela zokusombulula iingxaki zezibalo ezikwiBanga le-2 kwisahluko sesi- 2). Iingxaki zokubala zophinda-phindo zibandakanya la manani mathathu kulwalamano lwemathematiki: • Inani lezinto kwisethi nganye • Inani leesethi • Inanl lilonke **Imizekelo yeengxaki zezibalo ezinokwenziwa kule kota** Kulindeleke ukuba xa abafundi besenza lo msebenzi basebenzise imizobo nemifanekiso yezinto eziphathekayo ukuncedisa ukubala. Ukuba abafundi bazoba imifanekiso ebancedisa ekubaleni imizobo ma yibonise ukwahlula ngokwamaqela. Abafundi mabasoloko bekhuthazwa ukubhala izivakalisi zamanani zazo zonke iingxaki zezibalo. Lindela ukuba abafundi basebenzise ukudibanisa okuphindiweyo besebenzisa izivakalisi zamanani ukubonisa izisombululo zabo.	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.8 **Ukudibanisa okuphinda phindiweyo okukhokelela kuphinda phindo**	Sombulula iingxaki zezibalo zamazwi kwimeko ethile aze acacise izisombululo zakhe ezibandakanya ukudibanisa okuphindiweyo okanye uphinda-phindo oluneempendulo ukuya kuma-50.	Sombulula iingxaki zezibalo zamazwi kwimeko ethile aze acacise izisombululo zakhe ezibandakanya ukudibanisa okuphindiweyo okukhokelela kuphinda-phindo oluneempendulo ukuya kuma-20.	**Imizekelo yeengxaki zezibalo enokusetyenziswa**: **Ukudibanisa okuphindiweyo** • Mangaphi amavili ezinawo iibhayisikili ezi- 4? • Mangaphi amehlo abafundi abasi-7 ewonke? Abafundi bangayisombulula le ngxaki ngale ndlela; • Imifanekiso mayibonakalise ukwenza iqela.  Abafundi mabakhuthazwe ukubala ngezibini ukuze bafumane impendulo. Mabakhuthazwe ukubonisa uubala besebenzisa isivakalisi samanani.  **2 + 2 + 2 + 2 + 2 + 2 + 2 = 14** **Uhlelo** UThami usela iikomityi ez- 3 zobisi mihla le. Ugqibela esele zangaphi ngeveki? **Iigridi okanye ulungelelaniso -manani** Utata uKhumalo utyala imiqolo emi- 3 yekhaphetshu. Kukho izityalo ezi-5 kumqolo ngamnye. Mangaphi amagaqa amakhaphetshu ewonke? • Igadi yemifuno inemiqolo emi-5 yezityalo. Umqolo ngamnye unenani elilinganayo lezityalo. Ukuba izityalo zizonke zili- 15, zingaphi ke izityalo kumqolo ngamnye? • Igadi yemifuno inemiqolo eli-18 yezityalo . Umqolo ngamnye unezityalo ezi- 6. Mingaphi ke imiqolo ekhoyo iyonke?	

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1.9 **Ukohlula ngokwamaqela nokwaba ngokulinga nayo kukhokelela ekwahluleni**	Sombulula ucacise izisombululo kwiingxaki zezibalo enzenziwayo ezibandakanya ukwaba ngokulinganayo nangokohlula ngokwamaqela ukuya kuma -99 neempendulo eziquka nentsalela	Sombulula ucacise izisombululo kwiingxaki zezibalo enzenziwayo ezibandakanya ukwaba ngokulinganayo nangokohlula ngokwamaqela ukuya kuma -20 neempendulo eziquka nentsalela	Njengakuphinda-phindo, ukwahlula okusisiseko kweli Banga, kukwaba ngokulinganayo nokwahlula ngokwamaqela ngokulinganayo. • Ukwahlula ngokwamaqela (umz.Abafundi abalishumi elinesibini kwiitheyibhile zezine, zingaphi iitafile ezifunekayo) • Ukwaba ngokulinganayo (umz. Abafundi abalishumi elinambini kwiitafile ezine, bangaphi kwitafile nganye.) Abanye abafundi bafika esikolweni bekwazi ukubonisa iingxaki zokwahlula hlula ezi zezi: ukwahlula ngokwamaqela kunye nokwaba ngokulinganayo, besebenzisa izixhobo eziphathekayo. Iingxaki zezibalo zophinda-phindo nokwahlula hlula ezibandakanya la manani mathathathu alandelayo kulwalamano lwemathematika: • Inani lezinto kwisethi nganye • Inani leesethi • Inani lilonke **Imizekelo yeengxaki zezibalo emazenziwe kule kota** **Ukwaba ngokulinganayo** • Ndineepensile ezi-12 endizakunabela zona ngokulinganayo nobathathu, umntu emnye uzakufumana zibe ngaphi? • Kukho i-18 leemoto zokudlala,ningazahlula ngokulinganayo phakathi kwenu nobabini? • Kukho i-16 lee plamzi nabafundi abasi-8 amabahlulelane ngazo ngokulinganayo. Zingaphi iiplamzi umntwana ngamnye aza kuzifumana? • UNaomi uneentyatyambo ezingama-20.Uzifake kwiivazi ezimbini.Zingaphi iintyatyambo kwivazi nganye? • UTom ubhaka iikeyiki ezi-8.Unama -40 ezimatisi.Zingaphi izimatisi emazibekwe phezu kwekeyiki nganye?	

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1.9 Ukohlula ngokwamaqela nokwaba ngokulinga nayo kukhokelela ekwahluleni	Sombulula ucacise izisombululo kwiingxaki zezibalo enzenziwayo ezibandakanya ukwaba ngokulinganayo nangokohlula ngokwamaqela ukuya kuma -99 neempendulo eziquka nentsalela	Sombulula ucacise izisombululo kwiingxaki zezibalo enzenziwayo ezibandakanya ukwaba ngokulinganayo nangokohlula ngokwamaqela ukuya kuma -20 neempendulo eziquka nentsalela	**Ukwahlula ngokwamaqela** • Zingaphi iimoto onokuzenza ukuba unamavili asi-8?.Zingaphi izikuta? • Kukho ii-apile ezili-18 ebhokisini.Zingaphi iingxowa zezi-3 ezinokuzaliswa? • Umbhaki ubhaka iibhanisi ezi-30.Ufaka iibhanisi ezi-6 kwibhokisi nganye.Zingaphi iibhokisi anokuzizalisa? • Kukho abafundi abali -16 apha namhlanje.Mangaphi amaqela e -4 esingawenza? **Ucwangciso manani** UMongezi upakishe ama -20 izinto zokubala kwimiqolo e-10.Zingaphi izinto zokubala kumqolo ngamnye?	

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1.11 **Imali**	• Ukunakana nokuchonga imali ezinkozo yaseMzantsi Afrika 5c,10 c,20c,50c R1, R5 nengamaphepha R10, R20, R50 • Ukusombulula iingxaki zokubala imali ezibandakanya imali epheleleyo netshintshi kuma- R99 nakwimali ezinkozo ukuya kuma-90 c	• Ukunakana nokuchonga imali ezinkozo yaseMzantsi Afrika 5c,10 c,20c,50c R1, R5 nengamaphepha R10, R20, R50 • Ukusombulula iingxaki zokubala imali ezibandakanya imali epheleleyo netshintshi ku- 50c nakwimali ezinkozo ukuya kuma-R20	**Yintoni eyahlukileyo kwiBanga lo- 1?** Kule Kota abafundi baziqhelanisa nokunakana imali nokuyahlula. **Imizekelo emayenziwe kule kota** • Ungawaba ama-50c ngokulinganayo kubantwana abane?Chaza njani. • Iilekese zixabisa i-10c inye.UBusi uchithe ama -50c. Zingaphi iilekese azithengileyo zizonke? • UThenji uhlawule ii- R5 etekisini ukuya esikolweni kusasa.Uhlawule ngama- R20. Yimalini itshintshi yakhe? Yimalini imali eshiyekileyo xa ebuyela ekhaya ngetekisi ? • Itshokolethu ixabisa ii- R2,50.UPalisa ufuna ukuthenga zibe-4 itshokolethi Unee-R8 .Ingaba unemali eyaneleyo?Ukuba ayanelanga,yimalini ayidingayo ngaphezulu?	

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1.12 Ubuchule (lindlela)	Sebenzisa ubuchule xa ubala • Ukuzoba okanye izixhobo ezibambekayo umz.izinto zokubala • Ukwakha nokwahlula amanani • Ukuphinda phinda kabini nokwahlula amanani kabini ngokulinganayo • Umgca-manani	Sebenzisa ubuchule xa ubala • Ukuzoba okanye izixhobo ezibambekayo umz.izinto zokubala • Ukwakha nokwahlula amanani • Ukuphinda phinda kabini nokwahlula amanani kabini ngokulinganayo • Umgca-manani	**Yintoni eyahlukileyo kwiBanga loku – 1?** Abafundi balindeleke ukuba basombulule izibalo ezingalawulwa meko besebenzisa obu buchule bulandeleyo: • Ukuzoba okanye izixhobo ezibambekayo • Ukwakha okanye ukohlula amanani Ukuphinda phinda kabini nokwahlula amanani kabini ngokulinganayo Umgca-manani **Ukuzoba okanye izixhobo ezibambekayo** Abafundi bayaqhubekeka ngokuzoba imifanekiso besebenzisa izixhobo ezibambekayo ukusombulula iingxaka.Kubalulekile ukuba imifanekiso okanye imizobo ibe namanani kunye nezivakalisi zamanani. **Ukwakha nokwahlula amanani** Le yenye yeendlela ezibalulekileyo kwisiGaba esisiSiSeko. (Abafundi bazakusebenzisa rhoqo ukwahlukanisa amanani kwisiGaba esiPhakathi)Ukusebenzisa le ndlela kunika abafundi ithuba lohlukanisa baze badibanise kwakhona amanani ukubanceda ekubaleni lula. Kule kota abafundi baya: • Ukwahlula amanani besebenzisa ixabiso lenani; • Ukwahlula amanani besebenzisa uphinda-phindo lwezi-10 • Ukwahlula amanani ngezibini umz.izibini ezenza ama -20 **Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo amanani** Abafundi bayaqhubekeka ukusebenzisa ukuphinda phinda kabini nokwahlula ngokulinganayo amanani njengobuchule bokubala. **Imigca-manani** Jongo kumanqaku ukufumana eminye imizekelo yokusebenzisa imigca-manani kwicandela lokusombulula iingxaki zezibalo. • Ukudibanisa nokuthabatha	

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1.12 Ubuchule (lindlela)	Sebenzisa ubuchule xa ubala • Ukuzoba okanye izixhobo ezibambekayo umz.izinto zokubala • Ukwakha nokwahlula amanani • Ukuphinda phinda kabini nokwahlula amanani kabini ngokulinganayo • Umgca-manani	Sebenzisa ubuchule xa ubala • Ukuzoba okanye izixhobo ezibambekayo umz.izinto zokubala • Ukwakha nokwahlula amanani • Ukuphinda phinda kabini nokwahlula amanani kabini ngokulinganayo • Umgca-manani	Abafundi mabakhe eyabo imigca-manani nokohlula amanani kube lula ukusebenza ngawo. **Umzekelo:** 8 + 12 Umgca –manani kufuneka uqale kwi-8 ukuze abafundi bakwazi ukuyila: • Imitsi emi-2 yo- 6 • Imitsi emi-4 yo- 3 • Imitsi emi-3yo- 4 • Umtsi omnye we-10 nomtsi wo-2 • Ukuphinda-phinda Imigca-manani mayiqhubeke ukusetyenziswa ukuxhasa ukudibanisa okuphindiweyo Imitsi elinganayo mayirekhodishwe kumgca manani nezivakalisi ezixhasayo zingarekhodishwa.Umzekelo: 5 + 5 + 5 + 5 + 5 = 25 Ukungcileza amaxesha ama-5 ka -5 ukwenza ama-25 Amaqela ama-5 ezi- 5 = 25 5 x 5 = 25 Kuphinda-phindo olunikiweyo, abafundi kufuneka bakwazi ukuchaza imitsi ingenziwa njani kumgca-manani. Bavumele abafundi bakhethe indlela ebalungeleyo.Ukuba abafundi abasebenzisi ndlela engafanelekanga kufuneka bakhokelew ekusebenziseni iindela ezifanelekileyo. Qaphela ukuba abafundi basenakho ukuzisombululela iingxaki ngendlela utitshala angayilindelanga, umzekelo: ingxaki yokwahlulwa ingasonjululwa ngokuthabatha okuphindiweyo, ukudibanisa okanye uphinda phindo. Iimethodi/iindlela zabafundi ziza kutshintsha apha ekuhambeni konyaka njengokuba ukuqonda kwabo nokuziqhelanisa neendidi zeengxaki kukhula kunye nengqiqo zabo zamanani zikhula.	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-99 • Thabatha ukusuka kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kwi-10	• Dibanisa ukuya kuma-20 • Thabatha ukusuka ku-20 • Sebenzisa iisimboli ezifanekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	**Yintoni eyahlukileyo kwiBanga loku-1?** Kule kota kugqaliswe kakhulu ekuphuhliseni iindlela zokubala. Ukwahlula amanani ukuze ubale buba bubuchule obubalulekileyo abafundi abaza kuziqhelanisa nabo. **Kule kota kuza kugqaliswe koku:** Ukusetyenziswa kwemisebenzi yokwakha nokwahlula amanani eza kuphuhlisa ukuqonda ukudibanisa nokuthabatha. Abafundi baziqhelanisa nokudibanisa nokuthabatha ukuya kuma -20.Iphakathi kolu luhlu lwamanani apho abafundi baqala ukufunda kwixabiso lendawo kwizishumi nemivo. Kuhlala kubalulekile ukubala ngamaqela kwaye bayaqala ukuqonda ukuba ukubala ngokongeza ngoo-1 yindlela engelo ncedo. Kuphakathi kolu luhlu lwamanani pho abafundi kufuneka becinge nzulu ngeendlela abaza kuzisebenzisa.Ukukhetha iindlela efanekileyo yokubala iza kunceda ukuba abafundi bakwazi ukubala. Ukuze ukwazi ukubala uluhlu lwamagama ukuqala kwi -0 ukuya kuma-20 amava abafundi mawabandakanye oku: • Izinto zokubala; • Ukunakana,bafunde baze babhale amanani ; • Ukuthelekisa nokulandelelanisa amanani; • Ukwakha nokwahlula amanani, • Ukuziqhelanisa nokudibanisa nokuthabatha ukuya kuma-20; • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo; • Ukucengceleza amanye amanqaku amanani. **Ubuchule bokubala bokudibanisa nobokuthabatha** Ubuchule obungezantsi buvumela ukuba bacwangcise ulwazi lokubala nolwamanani. Ukwenza obu buchule bungezantsi bukhuthaza abafundi bathethe ngo lwalamano phakathi kwamanani kwaye kufundise abafundi ukuba bangasebenzisa ulwazi lwabo ukubala. **Beka inani elikhulu kuqala ukuze ukwazi ukubala ngokongeza okanye ukubala ubuya umva.** 4 + 12 = ☐	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-99 • Thabatha ukusuka kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kwi-10	• Dibanisa ukuya kuma-20 • Thabatha ukusuka ku-20 • Sebenzisa iisimboli ezifanekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	Ukucwangcisa ngokutsha 4 + 12 njengo 12 + 2 ubale ngokongeza ukusuka ku- 12. **Chonga ukuphinda phinda kabini okusondeleyo** 8 + 7 Abafundi bachaza isibalo ukuba singabhalwa ngolu hlobu- 8 + 8 -1 (phinda-kabini- u-8 uthabathe u- 1) okanye 7 + 7 + 1(phinda-kabini 7dibanisa u- 1). Abafundi bangarekhodisha besebenzisa iintolo ngolu hlobo: 8 + 8 16, 16 - 1 = 15 **Guqula inani ulise kwishumi uthabathe okanye udibanise isinye** Le ndlela ingafundiswa ngamanani akuludwe oluphantsi luze lusetyenziswe kuludwe lwamanani aphezulu. 9 + 6 = ☐ Abafundi bangathi: “Ndiza kuthatha ibenye kwezi-6 ze ndidibanise u-9 ukwenza u-10. Ngoko ke u- 9 + 6 angabhalwa ngolu hlobo - 10 + 5 = 15. 8 + 5 = ☐ Abafundi bangathi: “Ndiza kuthatha zibe mbini kwezi-5 ze ndidibanise u-8 ukwenza u-10. Ngoko ke u-8 + 5 angabhalwa ngolu hlobo - 10 + 3 = 13 **Ukwahlula amanani abe mancinci ukuze babale ngokulula** Abafundi bahlula inani libe ngamalungu asebenziseka lula. Ukubala ngokongeza ngokwahlula inani elinye 11 + 7 = ☐ 11 + 4 + 3 11 + 4 15 + 3 = 18 11 + 7 = ☐ 11 + 5 + 2 11 + 5 16 + 2 = 18	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-99 • Thabatha ukusuka kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kwi-10	• Dibanisa ukuya kuma-20 • Thabatha ukusuka ku-20 • Sebenzisa iisimboli ezifanekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kwi- 10	17 – 9 = ☐ 17 - (7 + 2) 17 – 7 10 - 2 = 8 12 + 7 = ☐ 10 + 2 + 7 7 + 2 9 + 10 = 19 **Ukusebenzisa ulwazi lolwalamano phakathi kokudibanisa nokuthabatha-enye ingumguqulelwa wenye** 15 – 9 = ☐ Umfundi uyayazi ukuba izibalo zinokuphindwa zibhalwe kwakhona njengezibalo zokudibanisa “Ndiyayazi ukuba u-9 + ☐ = 15.” Umfundi angasebenzisa ukubala ngokongeza ukuze abale. **Iibhondi zamanani** Ukuze baziqhelanise neebhondi zamanani, abafundi mabanikwe iintlobo ngeentlobo zemisebenzi. Oku kunokweziwa ngexesha lokuba abafundi bezisebenzela bebodwa. Umgca-manani nawo ungasetyenziswa ukwenza iibhondi zama-10.	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.14 **Ukudibanisa okuphinda phindiweyo okukhokelela kuphinda-phindo**	• Dibanisa inani elinye ngokuphindiweyo ukuya kuma-50 • Phinda-phinda la manani u-1 uyokutsho kwi- 10 ngo - 1, 2, 5, 3 no 4 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐)	• Dibanisa inani elinye ngokuphindiweyo ukuya kuma-20 • Phinda-phinda la manani u-1 uyokutsho kwi- 10 ngo - 2 • Sebenzisa iisimboli ngokufanekileyo (+, -, =, ☐)	**Yintoni eyahlukileyo kwiBanga loku- 1 ?** Abafundi baya kwenza utshintsho ukusuka kudibaniso oluphindiweyo ukuya kuphinda phindo.Bayakuthi bayiqonde ingqiqo yophinda phindo. Bayakuthi benze imisebenzi ebonisa ulwalamano phakathi kwamanani:. • Inani lezinto kwiseti • Inani leeseti okanye amaqela • Inani lilonke Abafundi bafika kwiaBanga lesi -2 bekuqonda ukudibanisa okuphindiweyo. Ekupheleni kwekota kufuneka bazi oku: • Zalanisa ubalo ngokuqakatha nokudibanisa ngokuphindiweyo ukuqonda ukuphinda-phinda; • sebenzisa,funda nokubhala iimpawu zophinda-phindo; • bhala izivakalisi zamanani zophinda-phindo ; • phinda-phinda amanani ukusuka ku-1 ukuya kwi -10 ngesi- 2. Xa besombulula izibalo zamazwi kungalindeleka ukuba abafundi banokusebenzisa ukudibanisa okuphindiweyo ngaphandle kwezo zibalo zamazwi ezinemfanekiso ecangciswe ngendlela ethile.Kukwimeko ezingalawulwa nto apho imifanekiso yophinda phindo inokusetyenziswa. **Ucwangciso** Njengoko abafundi befumana amava ngeendidizezibalo zamazwi zophinda-phindo, ukulungisa amaqela ngendlela ecwangcisweyo kunganika isakhiwo sokubonisa uguquko lophinda-phindo umzekelo 2 x 4 uyafana no 4 x 2.  4+ 4 = 8  2 + 2 + 2 + 2 = 8	

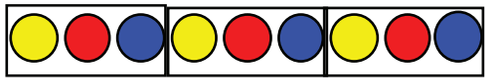
ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.14 **Ukudibanisa okuphinda phindiweyo okukhokelela kuphinda-phindo**	• Dibanisa inani elinye ngokuphindiweyo ukuya kuma-50 • Phinda-phinda la manani u-1 uyokutsho kwi- 10 ngo - 1, 2, 5, 3 no 4 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐)	• Dibanisa inani elinye ngokuphindiweyo ukuya kuma-20 • Phinda-phinda la manani u-1 uyokutsho kwi- 10 ngo - 2 • Sebenzisa iisimboli ngokufanekileyo (+, -, =, ☐)	Ucwangciso luvumela: • Ukwakha nokwahlula amanani; • Ukunxulumanisa uphinda-phindo nokudibanisa okuphindaphindiweyo ; • Ukucinga ngophinda-phindo njengocwangciso oluthile; no • Ukubeka isiseko somthetho wokuguqula. Tsalela ingqwalasela yabafundi kwinani lemiqolo nenani lezinto zokubala ezikulo mqolo ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ 4+ 4 = 8 Kukho imiqolo emi-4 yezi-2,ekunika isi-8 xa iyonke. Abafundi nabo mabarekhodishe ngolu hlobo lulandelayo: ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ 2 + 2 + 2 + 2 = 8 Kukho imigca emi- 2 yezi-4. ikunika isi-8 xa iyonke Eli gama “phinda-phinda “lingalifundiswa ngokuthi: 4 uphinda-phinda ngo- 2 zenza - 8. Bakuthi xa abafundi benamava ngokwaneleyo, uphawu lophinda phindo lungafundiswa kunye nolu lwimi lulandelayo oluphuhlisiweyo. • Amaqela ama-4 ezi--2 • Izi -4 ezibini • 2 + 2 + 2 + 2 = 8 • Amaqela ama-4 ezibini/ isi- 4 usiphinda-phinda ngesi -2 zenza isi -8 Nangona olu phawu lufundisiwe, amazwi, imifanekiso emininzi yokuxhasa ukuqonda olu phawu luyakuhlala lubalulekile.	

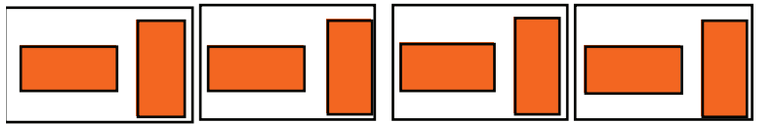
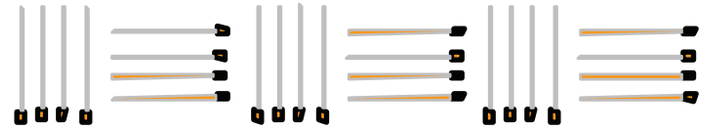
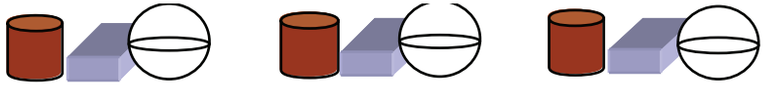
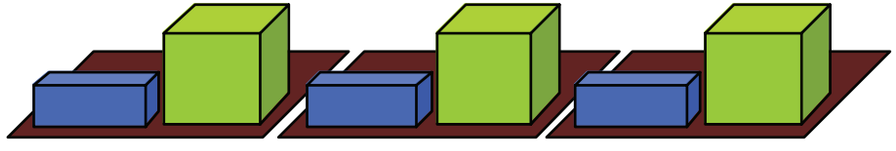
ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.14 **Ukudibanisa okuphinda phindiweyo okukhokelela kuphinda-phindo**	• Dibanisa inani elinye ngokuphindiweyo ukuya kuma-50 • Phinda-phinda la manani u-1 uyokutsho kwi- 10 ngo - 1, 2, 5, 3 no 4 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐)	• Dibanisa inani elinye ngokuphindiweyo ukuya kuma-20 • Phinda-phinda la manani u-1 uyokutsho kwi- 10 ngo - 2 • Sebenzisa iisimboli ngokufanekileyo (+, -, =, ☐)	Imifanekiso yokuqonda uphinda-phindo: • Iityhubhu ze-unifix zingasetyenziswa kwaye unokupakisha ikholamu ezi -4 kwaye kwikholamu nganye kungakho iityhubhu ezi-2. Le nto ivumela umfundi ukuba athi kukho iingqokelela ezine zeetyhubhu kwaye zimbini kwingqokelela nganye . Ibanika ithuba lokurekhodisha: 2+2+2+2 kwaye amaqela a-4 ezi- 2 ngu 4x2. • Umgca-manani unokusetyenziswa ukudibanisa okuphindiweyo okanye amaqela amanani. Oku kunxulumene kakhulu ngokubala ngokuqakatha. Abafundi banakho ukurekhodisha oku kulandelayo: Iqela eli- 1 lezi- 2 ngu -2 okanye u- 1 phinda-phinda ngo-2 ngu -2 okanye 1 x 2 = 2 Amaqela ama-2 ezi-2 angu - 4 okanye 2 phinda-phinda ngo -2 ngu-4 okanye 2 x 2 =4 Amaqela ama-3 ezi-2 angu - 6 okanye 3 phinda-phinda ngo -2 ngu-6 okanye 3 x 2 =6	

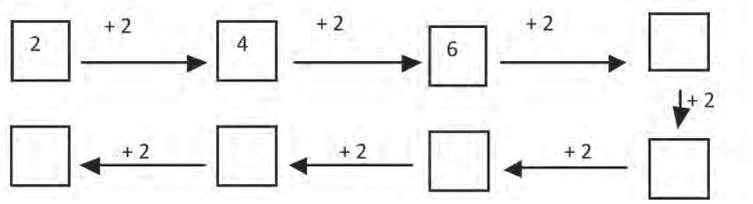
ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.16 **Izibalo zentloko**	**Ingqiqo yamanani: Uluhlu - 99** • Landelelanisa iseti yamanani achongiweyo. • Thelekisa ude uye kuma -99 uxele inani elingaphezulu nelingaphantsi • Yazi okokuba leliphi inani elingaphezulu ngo -1 okanye elingaphantsii ngo-1 • Yazi okokuba leliphi inani elingaphezulu ngesi -2 okanye elingaphantsi ngesi -2 • Yazi okokuba leliphi inani elingaphezulu ngesi -3 okanye elingaphantsi ngesi -3 • Yazi okokuba leliphi inani elingaphezulu ngo -4 okanye elngaphantsi ngo--4 • Yazi okokuba leliphi inani elingaphezulu ngo -5 okanye elingaphantsi ngo -5 • Yazi ukuba leliphi inani elingaphezulu okanye elingaphantsi nge -10.	**Ingqiqo yamanani:Uluhlu -25** • Landelelanisa iseti yamanani achongiweyo • Thelekisa ude uye kuma -99 uxele inani elingaphezulu nelingaphantsi • Yazi okokuba leliphi inani elingaphezulu ngo -1 okanye elingaphantsi ngo-1 • Yazi okokuba leliphi inani elingaphezulu ngo -2 okanye elingaphantsi ngo-2 • Yazi okokuba leliphi inani elingaphezulu kwe -10 okanye elingaphantsi kwe -10 **Ukukhumbula ngokukhawuleza:** • Khumbula amanqaku okudibanisa nokuthabatha ukuya kwi 10	**Yintoni eyahlukileyo kwiBanga loku- 1 ?** **Kule kota makugqaliswe koku:** Inkqubo yezibalo zentloko mayakhiwe ngendlela emisiweyo apha enyakeni .Abafundi mabangabali imihla yonke.Njengokuba abafundi besenza izihloko ezithile kwaye bephuhla kwiindlela zokubala kwizifundo, amanqaku ezi zinto angafakwa kwinkqubo yezibalo zentloko:iingqiqo nezakhono ziphuhliswa kwisifundo kwaye baziqhelanise ngamanye amaxesha ngoluhlu lwamanani amancinci,kwinkqubo yezibalo zentloko Kule kota uluhlu lwamanani lungagcinwa lusezantsi kwiBanga loku-1 kwaye longezwe ekuhambeni konyaka. Ekuqaleni konyaka,uluhlu lwamanani neendlela zokubala zingasekelwa kwezo zifundo zikhuliswe kwiBanga loku-1. **Ingqiqo yamanani:** **Imizekelo yemibuzo enokubuzwa::** **Amagama amanani neesimboli** Phakamisa ikhadi okanye ubhale igama lenani. Chonga umfundi ukuba makabhale inani elihambela nalo. **Ngaphezulu okanye ngaphantsi** Leliphi inani eli • ngaphantsi kwe -15 ngo-1 • ngaphezu kwe -9 ngo-1 • ngaphezu kwe -15 nge -10 • ngaphantsi kwe -16 nge -10 Ngubanani unobumbha wesihlanu kwi-alfabheti? Yeyiphi inyanga yesithoba enyakeni? **Ukulandelelanisa nokuthelekisa** Leliphi elikhulu: i -12 okanye ama -21? Ndinike inani eliphakathi kwe -17 ne -19.	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.16 **Izibalo zentloko**	**Khumbula ngokukhawuleza:** • Ukudibanisa nokuthabatha amanqaku ku-20 • Dibanisa okanye thabatha iziphinda-phindo ukusuka kwi-0 ukuya ku-100 **Iindlela zokubala** Sebenzisa iindlela zokubala ukudibanisa nokuthabatha ngokufanelekileyo: • Beka inani elikhulu kuqala ukuze ubale ngokongeza okanye ubale ubuya umva • Umgca-manani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo • Ukwakha nokwahlula amanani • Ukusebenzisa ulwalamano phakathi kokudibanisa nokuthabatha.	**Iindlela zokubala ngentloko** Sebenzisa iindlela zokubala ukudibanisa nokuthabatha: • Beka inani elikhulu kuqala ukuze ubale ngokongeza okanye ubale ubuye umva • Umgca-manani wentloko • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo • Ukwakha nokwahlula amanani • Ukusebenzisa ulwalamano phakathi kokudibanisa nokuthabatha.	**Amanqaku okudibanisa nokuthabatha** • Zazi ngentloko zonke iibhondi zamanani zokudibanisa nokuthabatha ukuya kwi-10 □ + △ = 10 □ + △ = 8 Amanqaku okudibanisa nokuthabatha amanani ukuya nokuquka i- 10 1 + 9 = 10 9 + 1 = 10 2 + 8 = 10 8 + 2 = 10 3 + 7 = 10 7 + 3 = 10 8 – 4 = 4 8 – 4 = 4 8 – 5 = 3 8 – 3 = 5 Ukukhumbula ngokukhawuleza ukuphinda phinda kabini kokudibanisa ukuya kwi- 10. Oku makuquke amanqaku angqinelanayo okuthabatha. • 1 + 1 = 2 • 2 + 2 = 4 • 3 + 3 = 6 • 4 + 4 = 8 • 5 + 5 = 10 Bonisa inani ukudibanisa ku ..... ukwenza i-10 Bhala phantsi usebenzisa ixabiso lendawo okanye oonotsheluza. • 8 • 2 • 9 • 5 • 3	

ISIHLOKO	IINGQINGO I NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Isifundo seyure e-1 nemizuzuz engama-24)
1.16 **Izibalo zentloko**			Bonisa inani elishiyekileyo xa …. lithatyathwe ku-10(Bhala phantsi usebenzisa ixabiso lendawo okanye iflad khadi) • 5 • 3 • 6 • 1 • 7 Ezinye izibalo zentloko zingenziwa ngaphandle kwezixhobo kodwa kuluncedo ukuba kwenziwe izibalo zentloko kusetyenziswa izixhobo nokurekhodisha umsebenzi owenziweyo.. **Izixhobo ezicetyiswayo** • Umgca –manani (owakhiweyo nongabhalwanga) • Igridi yamanani • Amakhadi exabiso lendawo (iifladis khadi) • Amaso okubala	

IBANGA LESI- 2 IKOTA YOKU-1 2. IIPATENI, II-FANKSHINI NE-ALJIBRA				
IZIHLOKO	**IINGQIQO NEZAKHONO** **IMFUNO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO** **UGXININISO KWIKOTA YOKU- 1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA ELABIWEYO**
2.1 **Iipateni zejiyometri**	**Ukukopa, ukwandisa nokuchaza.** Ukukopa, ukwandisa nokuchaza amagama. • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwa ngemizobo yemigca, iimilo okanye izinto. **Ukuyila nokuchaza iipateni zakho.** Ukuyila iipateni zakho zejiyometri. • Ngezinto eziphathekayo. • Ngokuzoba imigca, iimilo okanye izinto. • Iipateni ezisirhangqileyo Ukukhetha, ukuchaza ngamagama nokukopa iipateni zejiyometri. • kwindalo • kubomi bemihla ngemihla • kwimveli yethu yenkcubeko.	**Ukukopa, ukwandisa nokuchaza.** Ukukopa, ukwandisa nokuchaza amagama. • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwa ngemizobo yemigca, iimilo okanye izinto. **Ukudala nokuchaza iipateni zakho.** Ukudala iipateni zakho zejiyometri. • Ngezinto eziphathekayo. • Ngokuzoba imigca, iimilo okanye izinto.	Ukukopa ipateni kuncedisa abafundi ukubona ingqiqo eyiyo ngendlela ipateni eyenziwe ngayo. Ukwandisa ipateni kuncedisa abafundi ukubona ukuba bayiqondile ngenene ingqiqo engepateni. Ukuchaza ipateni kuncedisa abafundi ukuphuhlisa izakhono zolwimi nokuthetha. Incedisa ukubonisa indlela abafundi abatolika ngayo ipateni. Kudla ngokuba lula kubafundi ukuthetha ngepateni emva kokuba beyenzile. Abafundi kufuneka baqhelaniswe nokukhangela kunye nokuchaza ipateni. Ungababonisa oku ngokubabuza imibuzo efana nale. “Ziziphi iimilo ozibonayo kule pateni?” “ “Ingaba zonke zingumbala omnye?” “Uyazibona ezinye iimilo kwipateni?” “Ingaba izinto zonke zijonge kwicala elinye?” “Ingaba kukho inani elifanayo lezinto kwiqela ngalinye?” “Zingaphi izinto ezikwiqela ngalinye?” “Ingaba zonke iimilo ziyafana ngobungakanani?” njalo njalo. Bandakanya iimilo zejiyometri ezinokwakheka kuka -2-D nezinto zejiyometri ezinokwakheka kuka -3-D abafunde ngazo abafundi. Abafundi banokwenza iimilo ezinokwakheka kuka -2-D ngokusika iphepha okanye ikhadi, okanye banokuzizoba. Banokwenza iipateni kwiimilo zebhokisi, zebhola neesilinda abazenzileyo ngomdongwe. Iipateni zinokwenziwa ngokusebenzisa into enye enemibala yezinto etshintsha rhoqo. **Umzekelo:**  Iipateni zinokwenziwa kumaqela afanayo aphindaphindiweyo, apho iqela ngalinye linodidi olunye lwezinto kodwa indawo ezimi kuyo izinto eqeleni itshintsha. Amaqela afanayo ayaphindaphindwa.	Isifundo soku-1

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA YOKU- 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA ELABIWEYO
2.1 **Iipateni zejiyometri**	**Ukukopa, ukwandisa nokuchaza.** Ukukopa, ukwandisa nokuchaza amagama. • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwa ngemizobo yemigca, iimilo okanye izinto. **Ukuyila nokuchaza iipateni zakho.** Ukuyila iipateni zakho zejiyometri. • Ngezinto eziphathekayo. • Ngokuzoba imigca, iimilo okanye izinto. • Iipateni ezisirhangqileyo Ukukhetha, ukuchaza ngamagama nokukopa iipateni zejiyometri. • kwindalo • kubomi bemihla ngemihla • kwimveli yethu yenkcubeko.	**Ukukopa, ukwandisa nokuchaza.** Ukukopa, ukwandisa nokuchaza amagama. • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwa ngemizobo yemigca, iimilo okanye izinto. **Ukudala nokuchaza iipateni zakho.** Ukudala iipateni zakho zejiyometri. • Ngezinto eziphathekayo. • Ngokuzoba imigca, iimilo okanye izinto.	**Umzekelo:**   Kwezinye iipateni izinto ezahlukeneyo ziyasetyenziswa ukwenza iqela, kodwa amaqela ezinto ayaphindaphindwa kanye ngendlela efanayo twatse. **Umzekelo:**  Iipateni zinokwenziwa apho ubungakanani bezinto butshintshanayo kanye ngendlela efanayo.  Abafundi banokwenza iipateni ngokuhlohla amaso. Ipateni inokwenziwa kwisifundo seZakhono zokuFunda.	Isifundo soku-1

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA YOKU- 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA ELABIWEYO
2.2 **Iipateni zamanani**	**Ukukopa, ukwandisa nokuchaza.** Ukukopa, ukwandisa nokuchaza ulandelelwano lwamanani olulula ukuya kutsho kuma-200. **Ukudala nokuchaza iipateni zakho.** Ukudala iipateni zakho zamanani.	**Ukukopa, ukwandisa nokuchaza.** Ukukopa, ukwandisa nokuchaza ulandelelwano lwamanani olulula ukuya kutsho kwi-100. Ulandelelwano kufanele lubonise ukubala usiya phambili nokubala ubuya umva: • Izi-1 ukusuka kulo naliphi inani eliphakathi kwesi-1 ne-100. • Ama-10 ukusuka kuso nasiphi na isiphindaphindwa sika-10 phakathi ko-1 ne-100. • Izi-5 ukusuka kuso nasiphi na isiphindaphindwa sesi-5 phakathi ko-1 ne-100. • Izi-2 ukusuka kuso nasiphi na isiphindaphindwa sesi-2 phakathi ko-1 ne-100.	Ulandelelwano lwamanani lunokunxulunyaniswa luxhase ukubala. Xa izakhono zokubala zabafundi ziguquka kwaye ziphuhlile, iindidi zolandelelwaniso lwamanani abafundi abasebenza ngazo zingaphuhlisa. Ulandelelwano kufanele lubonise ukubala uye phambili nokubala ubuya umva: • Izi-1 ukusuka kulo naliphi inani eliphakathi kwesi-1 ne-100. • Ama-10 ukusuka kuso nasiphi na isiphindaphindwa sika-10 phakathi ko-1 ne-100. • Izi-5 ukusuka kuso nasiphi na isiphindaphindwa sesi-5 phakathi ko-1 ne-100. • Izi-2 ukusuka kuso nasiphi na isiphindaphindwa sesi-2 phakathi ko-1 ne-100. KwiBanga lesi- 2 abafundi babala baye emva ngeziphindaphindwa ze-10, 5 nesi-2 okokuqala. Abafundi banokukhomba amanani xa bebala. Kuluncedo ukunika abafundi ulandelelwano lwamanani ngokweendlela ezahlukeneyo, umzekelo, • Ulandelelwano lwamanani abhaliweyo 100; 99; 98; 97; 96..... • Imigca-manani. • Igridi yamanani. • Amatyathanga amanani. Abafundi banokogquma, bafake umbala, okanye barhangqe amanani xa bebala kwimigca-manani nakwiigridi zamanani. Abafundi banokuzalisa amanani ashiyelelweyo kwimigca-manani, kwiigridi zamanani kulandelelwano lwamanani olubhaliweyo namatyathanga amanani, umzekelo,  Ekupheleni kwekota abafundi babala ulandelelwano ukusuka nokuya kwi-100.	Izifundo ezi-3

IBANGA LESI- 2 IKOTA YOKU-1 3. ISITHUBA NEMILO				
IZIHLOKO	**IINGQIQO NEZAKHONO:** **IMFUNO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO:** **UGXININISO KWIKOTA YOKU-1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA ELABIWEYO** (kwizifundo zeyure e-1 nemizuzu engama-24)
3.2 **Izinto ezinokwakheka kuka -3-D**	**Uluhlu lwezinto** Ukuqaphela nokuxela izinto ezinokwakheka kuka -3-D eklasini nakwimifanekiso. • iimilo zebhola (ngqukuva) • iimilo zebhokisi (iprizimu). • iisilinda. **Iimpawu zezinto.** Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka -3-D ngolu hlobo: • ubungakanani • izinto eziqengqelekayo. • izinto ezitshebelezayo. **Imisebenzi ekugqaliswe kuyo.** Ukuqaphela nokwakha izinto ezinikiweyo ezinokwakheka kuka -3-D usebenzisa iimathiriyeli ezibambekayo ezisikiweyo ezineemilo ezinokwakheka kuka -2-D, iibhloko zokwakha, imathiriyeli yokurisayiklisha, iikiti zokwakha, nezinye izinto zejiyometri ezinokwakheka kuka -3-D.	**Uluhlu lwezinto** Ukuqaphela nokuxela izinto ezinokwakheka kuka -3-D eklasini nakwimifanekiso. • iimilo zebhola (izifiye) • iimilo zebhokisi (iprizimu). **Iimpawu zezinto.** • Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka -3-D ngolu hlobo: • ubungakanani • izinto eziqengqelekayo. izinto ezitshebelezayo. **Imisebenzi ekugqaliswe kuyo.** Ukuqaphela nokwakha izinto ezinikiweyo ezinokwakheka kuka -3-D usebenzisa iimathiriyeli ezibambekayo ezisikiweyo ezineemilo ezinokwakheka kuka -2-D, iibhloko zokwakha, izinto ezinokuphinda zisetyenziswe kwakhona, iikiti zokwakha, nezinye izinto zejiyometri ezinokwakheka kuka -3-D.	**Yintoni eyahlukileyo kwikota yoku-1?** Iisilinda zintsha kwiBanga lesi- 2 kodwa ziza kufundiswa kwikota yesi-3. Kwikota 1, abafundi banokuhlaziya baze babethelele oko bakwenze kwiBanga loku- 1. Abafundi banokugxininisa kwiisilinda kwikota yesi-3. Umsebenzi omninzi ongezinto ezinokwakheka kuka -3-D kwiBanga lesi- 2 kufanele wenziwe ngezinto ezibambekayo / ezibonakalayo. Ilizwe silibona ngeendlela ezintathu, ukuqala kwizinto ezibonakalayo kuncedisa abafundi basebenzise amava abeza nawo esikolweni. Abafundi abaninzi abakhulayo bayasokola ukutolika izinto zejiyometri ezinokwakheka kuka -3-D kwimifanekiso. Ukusebenza ngezinto ezibonakalayo kuncedisa abafundi ukutolika imifanekiso yezinto zejiyometri. Xa uphethe into ebambekayo ungayijika uze uyikhangele kumacala onke. Ungayibona ukuba ikhangeleka njani ngasemva nangaphantsi. Xa unomfanekiso kuphela, kufuneka ube nomfanekiso-ngqondweni wezinto ezingabonakaliyo kuloo mzobo. Akukho lula oku kubafundi abasakhulayo. Xa abafundi benikwe ingcaciso kuphela ngezinto bengayiboni okanye bengayibambanga, kuba nzima kakhulu ukuqonda iimpawu zezinto ngokugqibeleleyo. **Ukwakha izinto ezinokwakheka kuka -3-D** Abafundi bakopa imodeli ngento ekhutshwe nguwe njengetitshala, umzekelo, ithawa, irobhothi, itreyini, iteksi, ibhotwe, njalo njalo. Iimodeli okanye ulwakhiwo lunokwenziwa ngokusebenzisa iibhloko zokwakha, izinto ezinokuphinda zisetyenziswe, iikiti zokwakha, nezinye izinto zejiyometri ezinokwakheka kuka -3-D, iimilo ezinokwakheka kuka -2-D ezisikiweyo. Oku kungenziwa ngexesha labo lokuzisebenzela. Kubalulekile ukuba abafundi bathethe malunga neemodeli abazenzileyo. Umzekelo, xa ithawa yakhiwe ngeebhokisi okanye iibhloko, unokubabuza, “Ningakwazi ukwakha ithawa ngeebhola kuphela?” Kufanele bayicacise impendulo yabo. **Ukuthelekisa nokuchaza izinto ezinokwakheka kuka -3-D: ubungakanani** Abafundi bathelekisa ubungakanani bezinto ezifanayo, umzekelo, Cwangcisa iibhola ngokobungakani; kunye nokusebenzisa ulwimi lobungakanani ukuthelekisa izinto: “Ibhokisi inkulu kunebhola, kuba ndingayifaka ibhola ngaphakathi kwibhokisi.”	Izifundo ezi-3

IZIHLOKO	IINGQIQO NEZAKHONO: IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO: UGXININISO KWIKOTA YOKU-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA ELABIWEYO (kwizifundo zeyure e-1 nemizuzu engama-24)
3.2 **Izinto ezinokwakheka kuka -3-D**	**Uluhlu lwezinto** Ukuqaphela nokuxela izinto ezinokwakheka kuka -3-D eklasini nakwimifanekiso. • iimilo zebhola (ngqukuva) • iimilo zebhokisi (iprizimu). • iisilinda. **Iimpawu zezinto.** Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka -3-D ngolu hlobo: • ubungakanani • izinto eziqengqelekayo. • izinto ezitshebelezayo. **Imisebenzi ekugqaliswe kuyo.** Ukuqaphela nokwakha izinto ezinikiweyo ezinokwakheka kuka -3-D usebenzisa iimathiriyeli ezibambekayo ezisikiweyo ezineemilo ezinokwakheka kuka -2-D, iibhloko zokwakha, imathiriyeli yokurisayiklisha, iikiti zokwakha, nezinye izinto zejiyometri ezinokwakheka kuka -3-D.	**Uluhlu lwezinto** Ukuqaphela nokuxela izinto ezinokwakheka kuka -3-D eklasini nakwimifanekiso. • iimilo zebhola (izifiye) • iimilo zebhokisi (iprizimu). **Iimpawu zezinto.** • Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka -3-D ngolu hlobo: • ubungakanani • izinto eziqengqelekayo. izinto ezitshebelezayo. **Imisebenzi ekugqaliswe kuyo.** Ukuqaphela nokwakha izinto ezinikiweyo ezinokwakheka kuka -3-D usebenzisa iimathiriyeli ezibambekayo ezisikiweyo ezineemilo ezinokwakheka kuka -2-D, iibhloko zokwakha, izinto ezinokuphinda zisetyenziswe kwakhona, iikiti zokwakha, nezinye izinto zejiyometri ezinokwakheka kuka -3-D.	**Ukuchaza izinto ezinokwakheka kuka -3-D: umbala** Abafundi bathetha malunga nemibala yezinto baze bahlele izinto ngokwemibala. Ukuchonga nokuxela izinto nemibala nokuthelekisa ubungakanani bezinto, kunokwenziwa ngexesha kufundiswa ngeepateni.  **Izinto ezinokwakheka kuka -3-D kwiBanga le- 2** Abafundi basebenzisa: Iibhola nezinto ezimile okweebhola; kunye Neebhokisi ezininzi nezinye izinto ezifana neeprizm ezibuxande okanye iityhubhu. Abafundi baphanda ukuba ziziphi na izinto ezikwaziyo ukuqengqeleka, izeziphi ezitshebelezayo. **Ugqaliso kwiimpawu zezinto ezinokwakheka kuka -3-D** Abafundi banokwenza umtshebelezo ngokubeka ibhokisi phantsi kwencwadi enkulu. Banokulinga ukuba ngaba izinto ziyatshebeleza okanye ziyaqengqeleka. Oku yinkqubela yoko bekusenziwa kwiBanga loku- 1, kodwa ngoku iisilinda ziza kufundiswa. Abafundi banokuphanda ukuba bayakwazi ukwenza ingqokelela okanye iithawa besebenzisa iibhola kuphela, okanye iibhokisi kuphela. **Ukuqaphela nokuxela iibhola (izinto ezingqukuva) neebhokisi (iiprizimu)** Abafundi kufanele banikwe uluhlu lwezinto abaza kusebenza ngazo: • Iimilo ezingqukumba, umzekelo, iibhola okanye ubungakanani obahlukileyo, amabhastile, ii-orenji, njalo njalo; kunye • Iimilo eziyiprizimu, ezifana neebhloko, izitena, iibhokizi ezinobungakanani obahlukileyo, umzekelo, ibhokisi yematshisi, iibhokisi zesiriyeli, iibhokisi zeti, iibhokisi zentlama yokuhlamba amazinyo.	Izifundo ezi-3

IZIHLOKO	IINGQIQO NEZAKHONO: IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO: UGXININISO KWIKOTA YOKU-1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA ELABIWEYO (kwizifundo zeyure e-1 nemizuzu engama-24)
3.2 **Izinto ezinokwakheka kuka -3-D**	**Uluhlu lwezinto** Ukuqaphela nokuxela izinto ezinokwakheka kuka -3-D eklasini nakwimifanekiso. • iimilo zebhola (ngqukuva) • iimilo zebhokisi (iprizimu). • iisilinda. **Iimpawu zezinto.** Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka -3-D ngolu hlobo: • ubungakanani • izinto eziqengqelekayo. • izinto ezitshebelezayo. **Imisebenzi ekugqaliswe kuyo.** Ukuqaphela nokwakha izinto ezinikiweyo ezinokwakheka kuka -3-D usebenzisa iimathiriyeli ezibambekayo ezisikiweyo ezineemilo ezinokwakheka kuka -2-D, iibhloko zokwakha, imathiriyeli yokurisayiklisha, iikiti zokwakha, nezinye izinto zejiyometri ezinokwakheka kuka -3-D.	**Uluhlu lwezinto** Ukuqaphela nokuxela izinto ezinokwakheka kuka -3-D eklasini nakwimifanekiso. • iimilo zebhola (izifiye) • iimilo zebhokisi (iprizimu). **Iimpawu zezinto.** • Ukuchaza, ukuhlela nokuthelekisa iimilo ezinokwakheka kuka -3-D ngolu hlobo: • ubungakanani • izinto eziqengqelekayo. izinto ezitshebelezayo. **Imisebenzi ekugqaliswe kuyo.** Ukuqaphela nokwakha izinto ezinikiweyo ezinokwakheka kuka -3-D usebenzisa iimathiriyeli ezibambekayo ezisikiweyo ezineemilo ezinokwakheka kuka -2-D, iibhloko zokwakha, izinto ezinokuphinda zisetyenziswe kwakhona, iikiti zokwakha, nezinye izinto zejiyometri ezinokwakheka kuka -3-D.	Abafundi banokukhangela izinto ezimile okwebhola (isifiye), okanye ezimile okwebhokisi (iiprizm) xa benikwa ingqokelela yezinto. Abafundi banokukhangela okanye babonise izinto ezimile okweebhokisi (iprizm) eklasini, umzekelo, esi sitena simile okwebhokisi okanye le orenji imile okwebhola. Ngexesha labo abafundi banokuqhubeka: • Nokuhlela izinto ngokobungakanani; • Nokuhlela izinto ngokwemibala;; • Nokwakha izinto; kunye • Nokwenza iimilo zeebhola neezebhokisi (iprizimu) ngodongwe okanye intlama yokudlala. **Imisebenzi ebhalwayo** Nangona umsebenzi omninzi ongezinto ezinokwakheka kuka -3-D usenziwa ngezandla, umsebenzi kufuneka ubethelelwe ngemisebenzi ebhalwayo. **Ulwimi** Kubalulekile ukuphuhlisa ukukwazi kwabafundi ukuthetha ngezinto ezinokwakheka kuka -3-D. • Ulwimi lobungakanani: Inkulu, inkudlwana, inkulu kakhulu, incinane, incinanana, incinane kakhulu. • Imibala • Ulwimi olungezinto: Iibhokisi, iibhola (Abafundi akulindelekanga ukuba bazi ngegama elithi ngqukumba). • Ulwimi olungendawo -bumilo ukuchaza ukwakhiwa, umzekelo, ngaphezulu, ngaphantsi,, ngasemva, ngaphambili, kufutshane, ecaleni, ngaphantsi, ngaphezulu, ufutshane, phakathi, ngaphakathi, ngaphandle Ulwimi olungobungakanani nemibala lunokuphuhliswa kwizifundo zoLwimi okanye ngeZakhono zoBomi, ize isetyenziswe kwixesha lesifundo seMathematika. Ulwimi olungendawo-bumilo lunokuphuhliswa kwisifundo soLwimi okanye isifundo ngeZakhono zoBomi naxa abafundi begqalise kwindawo-bumilo. Inokwenziwa xa abafundi besebenza ngezinto ezinokwakheka kuka -3-D.	Izifundo ezi-3

IBANGA LESI- 2 IKOTA YOKU-1 4. UMLINGANISELO				
IZIHLOKO	**IINGQIQO NEZAKHONO** **IMFUNO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO** **UGXININISO KWIKOTA YOKU- 1**	**AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA ELABIWEYO** (kwizifundo zeyure eli-1 nemizuzu engama-24)
4.1 **Ixesha**	**Ukuxela ixesha.** • Zazi iintsuku zeveki. • Zazi iinyanga zonyaka. • Ukubeka iintsuku zokuzalwa, iminyhadala yezenkolo, iiholide zoluntu, iziganeko zezembali, iziganeko zezikolo zekhalenda. • Ukuxela ixesha eliziiyure ezili-12, iziqingatha zeeyure nemikhono yeyure. **Ukubala ubude bexesha nokuhamba kwexesha.** • Ukusebenzisa iikhalenda ukubala nokuchaza ubude bexesha ngokweentsuku okanye ngokweeveki. • Ukusebenzisa iiwotshi ukubala ubude bexesha ngokweeyure, ngokweziqingatha zeeyure okanye ngokweekota zeyure.	**Ukuxela ixesha.** • Zazi iintsuku zeveki. • Zazi iinyanga zonyaka • Ukubeka iintsuku zokuzalwa, iminyhadala yezenkolo, iiholide zoluntu, iziganeko zezembali, iziganeko zezikolo zekhalenda. • Ukuxela ixesha eliziiyure ezili-12 kwiiwotshi zosiba.	KwiBanga loku- 1 abafundi bathethe • Ulandelelwano lweziganeko; kunye • Ubude bexesha. Bafunde ngeentsuku zeveki neenyanga zonyaka baze bakusebenzisa oku kwakunye nolunye ulwimi ukuthetha ngokulandelelanisa iziganeko ebomini babo. Bathetha ngexesha lokwenzeka kwezinto, besebenzisa ulwimi olunjengolu, ndana okanye futshane kunye nokukhawuleza okanye ukucotha. Abafundi bacwangcisa ulandelelwaniso lwemifanekiso: • Amanyathelo okwenza iqebengwana okanye ikomityi yeti; • Iifoto ezibonisa usana olukhulayo lude lube ngumntu omdala; • Umjikelo wobomi wezilwanyana, umzekelo, ukusuka kwiqanda libe lintshontsho, okanye ukusukela kwiqanda lesele libe lisele okanye ukusukela kwiqanda lebhabhathane libe libhabhathane elikhulileyo; kunye • Iziganeko ezenzeka rhoqo ngosuku (ukuvuka kusasa, ukuya esikolweni, ukudlala, ukutya isidlo, ukulala). Babeka iintsuku zabo zokuzalwa kwikhalenda unyaka wonke. kwiBanga lesi-2 abafundi baqhubeka nokuziqhelanisa nokuthetha malunga nobude bexesha nokulandelelaniswa kwexesha. Ngexesha lokufundiswa kweklasi yonke nokugxininiswa kwixesha leqela, abafundi baqhubeka nokuthetha malunga nosuku lweveki, inyanga yonyaka nomhla wosuku kunye neentsuku zangaphambili nezizayo. Abafundi baziqhelanisa neekhalenda ngokuqhubeka ukubeka • iintsuku zokuzalwa; • iminyhadala yezenkolo; • iziganeko zezembali; • iziganeko zezikolo; kunye • Neeholide zikawonke-wonke; kwikhalenda	Izifundo ezi-2

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA YOKU- 1	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA ELABIWEYO (kwizifundo zeyure eli-1 nemizuzu engama-24)
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IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA YOKU- 1	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA ELABIWEYO (kwizifundo zeyure eli-1 nemizuzu engama-24)
4.2 **Ubude**	**Umlinganiselo ongekho seSikweni.** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhodisha ubude usebenzisa imilinganiselo engekho seSikweni, umzekelo, izandla, amanyathelo, ubude bepensile, izinto zokubala. • Ukuchaza ubude bezinto ngokubala nokuxela ngendlela iiyunithi ezingekho sesikweni ezinde ngayo. • Ukusebenzisa ulwimi ukuthetha malunga nothelekiso, umzekelo, ubude, ubufutshane. **Ukufundisa ngomlinganiselo oseSikweni** Qikelela, thatha umlinganiselo, landelelanisa urekhodishe ubude, usebenzisa iimitha (ingaziimitha stikhi okanye intambo enobude obuyimitha) ngokweyunithi emiselekileyo yobude.	**Umlinganiselo ongekho seSikweni.** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhodisha ubude usebenzisa imilinganiselo engekho seSikweni, umzekelo, izandla, amanyathelo, ubude bepensile, izinto zokubala . • Ukuchaza ubude bezinto ngokubala nokuxela ngendlela iiyunithi ezingekho sesikweni ezinde ngayo. • Ukusebenzisa ulwimi ukuthetha malunga nothelekiso, umzekelo, ubude, ubufutshane. **Ukufundisa ngomlinganiselo oseSikweni** Qikelela, thatha umlinganiselo, landelelanisa urekhodishe ubude, usebenzisa iimitha (ingaziimitha stikhi okanye intambo enobude obuyimitha) ngokweyunithi emiselekileyo yobude.	**Yintoni eyahlukileyo kwikota yoku-1?** KwiBanga loku-1 abafundi bagxininisa: • Ekubekeni izinto ngokungqalileyo kufutshane nenye ukuthelekisa ubude, umphakamo nobubanzi; kunye • Umlinganiselo ongekho seSikweni oneeyunithi ezingamiselekanga zobude. Kwikota yoku-1 kwiBanga lesi-2 abafundi kufanele baqhubeke nokugxininisa kumlinganiselo ongekho seSikweni besebenzisa iiyunithi ezingamiselekanga, banokufundiswa ngeemitha njengeyunithi yomlinganiselo. **Umlinganiselo ongekho seSikweni wobude osebenzisa iiyunithi ezingamiselekanga zobude.** Abafundi banokufunda ngayo yonke imithetho engomlinganiselo besebenzisa iiyunithi ezingamiselekanga. Ukulinganisa ngeeyunithi ezingamiselekanga kufanele zingathathwa ngokuba zikumgangatho osezantsi xa zithelekiswa nokukuthatha umlinganiselo ngeeyunithi ezimiselekileyo. Ukuthatha umlinganiselo wobude ngeeyunithi ezingamiselekanga ekuquka ukubala ukuba zingaphi kwiyunithi ezikhethiweyo ezinobude obulinganayo njengento ethathwa umlinganiselo. Umzekelo, ubude bedesika bungangezandla ezisi-8 xa kubalwa ngesandla.Abafundi kufanele bathathe umlinganiselo weendidi zezinto besebenzisa uluhlu lwezinto njengeeyunithi ezingekho seSikweni. Zintathu iindlela zokusebenzisa iiyunithi ezingekho seSikweni: Ubude, umgama nomphakamo. • Zibeke zibe ngumqolo zinqamleze izinto ezithathwa umlinganiselo, inani lezinto ezibude bufanayo njengamagobhoza ematshisi, iziciko zeebhotile ezifanayo okanye izinto zokubala, iipensile ezintsha, njalo njalo. Umzekelo, ukulinganisa ububanzi bedesika, iipensile ezintsha zinokubekwa zisingelane zinqamleze edesikeni. Kubalulekile ukuba • Zonke izinto zibe nobude obulinganayo. Awukwazi kuthi incwadi yakho inobubanzi obungangeziciko zeebhotile ezili-12 xa ngaba iziciko zebhotile zinobungakanani obahlukileyo, umzekelo, iziciko zebhotile yobisi eziilitha ezi-2, iziciko zeebhotile yeplastikhi yesiselo, iziciko zebhotile zenkcenkce, njalo njalo. • Akukho zikhewu phakathi kwezinto: Kufanele zipakishwe ukwenzela ukuba zingqubane.	Izifundo ezi-3

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4.3 **Ubunzima**	**Umlinganiselo ongekho seSikweni.** • Ukuqikelela, ukuthatha umlinganiselo, ukuthelekisa, ukulandelelanisa nokurekhodisha ubunzima usebenzisa ukuthatha imilinganiselo engamiselekanga nesikali sokulinganisa, umzekelo, iibhloko, izitena. • Ukusebenzisa ulwimi ukuthetha ngokuthelekisa, umzekelo, ubulula, ubunzima, ubunzinyana, ubululana. **Ukufundisa ngomlinganiselo oseSikweni** • Ukuthelekisa, ukulandelelanisa nokurekhodisha ubunzima bezinto ezithengiswayo ezinobunzima bazo obuchazwe ngeekhilogram, umzekelo, iikhilogram ezi- 2 zerayisi kunye nekhilogram e- 1 yomgubo.		KwiBanga loku-1 kucetyiswe ukuba abafundima bagqalise ekusebenziseni isikali sokulinganisa ngoku: • Thelekisa ubunzima bezinto ngokungqalileyo; • Ukulandelelanisa nokuthelekisa ubunzima bezinto ezintathu okanye ngaphezulu, ngokubeka izinto zezibini kwisikali sokulinganisa, zide zonke izinto zilandelelaniswe; no • Nokufuna ubunzima bezinto besebenzisa iiyunithi ezinekho seSikweni zobunzima. Abafundi bakwagqalisa ukuphuhlisa ulwimi lokuthetha ngobunzima. Ngexesha labo lokuzisebenzela abafundi banokuziqhelanisa uthelekisa, ukuthatha umlinganiselo, ukuthelekisa, ukulandelelanisa nokurekhodisha ubunzima usebenzisa isikalli sokulinganisa neeyunithi zobunzima ezingekho seSikweni. **Ukuthatha umlinganiselo wobunzima njengemeko yokusombulula iingxaki zezibalo nezibalo** Ukusombulula iingxaki zezibala nezibalo kunokuqhubekeka kusetyenziswa umxholo wobunzima obunikiweyo ngokuthatha umlinganiselo ngokungekho seSikweni. Kwixesha elabelwe amaNani, iziBalo noLwalamano abafundi basombulula iingxaki zokubala ezisebenzisa imeko yomlinganiselo ongekho seSikweni wobunzima, umzekelo, idasta inobunzima obuli-11 bamabhastile. Ibhokisi yeekrayoni inobunzima bamabhastile asi-8. xazizonke ziza kuba nobunzima bamabhastile amangaphi? Thathela ingqalelo uluhlu lwamanani afanelekileyo kuloo kota,kwa kunye noluhlu lweendidi zeengxaki zezibalo ezifanelekileyo zekota.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA YOKU- 1	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA ELABIWEYO (kwizifundo zeyure eli-1 nemizuzu engama-24)
4.3 **Ubunzima**	• Ukuthatha umlinganiselo wobunzima bakho ngeekhilogram usebenzisa isikali.			
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho seSikweni.** • Ukuqikelela, ukuthatha umlinganiselo, ukuthelekisa, nokulandelelanisa nokurekhodisha umthamo wezikhongozeli (oko kukuthi umthamo wesikhongozeli xa sizele) ngokuthatha umlinganiselo ngokumiselekileyo, umzekelo amacephe neekomityi. • Ukuchaza umthamo wesikhongozeli ngokubala nokuchaza ukuba zingaphi na iiyunithi ezingekho seSikweni ozithathayo ukugcwalisa isikhongozeli, umzekelo, ibhotile enomthamo weekomityi ezine.		KwiBanga loku- 1 abafundi kufanele bagqalise: • Ukuphuhlisa ulwimi ukuthetha ngomahluko kumthamo • Ukuthelekisa umthamo wezikhongozeli ezibini ezifanayo; • Ukuthelekisa umthamo wezikhongozeli ezibini ezahlukileyo, ingakumbi izikhongozeli ezibanzi nezincnci; kunye • Nokuthatha umlinganiselo umthamo ngezixhobo neeyunithi ezingamiselekanga. **Yintoni umthamo? (Yintoni ivolumu)** Ibhotile inganomthamo weekomityi ezine ezigcweleyo, kodwa ingangagcwaliswa izale kakhulu, umzekelo, inganomthamo wekomityi enye yamanzi ngexesha. Umthamo bubungakanani obunokugalelwa kwinto (okanye ubungakanani besithuba ngaphakathi kwento). **Ivolum** bubungakanani besithuba esithathwa yinto. Ngamanye amaxesha abafundi baza kuthatha umlinganiselo wamanzi (okanye isanti okanye ezinye izinto) kwisikhongozeli. Oku kukuthatha umlinganiselo womthamo kwisikhongozeli. Ngamanye amaxesha abafundi baza kuthatha umlinganiselo wokuba isikhongozeli singagcwaliswa ngomthamo ongakanani xa uzele. Ngexesha labo lokuzufundela abafundi banokuziqhelanisa nokuqikelela, ukuthatha umlinganiselo, ukuthelekisa, ukulamdelelanisa nokurekhodisha umthamo besebenzisa izixhobo ezigamiselekanga neeyunithi ezingekho seSikweni zomthamo. Ukupheka nokubhaka ziimeko eziluncedo apho abafundi banokuziqhelanisa ukuthatha umlinganiselo womthamo. Khetha iiresiphi apho ukuthatha imilinganiselokwenziwa ngeekomityi, iitispuni nezinye iiyunithi ezingekho seSikweni.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA YOKU- 1	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA ELABIWEYO (kwizifundo zeyure eli-1 nemizuzu engama-24)
	Ukufundisa ngomlinganiselo osesikweni • Ukuqikelela, ukuthatha umlinganiselo, ukuthelekisa, ukulandelelanisa nokurekhodisha umthamo wezinto ngokuthatha umlinganiselo ngeelitha. • Ukuthelekisa, ukucwangcisa nokurekhodisha umthamo wezinto ezithengiswayo ezinomthamo ochazwe ngeelitha, umzekelo iilitha ezi-2 zobisi, ilitha e-1 yesiselo, iilitha ezi-5 zepeyinti.		**Ukuthatha umlinganiselo womthamo kwimeko ethile ukusombulula iingxaki zokubala nezibalo** Kwixesha elabelwe amaNani, iziBalo noLwalamano abafundi banokusombulula iingxaki zokubala ezisebenzisa iimeko zokuthatha umlinganiselo womthamo umzekelo, uGogo usebenzisa iikomityi ezi-2 zobisi ukwenza ipudini. Xa ephinda kabini iresiphi, uza kudinga ubisi olungakanani? Thathela ingqalelo uluhlu lwamanani olufanelekileyo lwekota kunye noluhlu lweendidi leengxaki zezibalo.	

IBANGA LESI- 2 IKOTA YOKU-1 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**IINGQIQO NEZAKHONO** **IMFUNO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO** **UGXININISO KWIKOTA 1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo zeyure eli-1 nemizuzu engama-24)
5.4 **Ukuqokelela nokucwangcisa ulwazi oluqoke lelweyo**	**Ukuqokelela nokucwangcisa ulwazi oluqokelelweyo.** • Ukuqokelela ulwazi oluqokelelweyo malunga neklasi okanye isikolo ukuphendula imibuzo ebuzwe ngutitshala.	**Ukuqokelela nokucwangcisa ulwazi oluqokelelweyo.** Ukuqokelela ulwazi oluqokelelweyo malunga neklasi okanye isikolo ukuphendula imibuzo ebuzwe ngutitshala. **Ukumela ulwazi oluqokelelweyo.** Ukumela ulwazi oluqokelelweyo kwigrafu yemifanekiso. **Ukuhlalutya nokutolika ulwazi oluqokelelweyo.** Ukuphendula iimpendulo malunga nolwazi kwigrafu yemifanekiso.	**Yintoni eyahlukileyo kwikota yoku-1?** • Abafundi abasasebenzisi iingqokelela zezinto. • Abafundi basaqhubeka nokusebenzisa iigrafu zemifanekiso – bezenza njengenxalenye yomjikelo wolwazi nokuhlalutya iigrafu zemifanekiso abazinikiweyo. **Umjikelo opheleleyo wokusebenza ngolwazi oluqokelelweyo** Kumjikelo opheleleyo wokusebenza ngolwazi oluqokelelweyo, • abafundi baqokelela ulwazi ukuphendula umbuzo. KwisiGaba esisiSeko nesiPhakathi loo mbuzo unikwa ngutitshala okanye ukwincwadi katitshala; • abafundi bahlela baze banike ulwazi ngeendlela ezenza kube lula ukuhlalutya. Imo yokunika ulwazi abafundi beBanga lesi- 2 baziqhelanisa ngayo yigrafu yemifanekiso; kunye • abafundi bahlalutya ulwazi kwigrafu yemifanekiso ngokuphendula imibuzo enikwa ngutitshala. Igrafu yemifanekiso yaseklasi Kucetyiswa ukuba kwiBanga lesi- 2 abafundi basebenze ngomjikelo wolwazi olupheleleyo ukwenza igrafu yemifanekiso yeklasi ubuncinane kabini ngonyaka (kanye kwikota yoku- 1 nakanye kwikota yesi- 3). Ukusebenza kunye njengeklasi kunceda abafundi bazibandakanye nazo zonke izigaba zenkqubo ngaphandle kokuphazamiseka kuso nasiphi na esinye isigaba, umzekelo, ukuzoba yonke imifanekiso. Ukwenza igrafu yeklasi kuvumela ukuba ugqalisele ingqiqo yabafundi kwimibandela ephambili yokusebenza ngolwazi kunye nokufuneka bakwazi ngeempawu ezibalulekileyo zegrafu yemifanekiso.	Izifundo ezi-3
5.5 **Ukubonisa ulwazi oluqoke lelweyo**	**Ukumela ulwazi oluqokelelweyo.** Ukumela ulwazi oluqokelelweyo kwigrafu yemifanekiso.			
5.6 **Ukuhlalutya nokutolika ulwazi oluqoke lelweyo**	**Ukuhlalutya nokutolika ulwazi oluqokelelweyo.** Ukuphendula iimpendulo malunga nolwazi kwigrafu yemifanekiso.			

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure eli-1 nemizuzu engama-24)
			Iimpawu zegrafu yemifanekiso ekufuneka zifundwe ngabafundi: • Indlela yokuleyibhelisha igrafu (isihloko segrafu) • Indlela yokuyilebhelisha amacandelo • Igrafu yemifanekiso kufanele ibe nesikhokelo esichaza okuthethwa ngumfanekiso ngamnye. • Imifanekiso okanye izithuba zemifanekiso kufuneka zibe nobungakanani obulinganayo. • Indlela yokubeka imifanekiso ngokulinganayo kwimiqolo. • Indlela yokufunda igrafu Abafundi kufuneka bazi ukuba kubalulekile ukufunda isihloko segrafu kuqala, ukwenzela bazi okuqulethwe lulwazi oluqokelelweyo. Kufuneka bafunde ngezihloko zemigcq ehamba embindini(axes) ngokuthe tyaba nangokuthe nkqo ukuya ezantsi. Abafundi akunyanzelekanga ukuba basazi isigama sobuchwepheshe esisetyenzisiwayo ukuchaza izicwili zegrafu, nje kufuneka bafunde “ngezantsi” “nasecaleni” ukuze babone ukuba igrafu ingantoni. Ngokwesiqhelo sifunda ukusuka ekhohlo ukuya ekunene, kodwa xa abafundi befunda iigrafu kufuneka bafunde ukusuka ekhohlo ukuya ekunene nokusuka ezantsi ukuya entla. Oku kufuneka kucaciswe kubafundi. Kukwafuneka baziqhelanise ezi zakhono. **Ukukhetha isihloko nokubuza imibuzo ukuqokelela ulwazi** KwiBanga lesi- 2 kufanele ubuze imibuzo, umzekelo, “Yiyiphi eyona nkqubo yomabona-kude ethandwa yiklasi?” Ootitshala besigaba kufanele baqinisekise ukuba izihloko ezahlukeneyo zikhethwe kwingqokelela yolwazi nohlalutyo kubanga ngalinye. Izihloko ezifanelekileyo ziquka imidlalo ethandwayo, iziselo ezithandwayo, imibala ethandwayo, izinto zokuzonwabisa ezithandwayo, ukutya okuthandwayo, iinkqubo zomabona- kude ezithandwayo, njalo njalo. **Ukubeka amacandelo okuqokelela ulwazi** Nika abafundi uluhlu lwamacandelo banokukhetha kuwo. **Ukubonisa ulwazi oluqokelelweyo** Abafundi banokunikwa amaphepha anobungakanani obulinganayo lokuzoba iimpendulo zabo ngamye.Imizobo iyacwangciswa ngokwemiqolo ukwenza igrafu yemifanekiso. Izihloko ziyongezwa kwimigca ehamba emibindini nakwiigrafu.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure eli-1 nemizuzu engama-24)
			Ukuhlalutya nokutolika ulwazi oluqokelelweyo. Abafundi baphendula imibuzo oyibuzayo ngegrafu yomfanekiso, umzekelo, “Yiyiphi inkqubo yomabona- kude ethandwa kakhulu eklasini yakho?” “Yiyiphi inkqubo ethandwa ngabafundi abambalwa eklasini? “Ingaba abafundi abaninzi bathanda.....okanye.....?” “Bangaphi abanye abafundi abathanda.....kune.....?”	

IBANGA LESI- 2 IKOTA YESI- 2 1. AMANANI, II-OPAREYSHINI NOLWALAMANO.				
IZIHLOKO	**IINGQIQO NEZAKHONO** **IMFUNO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO** **UGXININISO KWIKOTA 2**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)**
1.1 **Ukubala izinto**	**Bala izinto eziphathekayo.** Qikelela uze ubale uye kufika kuma -200 ezinto ezisetyenziswayo imihla ngemihla ngokuzithemba. Indlela yokwakha mgamaqela iyakhuthazwa.	Bala uye kufika kwi -150 lezinto ezisetyenziswayo imihla ngemihla ngokuzithemba. Nika ugqikelelo oluvakalayo lenani lezinto ezinokuqinisekiswa ngokubala.	**Yintoni eyahlukileyo kwikota yoku-1?** Kwikota yesi- 2 uluhlu lwenani lwandile kwaye abafundi ngoku bayakwazi ukubala izinto ezili-150. Ngenxa yokuba ilinani elikhulu lezinto zokuba zibalwa, ugxininiso malube sekubaleni ngamaqela. Esi sakhono sokuba abafundi baziqhelanise ukusukela kwiBanga loku- 1 kwaye oku kuyasetyenziswa kuluhlu lwenani eliphezulu. Kubalulekile ukuba ekupheleni kwekota abafundi babe sele bebone ingqokelela yezinto ezili-150 kwaye banokucebisa eyona ndlela iphucukileyo yokubala oku. Ukubala izinto kule kota kuxhasa: • Izakhono zokubala ezifunekayo zokuqonda indawo ekubekwe kuyo inani; • ukubala ngokucengceleza; • ukubiza amagama amanani; • ukuqaphela kwiisimboli zamanani; kunye ne • zakhono zokubala ezifunekayo zokubala. **Izixhobo:** Makuthathelwe ingqalelo kudidi lwesixhobo esisetyenziswayo. • Izixhobo ezakhiweyo, njenge misonto yamaso okubala. • I-abacus yokuziqhelanisa nokubala ngokwamaqela ezishumi. • Inyanda yezi-2, inyanda yezi-5 neyezishumi ezizakuthi zibalwe. • Iibhloko zeDienes, ingakumbi isiseko seebhloko ezilishumi. • Imali yokudlala.	10

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.2 **Bala uye phambili ubale ubuya umva**	Bala usiya phambili ubale ubuya umva: • Izi-1 ukusuka kulo naliphi inani eliphakathi k wi-0 nama -200. • Ama-10 ukusuka kuso nasiphi isiphindaphindi esiphakathi kwe -0 nama-200. • Izi-5 ukusuka kuso nasiphi na isiphindaphindi sesi-5 phakathi kwe -0 nama -200. • Izi-2 ukusuka kuso nasiphi na isiphindaphindwa sesi-2 phakathi kwe -0 nama -200. • Izi-3 ukusuka kuso nasiphi na isiphindaphindi sesi-3 phakathi kwe -0 nama -200. • Izi-4 ukusuka kuso nasiphi na isiphindaphindi sesi-4 phakathi kwe -0 nama -200.	Bala usiya phambili ubale ubuya umva: • Izi-1 ukusuka kulo naliphi inani eliphakathi kwe -0 ne -150. • Ama-10 ukusuka kuso nasiphi na isiphindaphindi se-10 phakathi kwe -0 ne -150. • Izi-5 ukusuka kuso nasiphi na isiphindaphindi sesi-5 phakathi kwe -0 ne-150. • Izi-2 ukusuka kuso nasiphi na isiphindaphindi sesi-2 phakathi kwe- 1 ukuya kwi -150. • Izi-3 ukusuka kuso nasiphi na isiphindaphindi sesi-3 phakathi kwe -0 nama -99. • Izi-4 ukusuka kuso nasiphi na isiphindaphindi sesi-4 phakathi kwe -0 ne-100.	**Yintoni eyahlukileyo kwikota yoku-1?** Kwikota yesi- 2 uluhlu lwenani lokubala lwandile kwaye abafundi bayaqalisa ukubala ngezithathu nezine okokuqala. Oku kunokufundiswa xa kubalwa izinto ezibonakalayo okokuqala, ukubala kumsonto wamanani amaso, ukusebenzisa igridi yekhulu nomgca-manani. Ekupheleni kwekota abafundi bayakwazi ukuphendula imibuzo eyile: • Qala kwi -132,ngokongeza ngonye ukuya kwi -150. • Qala kwi -120,,ngokubala ubuya umva ngonye ukuya kuma -98. • Qala kuma -60,ngokongeza ngezibini ukuya kwi -100. • Qala kwi -100,ngokongeza ngezibini ukuya kwi -138. • Qala ku -3,ngokongeza ngezithathu ukuya kuma -30. • Qala kuma -60,ngokubala ubuya umva ngezithathu ukuya kuma -42. • Qala ku -4 ubale ngezine kuya kuma -40. • Qala kuma—84 ubale ukubuya umva ngezine ukuya kuma -68. • Qala kuma – 45 ubale ngezihlanu ukuya kwi -100. • Qala kwi -100 ubale ukubuya umva ngezishumi ukuya kwi -10. Abafundi kufanele babale bebuya umva ukusukela nakwesiphi nai isiphindaphindi esinikiweyo.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.3 **Iisimboli zamanani namagama amanani**	**Nakana, chonga uze ufunde amanani.** • Qaphela, gqala uze ufunde iisimboli zamanani ukusuka kwi -0 ukuya kuma -200. • Ukubhala iisimboli zamanani i-0 ukuya kuma – 200. • Qaphela, gqala uze ufunde amagama amanani ukusuka kwi -0 ukuya kwi-100. • Bhala amagama amanani ukusuka kwi -0 ukuya kwi -100.	**Nakana, chonga uze ufunde amanani.** • Qaphela, gqala uze ufunde iisimboli zamanani ukusuka kwi -0 ukuya kwi-150. • Ukubhala iisimboli zamanani i -0 ukuya kwi – 150. • Qaphela, gqala uze ufunde amagama amanani ukusuka kwi -0 ukuya kuma -50. • Bhala amagama amanani ukusuka kwi -0 ukuya kuma -50.	**Yintoni eyahlukileyo kwikota yoku-1?** Abafundi baqhubeka nokufunda nokubhala iisimboli zamanani namagama amanani kuluhlu lwamanani olwandisiweyo. Abafundi baza kuqaphela, bafunde baze babhale iisimboli ezingaphezu kwekhulu elinye nokubhala amagama amanani ukuya kuma -50. Xa kufundiswa ngamanani amivo mithathu kufanele kwenziwe oko ngononophelo, umzekelo, umntu kufanele athi, “amakhulu amathathu anamashumi amabini anesithathu” endaweni yokuthi “isinye, isibini, isithathu.” Xa ubhala amanani amivo mithathu aphakathi kwe-100 ne-110, umvo okwindawo yamashumi li- 0. Abanye Abafundi bafumana ubunzima bokubhala la manani kwiisimboli xa benikwa iisimboli ngamagama. Umzekelo, ukubhala i -102 kunganzima kakhulu kwabanye abafundi. Banokusuka babhale u-1002. Beka amakhadi exabiso aluncedo ekuncediseni abafundi ukuqonda indlela la manani abhalwe ngayo ngokucacileyo. Abafundi kufanele banikwe ithuba elaneleyo lokubaqhelanisa nokubhala la manani. Imizekelo yomsebenzi obhalwayo: • Bhala inani. Ikhulu elinye elinamashumi amathathu ananye. | | Ikhulu elinye elinamashumi amane anesixhenxe. | | • Ukutshatisa amagama amanani kwiisimboli zamanani. • Gqibezela ulandelelwano lwamanani. • Gqibezela imigca-manani nolandelelo lwamanani.	

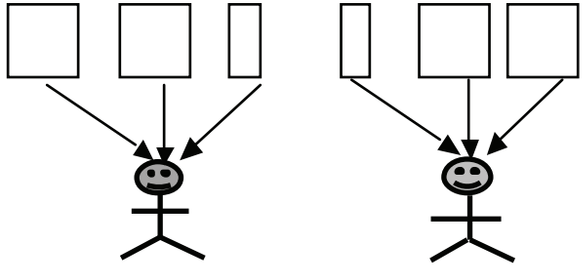
IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.4 **Chaza, thelekisa uze ucwangcise amanani azeleyo**	**Chaza, thelekisa uze ucwangcise amanani ukuya kutsho kuma-99.** • Chaza uze uthelekise amanani azeleyo ukuya kuma-99 ngokobuncinane kunenye, ubukhulu kunenye nokuba ngaphezulu kunenye, ngokuba ngaphantsi kunenye, nokulingana nenye. • Chaza uze uthelekise amanani azeleyo ukuya kuma-99 ukusukela kweyona incinane ukuya kweyona inkulu nokusukela kweyona inkulu ukuya kweyona incinane. **Sebenzisa amanani olandelelwano ukubonisa ucwangciso, indawo okanye ubume.** Beka izinto emgceni ukusukela kweyokuqala ukuya kweyeshumi okanye eyokuqala ukuya kweyokugqibela, umzekelo, eyokuqala, eyesibini, eyesithathu..... kweyamashumi amabini.	**Chaza, thelekisa uze ucwangcise amanani ukuya kutsho kuma-50.** • Chaza uze uthelekise amanani azeleyo usebenzisa ngokobuncinane kunenye, ubukhulu kunenye nokuba ngaphezulu kunenye, ngokuba ngaphantsi kunenye, nokulingana nenye. **Chaza uze uthelekise** amanani azeleyo ukusukela kweyona incinane ukuya kweyona inkulu nokusukela kweyona inkulu ukuya kweyona incinane. **Sebenzisa amanani olandelelwano ukubonisa ucwangciso, indawo okanye ubume.** • Beka izinto emgceni ukusukela kweyokuqala ukuya kweyeshumi okanye eyokuqala ukuya kweyokugqibela, umzekelo, eyokuqala, eyesibini, eyesithathu..... kweyeshumi.	**Yintoni eyahlukileyo kwikota yoku-1?** Ngale kota abafundi baqhubeka nokucwangcisa nokuthelekisa amanani. Umgca-manani uhlala ungowona mfanekiso ubalulekileyo oluncedo kakhulu ekuhloleni apho inani limi khona ngokunxulumene namanye amanani. Umfanekiso womgca-manani uza kuxhasa abafundi kwiindlela zabo zokubala izibalo ngentloko. **Eminye imisebenzi ezimeleyo:** Ukuziqhelanise nokubala isinye ukuya kwishumi. Rekhodisha oku kulandelayo kwiincwadi zokubhala zaseklasini: • Liliphi inani eliza kanye phambi kwama-46? • Liliphi inani eliza emva kwama-48? • Liliphi inani eliphakathi kwama-45 nama-47? • Sebenzisa umgca-manani onikiweyo uze ufakele amanani ashiyelelweyo. Bhala isi-1 esingaphezu kwelinye lamanani: - Isi-1 ngaphezu kwama-23_____ - Isi-1 ngaphezu kwama-29_____ - Isi-1 ngaphezu kwama-42_____ • Bhala isi-1 esingaphantsi kwelinye lamanani: - u-1 ungaphantsi kwama-20_____ - Isi-1 ngaphantsi kwama-31_____ - Isi-1 ngaphantsi kwama-42_____ • Bhala i-10 elingaphezu kwelinye lamanani: - i-10 ungaphezu kwama-20_____ - i-10 ngaphezu kwama-30_____ • Bhala i-10 ngaphantsi kwelinye lamanani: - i-10 ungaphantsi kwama-50_____ - i-10 ungaphantsi kwama-40_____ • Bhala amanani ngokulandelelana ukusukela kwelona likhulu kakhulu ukuya kwelona lincinane kakhulu. (130, 133, 123, 143, 103, 113) • Gqibezela isivakalisi. Gcwalisa ungaphezulu okanye ungaphantsi: - Ama -24 a _____ kwama-24 - Ama -36 a _____ kw e-19	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.5 **Ixabiso lendawo elimi kuyo inani**	**Qalisa ukuqonda ixabiso lendawo lamanani anobuncinane beedjithi ezi-2 ukuya kuma -99.** • Ukuqaphela ukuba umvo ngamnye umele ntoni. • Cazulula amanani amivo mi-2 abe ziziphindaphindwa ze-10 kunye noononye. • Chonga uze uxele ixabiso lendawo lomvo ngamnye.	**Qalisa ukuqonda ixabiso lendawo lamanani anobuncinane beedjithi ezi-2 ukuya kuma -50.** • Ukuqaphela ukuba umvo ngamnye umele ntoni. • Cazulula amanani amivo mi-2 abe ziziphindaphindwa ze-10 kunye noononye. • Chonga uze uxele ixabiso lendawo lomvo ngamnye.	**Yintoni eyahlukileyo kwikota yoku-1?** Ngale kota uluhlu lwamanani lwandisiwe ukusuka kuma-25 ukuya kuma-50. Abafundi ngoku baza kusebenzisa ulwazi lwabo ngengqiqo yexabiso lendawo elimi kuyo inani libe kuluhlu lwamanani eliphezulu. Ngale kota abafundi bayaqhubeka: • Ukubala nokuqumbanisa ukubonisa amashumi nezinye ngeendlela ezahlukeneyo; • Ukubala ngezixhobo esele ziqunjanisiwe / esele zenziwe. • Ukusebenzisa amakhadi exabiso lendawo elimi kuyo inani ukubonisa inani eliqunjanisiweyo nelibalwayo; • Ukubonisa amalungiselelo ohlukeneyo amanani, umzekelo, ama-35 anokuboniswa njengezinye ezizimeleyo zama-35, izi-3 zeshumi nezi-5 zezinye ezizimeleyo kunye namaqela ama-2 amashumi nezinye izinye ezili-15; kunye • Ukuxela ixabiso lomvo ngamnye. Umsebenzi ongasentla wenziwa kumaqela akhethekileyo nangexesha labafundi kuze kurekhodishwe oku kulandelayo: Ama-48 = 4 amaqela amashumi kunye nezinye ezizimeleyo zesi-8. 48 = 40 nesi-8 Oku kuxhaswa ngokusebenzisa oonotsheluza okanye amakhadi exabiso lendawo elimi kuyo inani. **Ixabiso lendawo emi kuyo imivo** Abafundi kufanele baqale ngokuxela ukuba umvo ngamnye umele ntoni. Yalela abafundi: • Ingaba isi-7 simele ntoni kuma-27? • Ingaba isi-4 simele ntoni kuma-49? Abafundi kufanele basebenzise amakhadi exabiso lendawo elimi kuyo inani ukuphuhlisa iinkcazelo zabo.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
SOMBULULA IINGXAKI ZOKUBALA NGOKUSEMXHOLWENI				
1.6 **Iindlela ngeendlela zokusom bulula iingxaki zezibalo**	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo ezo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, izinto zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo ezo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Abafundi kulindeleke ukuba basombulule iingxaki zezibalo besebenzisa ezi ndlela zilandelayo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, izixhobo zokubala. • Ukwakha okanye ukucazulula amanani. • Ukuphinda phinda kabini nokwahlula kabibi ngokulinganayo amanani. • Imigca-manani. **Imizobo okanye izixhobo ezibambekayo** Abafundi baza kuqhubeka nokuzoba imifanekiso nokusebenzisa izixhobo ezibambekayo zokubala izibalo. Ukuzoba ukuya kutsho kuma-30 okanye ama-50 ezinto ngokuzimeleyo iba yinto engalungiyo kwaye akufanelekanga ukuba kukhuthazwe oko. Bakhuthaze abafundi ukuba babandakanye iisimboli zamanani kurekhodisho lwabo, kuquka imifanekiso. Abafundi mabakhuthazwe babhale izivakalisi zamanani. Jonga kumanqaku akwikota yoku-1.	
1.7 **Ukudibanisa nokutha batha.**	Sombulula iingxaki zokubala izibalo ngokwemeko ethile nokucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma -99.	Sombulula iingxaki zokubala izibalo ngokwemeko ethile nokucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma-50.	**Yintoni eyahlukileyo kwikota yoku-1?** Ngale kota abafundi baqhubeka nokuziqhelanisa nokusombulula iingxaki zezibalo zamazwi besebenzisa ezi ndlela zilandelayo ukusombulula iingxaki zezibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani. Ugxininiso kule kota lusekurekhodisheni. Abafundi kufanele babhale phantsi izivakalisi zamanani njengobungqina bokuba bayakwazi ukunika impendulo yezibalo ebhaliweyo. Kubalulekile ukuqwalasela abafundi abasokolayo ukubhala isivakalisi senani xa bejamelene neengxaki zezibalo. Xa ngaba abafundi bekubuza ukuba ubabonise ngokubhalwa kwesivakalisi senani emva kokuba benike impendulo, lixesha elihle lokukubonisa oko. Imizekelo yokusonjululwa kweengxaki zezibalo kunokwenziwa kule kota, jonga kumanqaku ekota yesi-2.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.8 **Ukudibanisa ngokuphinda phindeneyo okukhokelela kuphinda phindo**	Sombulula iingxaki zokubala izibalo ngokwemeko ethile nokucacisa isisombululo sakho kwiingxaki zezibalo usebenzisa ukudibanisa ngokuphindaphindeneyo nophindaphindo oluneempendulo ukuya kuma-50.	Sombulula iingxaki zokubala izibalo ngokusemxholweni nokucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma -30.	**Yintoni eyahlukileyo kwikota yoku-1?** Uluhlu lwamanani ngokwekota lwandile lwaya kufika kuma-30. Abafundi kufanele bakhuthazwe ukuba babhale izivakalisi zamanani zazo zonke iingxaki zamanani ezikhoyo. Omnye unokulindela abafundi basebenzise izivakalisi zamanani ezinophindaphindo lokudibanisa ukubonisa isisombululo. Ngale kota abafundi kufanele babhale izivakalisi zamanani zokuphindaphinda kwiimpendulo zabo. Bafundisiwe ngophawu lokuphindaphinda kwikota yoku- 1 kwaye kufanele basebenzise amava abo ukusombulula iingxaki zezibalo zophindaphindo. Ukudibanisa ngokuphindiweyo kunye negridi / iingxaki zezibalo ezisekelwe kucwangciso oluthile kufanele zibonise isivakalisi senani lophindaphindo. Kuza kubakho abafundi abazithembileyo ngokurekhodisha izisombululo besebenzisa ukudibanisa okuphindaphindiweyo, hayi uphindaphindo. **Imizekelo yokubala izibalo ezinokwenziwa ngekota:** Ukudibanisa okuphindaphindiweyo • Mangaphi amavili eebhayisekile ezisi-8? • Mangaphi amehlo kubantwana abali-9? **Hlela** UThami usela iiglasi ezi-6 zamanzi yonke imihla. Zingaphi iiglasi zamanzi aziselayo ngeveki? **Iigridi** UMnumzana Khumalo utyala imiqolo emi-6 yezithole zekhaphetshu. Kukho izityalo ezi-5 emqolweni. Zingaphi izithole zekhaphetshu xa zizonke?	

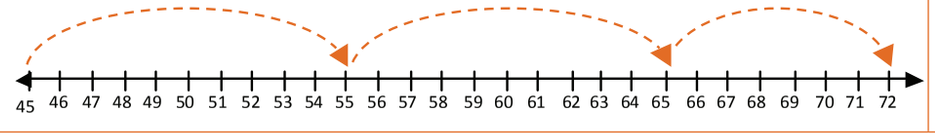
IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.9 **Ukuwahlula ngokwamaqela nokwaba ngokulinganayo okukhokelela kulwahlulwa-hlulo**	Sombulula uze ucacise izisombululo kwiingxaki zezibalo ezenziwayo kuquka ukwaba ngokulinganayo nokohlula ngokwamaqela amanani azeleyo ukuya kutsho kuma-99 kunye neempendulo eziquka iintsalela.	Sombulula uze ucacise izisombululo kwiingxaki zezibalo ezenziwayo kuquka ukwaba ngokulinganayo nokohlula amanani azeleyo ngokwamaqela ukuya kutsho kuma-50 kunye neempendulo eziquka iintsalela.	**Imizekelo yokubala izibalo ezinokwenziwa ngekota:** Ngale kota yalela abafundi basebenzise imizobo nezixhobo eziphathekayo ukubonisa iimpendulo zabo. Izivakalisi zamanani kufanele zisetyenziswe. Umntwana unokusebenzisa uthabatho oluphindaphindiweyo ukubonisa indlela afikelele ngayo kwimpendulo. **Igridi** UMongezi upakisha izinto zokubala ezingama-20 kwimiqolo eli-10. Zingaphi izinto zokubala emqolweni? **Ukohlula ngokwamaqela:** *Ukohlula ngokwamaqela, ukushiya intsalela* UStella uthengisa ii-apile ngokweengxowa zee-apile ezi-6 nganye. Unee-apile ezingama-40. Zingaphi iingxowa zee-apile ezi-6 aza kuzenza nganye? *Ukohlula ngokwamaqela, ukubandakanya intsalela kwimpendulo.* UBandile ufuna ukuthatha amaqanda angama-35 awase kuninakhulu. Zingaphi iibhokisi zamaqanda ezinokuthatha amaqanda ama-6 ekufuneka abe nazo ukupakisha onke amaqanda? **Ukwaba ngokulinganayo** *Ukohlula ngokwamaqela, ukushiya intsalela* • Yabela abahlobo bakho aba -4 iiswiti ezingama-45 ukwenzela ukuba bonke bafumane iiswiti ezilinganayo. • UBantu noLizo benza umsebenzi kunye. UBantu usebenza iiyure ezi-3 yena uLizo asebenze iyure e-1. Bahlawulwa ama-R40. Banokuyaba njani imali leyo bayihlawulweyo?	

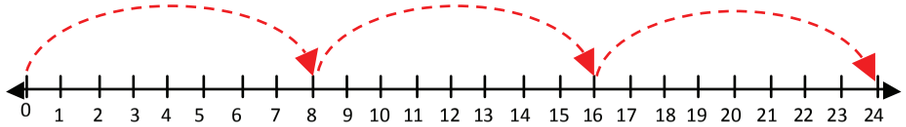
IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.10 **Ukwaba ngokulin ganayo okukhokelela kumaqhezu.**	Sombulula uze ucacise izisombululo kwiingxaki ezenziwayo zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu (*unitary*), umzekelo, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, njalo njalo.	Sombulula uze ucacise izisombululo kwiingxaki ezenziwayo zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu (*unitary*), umzekelo, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$, njalo njalo.	**Yintoni eyahlukileyo kwiBanga loku- 1?** Enye yeenjongo eziphambili kuphuhliso lwamaqhezu kufanele kuncediswe abafundi ukwakha izicwili zamaqhezu apheleleyo – izicwili eziphumela xa ziphelele okanye iyunithi yahlulahluliwe ibe ngamacala alinganayo okanye izicwili ezilinganayo. Abafundi bayakuqonda ukwahlula ikhwantithi ibe zizicwili ezibini okanye ngaphezulu eziza kwabiwa ngokulinganayo nabahlobo. Benza unxibelelwano phakathi kwezicwili ezifanayo nezamaqhezu. Ukwaba ngemisebenzi yindawo entle yokuqala ngamaqhezu. Ikharityhulam yethu ifundisa ngokwabelana okuvela kwizicwilana zamaqhezu. Imisebenzi yokwabelana yenziwa ngokwezibalo ezilula zamagama. Okokuqala xa abafundi besenza imisebenzi yokwabelana (ulwahlulwahlulo) bazifumana besahlulahlula okanye besabelana ngamagqabi ashiyekileyo. Emva koko babelana ngawo kwakhona. Ulwimi olungamaqhezu luza kufundiswa ngomlomo. Emva koko omnye uza kubhala amagama amaqhezu, umzekelo, isiqingatha esinye, ikota enye, isithathu esinye. Xa ubhala malunga nezicwili zamaqhezu ezininzi, umzekelo, iziqingatha ezi-3, iikota ezi-3, kubhale oku njengenani negama. Intetho ethi u-3 ngo-2 okanye u-3 ngo-4 ayinantsingiselo kwaye kungcono ukushiya ezi simboli kwisiGaba esiPhakathi. **Ukwaba ngokulinganayo** Kwimizekelo engasezantsi kukho imeko yokwabelana ngokulinganayo kwintsalela enokwabiwa isetyenziswe. Abafundi ababini babelana ngeetshokholethi ezi-5 ukwenzela ukuba omnye nomnye afumane isixa esifanayo. Umntwana ngamnye uza kufumana ezingaphi? Abafundi baza kunika umntwana ngamnye isi-2 emva koko isiqingatha sentsalela yetshokolethi. 	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.10 **Ukwaba ngokulin ganayo okukhokelela kumaqhezu.**	Sombulula uze ucacise izisombululo kwiingxaki ezenziwayo zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu (*unitary*), umzekelo, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, njalo njalo.	Sombulula uze ucacise izisombululo kwiingxaki ezenziwayo zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu (*unitary*), umzekelo, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$, njalo njalo.	**Iintsalela** Kubalulekile ukuba Abafundi beze neempendulo zabo. Okokuqala yalela Abafundi bachaze amagama abo 'inxalenye' yabo abayicazululeyo. Lindela ukuba xa Abafundi besika isicwili esishiyekileyo, izicwili zingayubungakanani engalinganiyo. Oku akunachaphazela indlela abachaza ngayo kwinkqubo yokwabelana. Xa Abafundi bakwazi ukwaba ngokukuko, amagama amaqhezu anokunikwa ngokwezicwili. Ukusuka ekusombululeni iingxaki zezibalo uze neempendulo ezineentsalela kwiimpendulo ngamanani azeleyo nezicwili zamaqhezu kuthetha ukuba Abafundi baqhelaniswa namaqhezu angaqhelekanga namanani axutyiweyo. Abafundi akunyanzelekanga ukuba bazi kwaye basebenzise isigama. Umzekelo: Isi-2 kunye nesiqingatha sinokubhalwa ngokusesikweni ngesi-$2\frac{1}{2}$, elinani elixutyiweyo. **Imisebenzi yokwabelana nolwimi lwamaqhezu** Ingxoxo engeempendulo zAbafundi lixesha elihle lokufundisa ngesigama esingezicwili zamaqhezu. Xa itshokholethi icazululwe yahlulwa ibe zizicwili ezilinganayo, ngokulula ithi, 'sizibiza ngokuba zizine.' Ibhiskithi iyonke isikwe yazizicwili ezine. Zonke izicwilii zibe nesayizi elinganayo. Abafundi kufuneka bazi ngemibandela emibini yezicwili zamaqhezu: • Inani lezicwili; kunye • Ukulingana kwezicwili. Imisebenzi yokwabelana inceda abafundi ukuphuhlisa iingqiqo ezilandelayo: • Xa sisahlula into ibe zizicwili ezi-2 ezilinganayo, sizibiza ngokuba zizicwili ezingamacala. • Xa sisahlula into ibe zizicwili ezi-3 ezilinganayo, sizibiza ngokuba zizicwili ezingamacala amathathu. • Xa sisahlula into ibe zizicwili ezi-4 ezilinganayo, sizibiza ngokuba zizicwili eziikota. • Xa sisahlula into ibe zizicwili ezi-4 ezilinganayo, sizibiza ngokuba zizicwili zezihlanu. Ugxininiso kwiingxaki zamagama ezingamaqhezu kule kota kuvumela Abafundi bakwazi: • Ukwabelanga nokuqumbanisa izinto ngokulinganayo; • Ukuxela izicwili zamaqhezu; • Ukufumana amaqhezu kwizinto eziphelelelyo; kunye • Ukuqaphela ukuba iqhezu yinxalenye yokuphelelelyo.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.10 **Ukwaba ngokulinganayo okukhokelela kumaqhezu.**	Sombulula uze ucacise izisombululo kwiingxaki ezenziwayo zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu (*unitary*), umzekelo, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, njalo njalo.	Sombulula uze ucacise izisombululo kwiingxaki ezenziwayo zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu (*unitary*), umzekelo, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$, njalo njalo.	**Imizekelo** yezibalo ezifanele ikota yesi-2. U-Erin, uTawfiq noThami mababelane ngeetshokholethi ezi-4 ezilinganayo. Umntwana ngamnye uza kufumana iitshokholethi ezingaphi? Zoba umfanekiso ukubonisa impendulo yakho. UMIles, uHannah, uMathew noNdaweni babelana ngefruthi bha ezi-5. Bangabelana njani ngazo ngokulinganayo? Zoba umfanekiso ukubonisa impendulo yakho. USerebolo noJamie babelana ngeswiti yeliquorice e-1. UJamie omnye wabo makafumane isiqingatha. Ingaba oku kuchanekile? Zoba umfanekiso ukubonisa impendulo yakho. Kubalulekile ukuba xa Abafundi besiza nezisombululo bayakwazi ukuchaza indlela ababelana ngayo. Ekuqaleni sebenzisa ulwazi lwAbafundi olungekho seSikweni ngolwimi ukuchaza izicwili zamaqhezu. Xa sele bezithembile beyiqonda ingqiqo 'kangokupheleleyo kunye icuntswana', igama leqhezu linokufundiswa. Emva koko ubani unokubhala amagama amaqhezu, umzekelo, isiqingatha esinye, ikota enye, isinye sesithathu. Isimboli yeqhezu ayifundiswa, njengentetha ethi u-1 ungaphaya ku-2 kwaye ayinantsingiselo kwaye kungcono ukushiya le simboli kumabanga alandelayo.	
1.11 **Imali**	• Ukuqaphela nokwalatha imali eziinkozo yaseMzantsi Afrika (i-5c, 10c, 20c, 50c, R1, R2, R5 nengamaphepha). i-R10, R20, R50 • Sombulula iingxaki zezemali eziquka iitotali netshintshi yama-R99 kunye neesenti ukuya kuma-90c.	• Ukuqaphela nokwalatha imali eziinkozo yaseMzantsi Afrika (i-5c, 10c, 20c, 50c, R1, R2, R5 nengamaphepha). i-R10, R20, R50 • Ukusombulula iingxaki zezemali eziquka iitotali netshintshi ukuya kwi-50c okanye iirandi ukuya kwi-R50.	**Yintoni eyahlukileyo kwikota yoku-1?** Ngale kota Abafundi baqhelaniswa nokuqaphela imali nokucazulula imali ibe zizicwilana ezincinane. **Imizekelo yokubala izibalo ezinokwenziwa ngekota** • Ungakwazi ukwaba ngama-50c ngokulinganayo wabele Abafundi abane? Chaza indlela onokwenza ngayo. • UJoe uchithe ama-50c kwiiswiti ze-10c. Uthenge iiswiti ezingaphi? • UThenji uhlawule i-R5 kwiteksi xa esiya esikolweni kusasa. Ubhatele nge-R20 eliphepha. Iza kuba yimalini itshintshi yakhe? Uza kushiyeka namalini xa ebuyela ekhaya? • Imali kaZusiphe yeteksi yi-R5,50. Uza kufumana tshintshi yamalini kwi-R10? UMiya uchithe ama-R38. Ube nama-R50. Ushiyeke namalini ngoku?	
IZIBALO EZINGALAWULWA MEKO				

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.12 **Iindlela ngeendlela zomsebenzi** **(limethodi okanye izicwangciso-qhinga)**	Sebenzisa iindlela ngeendlela ezilandelayo zokubala xa usenza izibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphinda kabini nokwahlulahlula amanani. • Imigca-manani.	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	**Yintoni eyahlukileyo kwikota yoku-1?** Abafundi kulindeleke ukuba basombulule izibalo ngokungekho mxholweni besebenzisa ezi ndlela zilandelayo: Ukwakha okanye ukucazulula amanani. Ukuphindaphinda nokwahlulahlula amanani. Imigca-manani. **Imizobo okanye izixhobo ezibambekayo** Abafundi baza kuqhubeka nokuzoba imifanekiso nokusebenzisa izixhobo ezibambekayo zokubala izibalo. Kubalulekile ukuba imifanekiso okanye imizobo equlethe amanani kunye nezivakalisi zamanani. **Ukwakha nokwahlula amanani.** Le yenye yeendlela ezibaluleke kakhulu kwisiGaba esisiSeko (oku kuxhaphake kakhulu kwisiGaba esiPhakathi). Ukusebenzisa le ndlela kuvumela Abafundi bakwazi ukucazulula (ukwahlula) nokudibanisa ngokutsha amanani ukuncedisa ukwenza izibalo zibe lula. • Kubalulekile ukuba Abafundi basebenzise ulwazi olwaziwayo xa becazulula amanani, umzekelo, • Ukwahlula ixabiso lendawo elimi kuyo inani; • Ukwahlula usebenzisa iziphindaphindwa ze-10; kunye • Ukwahlula abe ziipere amanani, umzekelo, iipere zama-20 zaziwa njengama-20 zinokucazululwa ngeendlela ezahlukeneyo. **Ukuphinda phinda kabini nokwahlulahlula amanani.** Umntwana usoloko efumana ukuphindaphinda kulula, nangona kunjalo, kuluncedo ukuqhelanisa Abafundi nokusebenzisa ulwazi lokuphinda kabini: • Ukusebenzisa ukunakana uphindo kabini ukubonisa ukusondeza kuphindo kabini **Uphindo kabini** **Ukusondeza kuphindo kabini** 12 + 12 12 + 13 25 + 25 25 + 24 • Ukusebenzisa ubuchule bokuphinda kabini nokubuyisa umahluko, umzekelo, 13 + 14 = phinda kabini u13 kunye no-1.	

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1.12 **Iindlela ngeendlela zomsebenzi** **(limethodi okanye izicwangciso-qhinga)**	Sebenzisa iindlela ngeendlela ezilandelayo zokubala xa usenza izibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphinda kabini nokwahlulahlula amanani. • Imigca-manani.	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Le ndlela yeyona eqaqambileyo kwaye ifuna isiseko esisiso solwazi ngamanani. Abafundi abakwaziyo ukukhetha le ndlela yokusebenza basechamini kakhulu. Umzekelo: Ngosuku olunye eklinikhi ama-24 Abafundi banikwe ugonyo kwiflu. Kusuku olulandelayo ama-25 Abafundi ayagonywa. Bangaphi Abafundi abagonyiweyo bebonke? Isisombululo sinokuvela ngokusebenzisa uphindo kabini. Umntwana unokuthi phinda kabini ama-24 kunye no-1 okanye uphindo kabini lwama-25 kumke u-1. **Imigca-manani.** Ukusebenzisa imigca-manani ukubancedisa ukubala kuza kunika Abafundi indlela yokurekhoda abakucinga nokukugcina oko. Incedisa Abafundi ukurekhodisha umfanekiso abanokuwusebenzisa ukucacisa indlela abayisombulula ngayo. Abafundi bebesebenzisa imigca-manani ukusukela kwiBanga loku-1. Ngoku kufanele bakwazi ukwenza umgca-manani ongenanto apho babhala khona inani lokuqala baze babonise ukuba bafikelele njani kwelinye. Umzekelo wendlela Abafundi abanokusebenzisa umgca-manani: • Ukudibanisa nokuthabatha. Abafundi kufanele babumbe imigca manani yabo nokucazulula amanani ngokulungeleleneyo. Umzekelo: 45 + 27  	

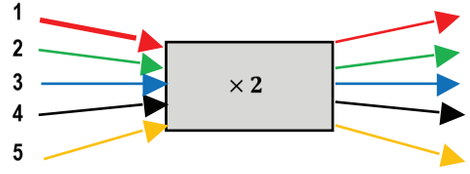
IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
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1.13 **Ukudibanisa nokuthabatha.**	• Yongeza kuma-99 • Thabatha kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+, –, =, ☐). • Qhelanisa neebhondi zamanani ukuya kuma-20	• Yongeza kuma-50 • Thabatha kuma-50 • Ukusebenzisa iisimbolo ezifanelekileyo (+, –, =, ☐) • Qhelanisa neebhondi zamanani ukuya ku-15	**Yintoni eyahlukileyo kwikota yoku-1?** Abafundi kwiBanga lesi-2 baza kuqhubeka nokusebenzisa izixhobo ezibambekayo neminye imifanekiso ukuncedisa ngolwazi namanani nokubala. Ukusetyenziswa kwale mifanekiso kuza kubanzima ngokuhamba kwexesha. Ekupheleni konyaka kwiBanga lesi-3, Abafundi kufanele babale ukuya kutsho kumanani amivo mithathu ngaphandle kokusebenzisa isixhobo esibambekayo. Abafundi beBanga lesi-2 bayaqhubeka nokusebenzisa nokuphucula izicwangciso-qhinga zabo zokubala. Kufuneka kuncediswe ukuqinisekisa ukuba urekhodisho luyaqhubekeka ukwenzela ukuba bakwazi ukuzifundela ngokwabo nabanye. Abafundi beBanga lesi-2 baza kusebenzisa iindidi zokurekhodisha kwaye baza kuzithemba ekusebenzeni amanani neesimboli njengemethodi yokurekhoda. Abafundi kufanele bakwazi 'ukucinga' malunga nombuzo obuziweyo kubo baze bakhangele uluhlu lwenani lwezibalo ukuzibonela ukuba yiyiphi na eyona ndlela iphucukileyo yokubala. Abafundi ngokusombulula iingxaki zezibalo, bayaqalisa ukuphuhlisa indlela yokubala yabo nemethodi yokurekhodisha ngokwabo. KwiBanga lesi-2, baza kuphucula oku. Ngale kota, kufanele bazithembe ekufundeni iimethodi zabo zokurekhodisha nokuchaza ukuba bazifumene njani na iimpendulo. Abafundi kufanele bakwazi ukwenza okulandelayo ngokudibanisa nokuthabatha. Nangona kunjalo, Abafundi basebenzisa izixhobo ezibambekayo nemifanekiso ukuxhasa izibalo zabo xa usebenza namanani, kwaye kufuneka bakwazi ukubala kwinqanaba elinzima. Ngekota yonyaka, Abafundi kufuneka baqhubeke nokubala imibuzo ephindaphindayo ngeendlela ezahlukeneyo ukwenzela babe nokukusebenzisa oko kumanani anobuphindaphindo njengesixhobo sokubala. **Umzekelo:** Ukuphinda phinda kabini ama-20. Bhala oku njengesivakalisi senani sokudibanisa. Ukukopa nokugqibezela: • 12 + 12 = ☐ • 14 + 14 = ☐ • 15 + ☐ = 30 • 16 + ☐ = 32 • 17 + 17 = ☐ • 36 = 18 + ☐ • 38 = ☐ + 19	

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1.13 **Ukudibanisa nokuthabatha.**	• Yongeza kuma-99 • Thabatha kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+, –, =, ☐). • Qhelanisa neebhondi zamanani ukuya kuma-20	• Yongeza kuma-50 • Thabatha kuma-50 • Ukusebenzisa iisimbolo ezifanelekileyo (+, –, =, ☐) • Qhelanisa neebhondi zamanani ukuya ku-15	Iindlela ezikhoyo zokubonisa izibalo zokudibanisa nokuthabatha. **Ukwahlula inani libe zizicwilana ezincinane ukwenza izibalo zibe lula.** **Ukusebenzisa ulwazi lwexabiso lendawo elimi kuyo inani ukulicazulula libe zizishumi nezinye.** *Ukudibanisa amagama amivo mabini ngokucazulula amanani amabini.* 23 + 36 = ☐ 23 + 36 = (20 + 3) + (30 + 6) = (20 + 30) + (3 + 6) = 50 + 9 = 59 **Ukudibanisa ngokwahlula inani elinye.** *Ukudibanisa amagama amivo mabini ngokwahlula inani elinye* 23 + 36 = ☐ 23 + (30 + 6) 23 + 30 → 53 + 6 = 59 Abafundi bahlula inani ngeendlela ezibalungeleyo. Oku kuthetha ukuba baza kukwenza oku ngeendlela ezahlukeneyo: 23 + 36 = ☐ 23 + (10 + 10 + 10 + 6) 23 + 10 → 33 + 10 → 43 + 10 → 53 + 6 = 59 **Ukuthabatha** • Ukwahlula amanani amabini. 47 – 26 = ☐ 47 – 26 = (40 + 7) – (20 + 6) = (40 – 20) + (7 – 6) = 20 + 1 = 21 42 – 26 = ☐ 42 – 26	

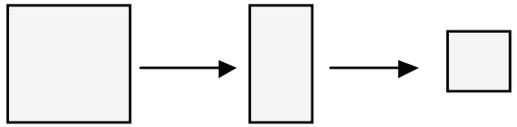
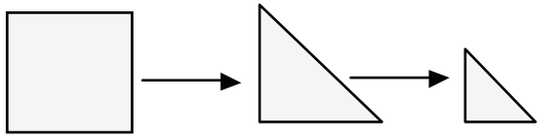
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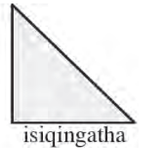
IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.13 **Ukudibanisa nokuthabatha.**	• Yongeza kuma-99 • Thabatha kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+, –, =, ☐). • Qhelanisa neebhondi zamanani ukuya kuma-20	• Yongeza kuma-50 • Thabatha kuma-50 • Ukusebenzisa iisimbolo ezifanelekileyo (+, –, =, ☐) • Qhelanisa neebhondi zamanani ukuya ku-15	**Nakana ukusondeza kuphindaphindo.** 24 + 25 ukucacisa ukuba u-24 uphindaphindiwe kunye no-1 okanye u-25 uphindaphindiwe kwemka u-1. 24 + 24 + 1 Abafundi kungafuneka barekhode izicwangciso-qhinga besebenzisa iintolo. 24 + (20 + 4) + 1 24 + 20 → 44 + 4 → 48 + 1 = 49 **Ukusebenzisa ukwenza iziqingatha nokohlula amanani.** 29 + 12 29 + (6 + 6) 29 + 6 → 35 + 6 = 41 **Tshintsha inani libe sisiphindaphindi seshumi uze emva koko uthabathe okanye udibanise izinye.** Bala uye phambili okanye emva ukuya kwi-10. 28 + 19 = ☐ Apha Abafundi kufuneka bazixelele ukuba baneendlela ezimbini. Tshintsha ama-28 okanye 19 aye kufikelela kwisiphindaphindwa esingu10. Bayazikhethela. Isibalo sinokubhalwa ngolu hlobo: 28 + 19 = 28 + 20 – 1 28 + 20 → 48 – 1 = 47 Abanye Abafundi banokucazulula u-20 abe ngamaqela ama-2 e-10 ukubala ngokuchanekileyo. Incedisa Abafundi ukuba bazithembe kwaye bazimele kwimathematika, xa benezicwangciso-qhinga. - ukutshekisha izisombululo ngokwabo; kunye - Ukuqwalasela ubunyani beempendulo zabo.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.14 **Ukudibanisa ngokuphin diweyo okukhokelela kuphinda phindo lwamanani.**	• Ukuphindaphinda amanani ukusuka ku-1 u kuya kwi-10 ngo-1, 2, 5, 3 no-4. • Sebenzisa iisimboli ezifanelekileyo (+, x, =, ☐)	Ukuphindaphinda amanani ukusukaku -1 ukuya kwi-10 ngo-2, 5 Sebenzisa iisimboli ezifanelekileyo (+, x, =, ☐)	**Yintoni eyahlukileyo kwikota yesi-2?** Ngexesha lekota yesibini, abafundi bathi gqolo ukuziqhelanisa ngengqiqo yokuphindaphindo. Ukuphindaphinda ngo-1 ku-10 ngo-5 kuyafundiswa. Ukufundisa ngophindaphindo luka-5, jonga kumanqaku okuphindaphinda ngo-2 kwikota 1. Ekupheleni kwekota Abafundi kufanele bakwazi ukurekhoda oku kulandelayo: 1iqela lesi-5 ngu-5 okanye Ka-1 ngo-2 ngu- 2 okanye 1 x 2 = 2 2 amaqela esi-2 ngu-4 okanye Ka-2 ngo-2 ngu- 4 okanye 2 x 2 = 4 3 amaqela esi-2 ngu-6 okanye Ka-3 ngo-2 ngu-6 okanye 2 x 2 = 6 Apha akugxininiswa kwiitheyibhile zokuzikhumbuza kodwa kugxininiswa ekwakheni ngengqiqo yophindaphindo. Abafundi bafunda ukufunda nokuqonda ngesivakalisi senani sophindaphindo. Imizobo emininzi yophindaphindo kufanele inikwe kwaye urekhodo oluninzi lwenziwe kwincwadi yokubhal yaseklasini. Imizekelo yomsebenzi obhalwayo. Inani labafundi | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 Inani lemilenze | | | | | | | | | | Iiflowu-dayagram  Xa usebenza ngeepateni zamanani, uphindaphindo lunokunxulunyaniswa nokutsiba ngokubala, ngokuphanda iipateni zophindaphindo kwigridi yenani. Umzekelo: Abafundi banokurekhoda izi-2 nezi-5 kwigridi yamanani. Banokuthetha ngamanani akhoyo kwiithayimtheyibhile ezimbini neethayimtheyibhile ezintlanu.	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.16 **Izibalo zentloko.**	**Ingqiqo ngamanani: Uluhlu lwama-99** • Cwangcisa iseti enikiweyo yamanani akhethiweyo. • Ukuthelekisa amanani ukuya kuma-99 nokuxela ukuba liliphi elingu-1, 2, 3, 4, 5 ne-10 elingaphezulu okanye ngaphantsi. **Ukukhumbula ngokukhawuleza:** • Izinto eziyinyaniso ngokudibanisa nokuthabatha ukuya kuma-20. • Dibanisa okanye uthabathe izininzi zika-10 ukusuka ku-0 ukuya kwi-100.	**Ingqiqo ngamanani: Uluhlu lwama-50** • Cwangcisa iseti enikiweyo yamanani akhethiweyo. • Ukuthelekisa amanani ukuya ku-100 nokuxela ukuba liliphi elingu-1, 2, 3, 4, 5 ne-10 elingaphezulu okanye ngaphantsi. **Ukukhumbula ngokukhawuleza:** • Khumbuza ngezinto eziyinyaniso ngokudibanisa nokuthabatha ukuya ku-10.	**Ingqiqo ngamanani:** Ukubala izicwangciso-qhinga, ingqiqo yenani, ulwazi nenani elaziwayo liyaphuhliswa ngokusombulula ingxaki nezibalo. Oku kwenziwa ngexesha lokubala imathematika ngentloko. Oku kuncedisa Abafundi ukubaqhelanisa nokukwazi ukusebenzisa oko ngokulula xa ebala naxa esombulula izibalo ngokusemxholweni. **Imizekelo yemibuzo** enokubuzwa: **Amagama amanani neesimboli** Ukuphakamisa ikhadi okanye ukubhala phantsi igama lenani. Ukukhetha umntwana oza kubhala inyumerali ematanisiweyo. **Ngaphezulu okanye ngaphantsi** Yintoni? • u-1 ungaphantsi kwama-50 • u-1 ungaphezu kwama-39 • u-3 ungaphantsi kwama-27 • u-10 ungaphezu kwama-20 Nguwuphi unobumba wesi-5 kwi-alfabhethi? Yiyiphi inyanga yesi-9 yonyaka? Phambi nasemva Liliphi inani eliza kanye phambi kwama-37? Liliphi inani eliza kanye phambi kwama-39? **Ukucwangcisa nokuthelekisa.** Liliphi inani elingaphezulu: Kwama-21 okanye ama-41? Ndinike inani eliphakathi kwama-37 nama-39. **Izinto eziyinyaniso ngokudibanisa nokuthabatha.** Jonga kumanqaku akwikota yoku-1.	

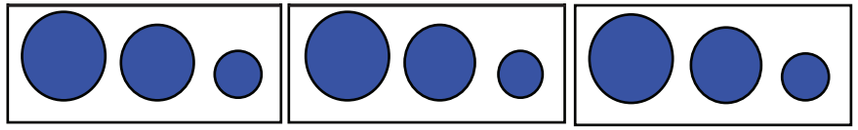
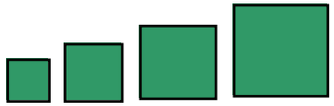
IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.16 **Izibalo zentloko.**	**Ubuchule bokubala** Sebenzisa ubuchule bokubala ukudibanisa nokuthabatha ngokukuko: • Beka inani elikhulwana kuqala ukuze ubale ukuya phambili okanye ngasemva. • Umgca-manani. • Ukuphindaphinda nokwahlulahlula amanani. • Ukwakha nokucazulula amanani. • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha.	**Izicwangciso-qhinga zokubala ngentloko** Sebenzisa ubuchule bokubala ukudibanisa nokuthabatha ngokukuko: • Beka inani elikhulwana kuqala ukuze ubale ukuya phambili okanye ngasemva. • Umgca-manani. • Ukuphindaphinda nokwahlulahlula amanani. • Ukwakha nokucazulula amanani. • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha.	**Ubuchule bokubala:** • Sebenzisa izicwangciso-qhinga zokubala ukudibanisa nokuthabatha ngokukuko. • Dibanisa amanani amaninzi ngokusebenzisa izicwangciso-qhinga: • Khangela izibini zamanani ezenza i-10 nokusebenzisa oku kuqala. 2 + 7 + 8 2 + 8 benza u-10 uze wongeze u-7. • Beka inani elikhulwana kuqala ukuze ubale ukuya phambili okanye ngasemva. • Qala ngelona nani likhulu 3 + 6 • Xela ngokutsha isivakalisi senani: 6 + 3 uze ubale uye kutsho ku-9. • Ukusebenzisa uphindaphindo njengesicwangciso-qhinga sokubala ngentloko. Yalatha uphindaphindo olungagqibelelanga. **Umzekelo:** 5 + 4 = 9 ukucacisa ukuba u-4 uphindaphindiwe kunye no-1 okanye u-5 uphindaphindiwe kwemka u-1. Ukuqaphela ukuba xa amanani amabini esondelelene ngokwesayizi kwelinye ngalinye, ngoko ke kulula ukukhangela umahluko ngokubala uye phambili endaweni yokubala uye emva. 8 – 6 = 2 uze ucacise ukuba ukubala uye phambili ukusukela kwisi-6 ukuya kwisi-8 kuphuma isi-2. Izibalo zentloko inokwenziwa ngaphandle kwezixhobo, kodwa oko kunokwenziwa kwimathematika ebalwa ngentloko enezixhobo. Izixhobo ezinokusetyenziswa • Umgca-manani (oleyibhelishiweyo nongaleyibhelishwanga) • Igridi yamanani • Amakhadi endawo elimi kuyo inani (oonotsheluza). • Ukubala amaso	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.17 **Amaqhezu.**	• Sebenzisa uze uxele amaqhezu (*unitary)* kuquka iziqingatha, iikota, izithathu nezine. • Nakanaamaqhezu kumzobo. • Bhala amaqhezu njengesiqingatha esi-1, nezithathu ezi-2.	• Sebenzisa uze uxele amaqhezu (*unitary*) ngokwemixholo eqhelekileyo kuquka iziqingatha, iikota, izithathu nezine. • Nakana amaqhezu kumzobo. • Bhala amaqhezu njengesiqingatha esi-1, nezithathu ezi-2.	**Le kota igxininisa:** Kule kota Abafundi bafundiswa ngamaqhezu. Abafundi baza kufundiswa ngamaqhezu ngokwabelana ngezibalo ezingamagama nemisebenzi. Nangona kunjalo, ingqiqo ngamalungu amaqhezu ibaluleke kakhulu kuba inokuphuhliswa ngokusebenzisa imisebenzi eyongezelelweyo. • Ukwenza iimilo ngehafu nekota ngokusonga nokusika. Abafundi banokusonga iphepha libe sisiqingatha baze baxele ilungu ngalinye. Kubalulekile kakhulu ukuba baqonde ukuba xa udibanisa amalungu amabini alinganayo ento, ubiza icala ngalinye njengenxalenye yehafu. Banokusonga iphepha libe yihafu kwakhona. Eyona nto ibalulekileyo apha kukusonga iphepha ngeendlela ezahlukeneyo libe yihafu ekhangeleka ngokwahlukeneyo.  Okanye  Buza Abafundi rhoqo ukuba baqikelele ukuba zingaphi izicwili abaza kuzifumana kwaye ubavumele ukuba baqobe iphepha batshekishe. Ukuthelekisa iimilo ezimbini ezahlukeneyo zehafu okanye iimilo ezahlukeneyo ezimbini zekota zinokukhokelela kwingxoxo enika umdla engemilo nesayizi. Unokubuza abafundi: Ndingazibiza ezi milo zimbini ngegama lenani elifanayo, isiqingatha esinye? 	

IZIHLOKO	IINGQIQO NEZAKHONO IMFUNO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zeyure e-1 nemizuzu e-24)
1.17 **Amaqhezu.**	• Sebenzisa uze uxele amaqhezu (*unitary)* kuquka iziqingatha, iikota, izithathu nezine. • Nakanaamaqhezu kumzobo. • Bhala amaqhezu njengesiqingatha esi-1, nezithathu ezi-2.	• Sebenzisa uze uxele amaqhezu (*unitary*) ngokwemixholo eqhelekileyo kuquka iziqingatha, iikota, izithathu nezine. • Nakana amaqhezu kumzobo. • Bhala amaqhezu njengesiqingatha esi-1, nezithathu ezi-2.	Ndibonise ukuba ndingazibiza ezi milo zimbini ngegama lenani lekota enye.   Abafundi kufanele baxele ilungu ngalinye kwaye oku kunokwenziwa ngokubhala amaqhezu. Umzekelo:   • Ukudibanisa ukwenza iphelele. Yalela Abafundi ukusebenzisa izangqa zamaqhezu okanye ukusika izangqa kwiphepha ukukhangela indlela ihafu nekota yeemilo inokudityaniswa ngayo ukwenza into epheleleyo kwakhona. • Ukufakela imibala okanye ukusheyidisha amaqhezu. Ezi ndidi zemisebenzi zikhuthaza: • Ukwazi ukuba amaqhezu anamalungu alinganayo; • Ukwalatha amalungu amaqhezu; kunye nokuxela amalungu amaqhezu. **Ukubhala amagama amaqhezu.** Asikwazi kufundisa Abafundi ukubhala isimboli yamaqhezu. Abafundi bafunda ngendlela yokuleyibhelisha amalungu amaqhezu ngokubhala ihafu enye okanye ikota enye.	

IBANGA LESI- 2 IKOTA YESI- 2

2. IIPATENI, II-FANKSHINI, NE-ALJEBRA

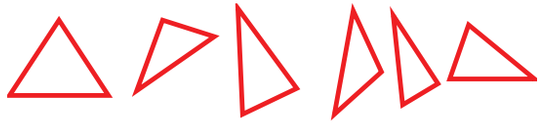
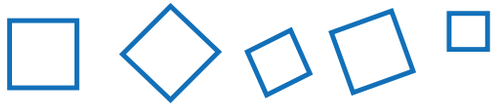
IZIIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA
2.1 **Iipateni zejiyometri**	**Ukukopa, ukwandisa nokuchaza** Ukukhuphela, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe nge-izinto ezibambekayo. • Iipateni ezilula ezenziwe ngemizobo yemigca, imilo okanye izinto **Ukuyila nokuchaza iipateni zabo** Ukuyila nokuchaza iipateni zabo zejometri • Ezingezinto ezibambekayo • Ngokwakha imigca, imilo okanye izinto. **Iipateni ezisingqongileyo** Ukuchonga, Ukuchaza ngamagama nokukhuphela iipateni zejometri • ngokwasendalweni • ngokwalemihla • ngokwembali ngezenkcubeko	**Ukukopa, ukwandisa nokuchaza** Ukukhuphela, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibambekayo. • Iipateni ezilula ezenziwe ngemizobo yemigca, imilo okanye izinto **Ukuyila nokuchaza iipateni zabo** Ukuyila nokuchaza iipateni zabo zejometri • Ezingezinto ezibambekayo • Ngokwakha imigca, imilo okanye izinto.	Kumabanga oku- 1 no 2 kwikota yoku-1 kucetyiswa ukuba abafundi basebenze ngeepateni (imilo, imigca okanye izinto) ziphindaphindwe kwangale ndlela inye. Kwikota yesibini yebanga lesi-2 Abafundi bangaqala ukusebenza ngeepateni apho ubungakanani yemilo okanye inani lemilo litshintsha ngendlela eqikelelekayo. Ezinye iipateni zingamaqela afanayo emilo okanye izinto eziphindaphindiweyo, apho ubungakanani yemilo kwiqela ngalinye itshintsha ibe yeqhelekileyo,ngendlela eqikelelekayo umz imilo iba mincinci kakhulu.  Ezinye iipateni zenziwe imilo ezinganye, kodwa umzekelo ngamnye wemilo iyanda okanye inciphe. Umz  Ezinye iipateni zenziwe ngamaqela apho imilo yezinto ezifanayo zenzeka khona, kodwa inani lezinto lohlobo ngalunye okanye izinto, iyanda okanye inciphe ngendlela eqhelekileyo.umz  Ukopa iipateni kunceda abafundi babone ingqiqo yokuba yenziwe njani ipateni. Ukwandisa ipateni kunceda abafundi ukuba bajonge ukuba bayive kakuhle ingqiqo eyenziwe ngayo ipateni. Ukuchaza ipateni kunceda abafundi ekukhuliseni ulwimi lwabo nezakhono zokuthetha. Iphinde incede utitshala ukuba abone ukuba bayichaza njani ipateni. Yinto elula ebantwaneni ukutheatha ngepateni emva kokuba beyenzile. Ngeli xesha abafundi kufuneka bakwazi ukuchaza ipateni ngaphandle ngokuncediswa ngemibuzo. Qhubekeka nokugxininisa ekwakhiweni ulwimi abazakulifuna xa bechaza ipateni.	Isifundo -1

IZIIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA
2.2 **Iipateni zamanani**	**Ukukhuphela, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza amagama alula alandelelanayo ubuncinane ukuya kuma - 200 **Ukuyila nokuchaza iipateni zabo** Ukuyila ezabo iipateni zamanani.	**Ukukhuphela, ukwandisa nokuchaza** Ukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya kwi - 150 Ukulandelelana makubonakalise ukubala ukuya phambili nokuya ngasemva: • Izinye ukusuka nakuliphina inani phakathi kuka - 0 ne-150 • Izishumi ukusuka nakwesiphina isiphindwa se - 10 phakathi kuka - 0 ne-150 • Izihlanu ukusuka nakwesiphina isiphindwa sesi – 5 phakathi kuka- 0 ne-150 • Izibini ukusuka nakwesiphina isiphindwa sesi- 2 phakathi kuka- 0 ne-150 • Izithathu nezine ukusuka nakwesiphina isiphindwa sika - 3 no- 4 phakathi kuka- 0 ne- 150	Jonga amanqaku kwikota -1, kodwa yandisa uluhlu lwamanani ukuya ku - 150.	Isifundo -3

IBANGA LESI- 2 IKOTA YESI- 2 3.ISITHUBA NEMILO				
IZIHLOKO	**IINQGIQO NEZAKHONO** **IIMFUNO ZOKUPHELA KONYAKA**	**IINGQOQO NEZAKHONO** **UGXININISO LWEKOTA 2**	**AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA**	**IXESHA** (kwizifundo zeyure enye nemizuzu engama-24)
3.1 **Indawo-bume, ukufumana indawo nembonakalo**	**Indawo yolwimi** Ukuchaza indawo yeizinto enye malunga nenye umz ngaphezulu kwenye, emva, ngaphambili, ngasemva, ekunxele, ekhohlo,, phezulu, phantsi, ecaleni. **Isithuba nemilo** Thelekisa izimvo ezahlukeneyo zeizinto enye efanayo. **Isithuba nezalathiso** Landela izikhombisi ukuhambahamba eklasini.	**Indawo yolwimi** Ukuchaza indawo yeizinto enye malunga nenye umz ngaphezulu kwenye, emva, ngaphambili, ngasemva, ekunxele, ekhohlo,, phezulu, phantsi, ecaleni. **Isithuba nezalathiso** Landela izalathiso ukuhambahamba eklasini	**Izinto emakugxininiswe kuzo ngekota yesi- 2: Indawo yolwimi** **ukulandela, ukulandela izalathiso** Ugxininiso kwikota 2 lungaba sisithuba nokufumana indawo. Kwikota yesi- 3 abafundi bangasebenza ngembonakalo. Qala ngokuhlola ukuba umntwana wazi ntoni kwaye ukhumbula ntoni ngesithuba nokufumana indawo. **Yintoni eyahlukileyo kwebanga loku - 1** Kwibanga lesi- 2,abafundi baqinisa umsebenzi ebebewenze nalunga nesithuba, uqhelaniso nezimvo kwibanga loku - 1. **Indawo yolwimi** Indawo yolwimi mayifundiswe ze yenziwe nemisebenzi eyenziwayo edibanisa abafundi intshukumo zomzimba, ukuquka amaculo nezingqisho nentshukumo nemidlalo enamagama anentshukumo. Oku kungenzeka kwixesha elipheleleyo lokufundisa eklasini okanye ugxininiso kwixesha lokufundisa leqela. Kucetyiswa ukuba uchithe iyure ezimbini kwimisebenzi yesithuba kwikota yesi- 2, kodwa uqhubekeke nokufundisa nokuprakthiza amagama esithuba ezinto ezimfutshane kwiklasi yonke., ugxininiso kwiqela nexesha lokusebenza elixhemekekileyo. Ulwimi lwesithuba maluprakthizwe ngexesha lesifundo solwimi nezakhono zobom. Ulwimi lwesahluko lungaqiniswa ngeerekodi ezibhaliweyo ezifana ukufaka umbala okanye imizobo edityaniswa namagama, ukuzotywa kwezinto okanye imilo xa kuzelwe iindawo ezalana nenye into, ukufaka umbala okanye imizobo edityanisiwe namagama. **Isithuba nezalathiso** Ukufundisa abafundi ukulangela izalathiso makwenziwe ngemisebenzi yepraktikhali apho abafundi bazihambisa ngokwemiyalelo. Kwibanga le - 2 banganikwa imiyalelo ngomlomo okaye ibhalwe ukuba bahambahambe eklasini umz “yiza ngaphambili eklasini” “tsiba umgqomo wenkunkuma”.	Izifundo 2

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (kwizifundo zeyure enye nemizuzu engama-24)
3.2 **Izinto ezinokwakheka kuka 3-D**	**Iindidi zezinto** Ukuqonda nokuxela izinto ezinokwakheka kuka 3-D eklasini nasemifanekisweni • Imilo ezinjengebhola (ingqukuva) • Imilo ezibhokisi (iprizimu) • Iisilinda **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ngokwe: • ubungakanani • izinto eziqengelekayo • izinto ezitshebelezayo **Imisebenzi yokugxininisa** Ukuqwalisela nokwakha izinto ozinikiweyo ezinokwakheka kuka 3-D usebenzisa izixhobo eziphathekayo ezifana nemilo esikiweyo eyi 2 D,iibhloko ezakhiweyo, ukurisayklisha, ikiti yokwakha, nezinye izinto zejometri ezinokwakheka kuka 3-D.		Akukho lugxininiso lulodwa kumsebenzi wezinto ezinokwakheka kuka 3-D olucetyiswayo kwikota yesi - 2. Kungenjalo, umsebenzi kwi 3-D ungaququnjelwa ngemisebenzi ebhaliweyo. Abafundi bangagqithela ukwakha izinto zokwakheka kuka 3-D kwizinto eziphinda zisetyenziswe okanye iikiti ezakhiweyo ngexesha lakhe elilodwa lomsebenzi..	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (kwizifundo zeyure enye nemizuzu engama-24)
3.3 **Iimilo ezinokwakheka kuka 2-D**	**Uluhlu lweemilo** Ukuqonda nokuxela imilo ezinokwakheka kuka 2-D • Izangqa • Oonxantathu • Izikwere • Uxande **Iimpawu zemilo** Ukuchaza, ukuhlela nokuthelekisa izinto ezi 2-D ngokwe: • Ubungakanani • Umbala • Imilo • Amacala angqalileyo • Amacala ambhoxo	**Uluhlu lwemilo** Ukuqonda nokuxela imilo ezinokwakheka kuka 2-D • Izangqa • Oonxantathu • Izikwere • Uxande **Iimpawu zemilo** Ukuchaza, ukuhlela nokuthelekisa izinto ezi 2-D ngokwe: • Ubungakanani • Umbala • Imilo • Amacala angqalileyo • Amacala ambhoxo	**Yintoni entsha kwibanga - 2** • Uxande Umsebenzi omninzi wemilo kwibanga le – 2 uyenziwa ngezinto eziphathekayo. Wonke umsebenzi mawuqiniswe ngomsebenzi obhaliweyo. Abafundi mabaqale ukudlala ngokukhululekileyo ngemilo eyahlukileyo equka ukwenziwa kwemifanekiso ngemilo enqunqiweyo yejometri. Oku kungenziwa ngexesha lakhe elilodwa. Oku kungenzeka kwakhona ngexesha lezifundo lezakhono zobom. Abafundi bakhuphela imifanekiso eyenziwe ngemiol yejometri. Le mifanekiso inganikezelwa ngencwadi yokufunda okanye ngutitshala. Lento inceda abafundi ukuba bakwazi ukwahlula • Izangqa nezikwere zeesayizi ezahlukeneyo; • Izikweri, amaxande, nonxantathu kwindawo ezahlukeneyo; kunye nee, • Noonxantathu namaxande anemilo eyahlukeneyo. Oku kungenzeka ngexesha lekhe elilodwa. Oku kungenzeka kwakhona ngexesha lezifundo lezakhono zobom. **Ukuthelekisa nokuchaza iimilo ezinokwakheka kuka 2-D nesayizi** Abafundi bathelekisa ubungakanani zemilo efanayo umz. • Landelelanisa izangqa ukuqala kwewsincinci kakhulu ukuya kwesikhulu kakhulu, • Beka zonke izikwere okanye ubungakanani ezilinganayo ndawoninye, Ukusebenzisa ulwimi ukuthelekisa imilo yesayizi eyahlukileyo umz “ndizobe unxantathu ngaphakathi kwesikwere, unxantathu mncinci kunesikwere.” **Ukuchaza iimilo ezinokwakheka kuka 2-D: umbala** Abafundi bathetha ngemibala ze bahlele imilo ngokwemilo. Ukuchonga nokuxela izinto nemibala kwakunye nokuthelekisa ubungakanani yee-izinto, kungaprakthizwa ngexesha lomsebenzi ngeepateni. **Ukuqonda nokuxela izangqa, oonxantathu, izikwere neengxande.** Abafundi mangahamba kwizangqa nezikwere ezineesayizi ezahlukeneyo namaxande anemilo eyahlukeneyo.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (kwizifundo zeyure enye nemizuzu engama-24)
3.3 **limilo ezinokwakheka kuka 2-D**	**Uluhlu lweemilo** Ukuqonda nokuxela imilo ezinokwakheka kuka 2-D • Izangqa • Oonxantathu • Izikwere • Uxande **limpawu zemilo** Ukuchaza, ukuhlela nokuthelekisa izinto ezi 2-D ngokwe: • Ubungakanani • Umbala • Imilo • Amacala angqalileyo • Amacala ambhoxo	**Uluhlu lwemilo** Ukuqonda nokuxela imilo ezinokwakheka kuka 2-D • Izangqa • Oonxantathu • Izikwere • Uxande **limpawu zemilo** Ukuchaza, ukuhlela nokuthelekisa izinto ezi 2-D ngokwe: • Ubungakanani • Umbala • Imilo • Amacala angqalileyo • Amacala ambhoxo	Kubalulekille ukuba abafundi bangaboni kuphela umzekelo imilo/isakheko esinye. Imilo yezentengiso eminzi ezisethi inika inika kuphela umzekelo omnye kanxantathu. Abafundi kufuneka bakwazi ukuqonda: • Oonxantathu ezinemilo eyahlukileyo nezibekwe kwindawo ezahlukeneyo. Le yenye yemizekelo yonxantathu:  • Izikwere ezinobungakanani obahlukeneyo, ezibekwe kwiindawo ezahlukeneyo. Le yenye yemizekelo yezikwere:  • Oonxantathu abanemilo eyahlukileyo, ebekwe kwindawo ezahlukeneyo. Le yeminye imizekelo yoonxantathu.  • Izangqa ezineesayizi ezahlukileyo. Le yeminye imizekelo yezangqa.  Kuluncedo ukuba abafundi basebenze ngemodeli zemilo yekhalibhodi ezisikiweyo. Uko kuvumela abafundi ukuba babone oonxantathu, izikwere namaxande ebekwe kwindawo ezahlukileyo.	Izifundo 3

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (kwizifundo zeyure enye nemizuzu engama-24)
3.3 **limilo ezinokwakheka kuka 2-D**	**Uluhlu lweemilo** Ukuqonda nokuxela imilo ezinokwakheka kuka 2-D • Izangqa • Oonxantathu • Izikwere • Uxande **limpawu zemilo** Ukuchaza, ukuhlela nokuthelekisa izinto ezi 2-D ngokwe: • Ubungakanani • Umbala • Imilo • Amacala angqalileyo • Amacala ambhoxo	**Uluhlu lwemilo** Ukuqonda nokuxela imilo ezinokwakheka kuka 2-D • Izangqa • Oonxantathu • Izikwere • Uxande **limpawu zemilo** Ukuchaza, ukuhlela nokuthelekisa izinto ezi 2-D ngokwe: • Ubungakanani • Umbala • Imilo • Amacala angqalileyo • Amacala ambhoxo	Abafundi bahlela imilo ngokokuba zelulekilena okanye zingqukuva. Abafundi mabahlele ze baqokelele imilo ngokokuba zingoonxantathu, izikwere okanye izangqa. Umsebenzi ziququnjelwa ngemisebenzi ebhalwayo. Le misebenzi iquka ukufaka umbala, ukudibanisa amagama emilo njalo njalo.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (kwizifundo zeyure enye nemizuzu engama-24)
3.4 **Ulingano-macala (isimetri)**	**Ulingano-macala** Ukuqonda nokuzoba imigca yemilinganiselo/ isimetri eyimilo ezinokwakheka kuki 2-D yejometri nengeyoyejometri.	**Ulingano-macala** Ukuqonda nokuzoba imigca yemilinganiselo/ isimetri eyimilo eyi 2-D yejometri nengeyoyejometri.	Abafundi babajonge imigca eyi simetri kwizinto eziphathekayo nemifanekiso. Ukubhala imisebenzisa • Mayingazotywa kuphela kwezinye iziqingatha. • Maziquke imizekelo apho abafundi bazoba imigca enomlingano macala/isimetri. Umgca womlingano-macala/isimetri mayingabingasoloko iyimigca ehlayo umz kumfanekiso wenyoka umgca womlingano-macala/isimetri mawubengoxwesileyo; ze • Ludityaniswe imizekelo nemigca yesimetri engaphezulu kwesinye. Ukuba umntwana akaqinisekanga ukuba umfanekiso okanye imilo inomgca wolingano –macala bangahlola ngoku songa iphepha elincinci ze babone ukuba ngaba ezi ziqingatha zilingana ncakasana. Okokuba ziyalingana, lo mgca usongiweyo ungumlingano-macala/isimetri.	Isifundo 1

IBANGA LESI- 2 IKOTA YESI- 2 4.UMLINGANISELO				
IZIHLOKO	**IINQGIQO NEZAKHONO** **IIMFUNO ZOKUPHELA KONYAKA**	**IINGQOQO NEZAKHONO** **UGXININISO LWEKOTA 2**	**AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA**	**IXESHA** (Kwizifundo zeyure e-1 nemizuzu engama-24)
4.1 **Ixesha**	**Ukuxela ixesha** • Yazi iintsuku zeveki • Yazi iintsuku zinyaka • Indawo ozalelwe kuyo, umnyhadala wenkolo, iholide ka wonke wonke, iziganeko zezelizwe, iziganeko zesikolo, ngokwekhalenda • Ukuxela ixesha ngokweyure ezili - 12. Amacala eyure neekota zeeyure. **Ukubala ubude bexesha nexesha elidlulileyo** Ukusebenzisa ikhalenda ukubala nokuchaza ubude bamaxesha osuku ngosuku okanye ngeveki. Ukusebnzisa iwotshi ukubala ixesha ngokweeyure, ngokwamacala okanye iikota zeeyure.	**Ukuxela ixesha** • Yazi iintsuku zeveki • Yazi iintsuku zinyaka • Indawo ozalelwe kuyo, umnyhadala wenkolo, iholide ka wonke wonke, iziganeko zezelizwe, iziganeko zesikolo, ngokwekhalenda • Ukuxela ixesha ngokweyure ezili - 12. Amacala eyure ewotshi yosiba. **Ukubala ubude bexesha nexesha elidlulileyo** Ukusebenzisa iwotshi ukubala ubude ngeeyure okanye amacala eeyure.	Abafundi bayaqhubekeka nokuprakthiza ukuthetha ngomlinganiselo wexesha nokulandelelana kwexesha. Ngexesha lokufundisa iklasi yonke nokugxininisa kwixesha lamaqela, Abafundi baqhubekeka nokuthetha ngentsuku zeveki kunye nenyanga zonyaka nemihla yangaphambili nezayo. Abafundi bayaqhelana nekhalenda ngokuthi agqibezele ukubeka • Usuku lokuzalwa; • Umnyhadala wenkolo; • Iziganeko zezendalo; • Iziganeko zesikolos; kunye • Iiholide zikawonke-wonke kwikhalenda Ngexesha lokuzimela msebenzi abafundi baqhubekeka nokulandelelanisa iziganeko kubomi babo bemihla ngemihla nokulandelelanisa iziganeko zemifanekiso. Abafundi mabaphinde basebenze imisebenzi enxulumene nokuxela ixesha ngokweyure. **Yintoni eyahlukileyo kwikota 1?** Ugxinininiso kwikota -2 kukuxela ixesha ngokweeyure namacala eeyure usebenzisa iwotshi yosiba. Oku kungalugxinininiso lwesifundo. Oku kuquka ukutheatha ngexesha usebenzisa u a.m. no p.m. ngexesha leeyure ezili 12. Ukuxela ixesha, wakuprakthizwe ngekota kuqhubekeka. Imz, abafundi bangabuzwa ukuba baxele ixesha lokungena kwesokolo, ixesha lokuphumla nexesha lokugoduka okanye xa betshintsha isifundo besiya kwesinye. Khetha amaxesha xa iwotshi enkulu bonisa iyure ngqo okanye icala leyure. Kuluncedo ukusebenzisa iwotshi enkulu ukubonisa ixesha eklasini, ukuze abafundi bajonge kuyo. Abafundi bangenza ezabo iimodeli zewotshi. Ungababuza abafundi ukuba babonise amaxesha awahlukilkeyo ze uquke nokubala, umz “Ndibonise iwotshi ebonisa intshimbi yeshumi entloko”. “ Ndibonise ukuba iza kuba ngubani ixesha emva kweyure.”	Isifundo1

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
4.2 **Ubude**	**Umlinganiselo ongekhosesikweni** Ukuthelekelela, ukulunganisa, ukuthelekisa, ukulandelelanisa usebenzisa imilinganiselo engekho sesikweni umz umlinganiselo wesandla, izantya, ubude bepensile, ixixhobo zokubala njalo njalo • Ukuchaza ubude bee-izinto ngokubala nokuxela ukuba zingaphi kwaye zinde kangakanani iiyunithi ezingekho sesikweni . • Ukusebenzisa ulwimi ukuthetha malunga nokuthelekisa umz inde kunenye, imfutshane kunenye, inomphakamo kunenye, inobubanzi kunenye. **Ukufunda umlinganiselo osesikweni** Ukuthelekelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhodisha usebenzisa iimitha (usenokusebenzisa imitha stikhi okanye umtya) njenge unithi esesikweni yobude.	Ngekota yoku- 1 kucetyiswa ukuba abafundi bagxininisa kuthelekelelo, ukulinganisa, ukuthelekise nokurekhodisha ubude, ububanzi nomphakamo ngee yunithi ezingekho seSikweni kodwa yenza uqikelelo, ukulinganisa, ukuthelekise nokurekhodisha imilinganiso ngokweemitha. Zonke ezindlela zokulinganisa zingaqheliswa ngexesha elizimeleyo lomsebenzi kwikota jikelele. Wonke umsebenzi mawurekhodishwe. Ngexesha lokwabiwa kwexesha ngokwamanani, ukusetyenziswa, nokuzalana/ulwalamano, abafundi mangasombulula iingxaki ezisebenzisa umxholo we • Umlinganiso ongekho seSikweni wobude; kunye • Nomlinganiso wobude weemitha. Thabathela ingqalelo uluhlu lwamanani alungele ukusetyenziswa ngekota, kwakunye noluhlu lwengxqki ezilungele ikota.		

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
4.3 **Umthamo**	**Umlinganiselo ongekhosesikweni** • Ukuthelekelela, ukulunganisa, ukuthelekisa, ukulandelelanisa usebenzisa imilinganiselo engekho sesikweni nebhalansi umz iibhloko, izitena njalo njalo • Ukusebenzisa ulwimi ukuthetha ngokuthelekisa umz iyasinda, ulula, ilula kunenye, iyasinda kunenye	**Umlinganiselo ongekhosesikweni** • Ukuthelekelela, ukulunganisa, ukuthelekisa, ukulandelelanisa usebenzisa imilinganiselo engekho sesikweni nebhalansi umz iibhloko, izitena njalo njalo • Ukusebenzisa ulwimi ukuthetha ngokuthelekisa umz iyasinda, ulula, ilula kunenye, iyasinda kunenye	**Yintoni eyahlukileyo kwikota 2?** Kwibanga 1 kucetyiswa ukuba abafundi bagxininisa ekusebenzeningomlinganiso olinganayo • Ukuthelekisa ngqo ubunzima bee-izinto, • Ukulandelelanisa nokuthelekisa ubunzima bee-izinto ezintathu okanye ezingaphezulu, ngokubeka iiperi zezinto kumlinganiso, de zonke ii=izinto zilandelelane. • Ukufumana ubunzima bee-izinto usebenzisa ii-unithi zobunzima ezingekho seSikweni. Abafundi mabagxininise ekwakheni ulwimi ukuthetha ngobunzima. Abafundi mabaqale ukuququmbela lonto bayaziyoibesebenzisa iiunithi ezilinganayo nezingekho seSikweni. Emva koko bangaboniswa ubunzima ngokwe khilogram **Ulunganiso olungekho sesikwini lobunzima usebenzisa iiyunithi ezilinganayo nezingekho seSikweni.** Abafundi bangafunda yonke imithetho sisekho neziqhelaniso usebenzisa iiunithi ezingekho sesikweni. Ukulinganisa ngeunithi ezingekho sesikweni bakungajongelwa phantsi kulinganiso olusesikweni. Ubunzima bomlinganiso wezentengiso bungasetyenziswa. Ukuba awunbo ubunzima bomlinganiso wezentengiso, ungenza iperi enye yezi zinto zilandelayo ihenga yokuxhoma ibhatyi, ikomityi yeyogathi, ibhotile yelitha ezimbini esikiwe emazantsi, ibhotile yelitha enye yobisi esikiwe emazantsi okanye ibhokisi yesiselo (izikhongozeli ezifanayo zincanyathiselwe kwelinye icala lehenga yokuxhoma ibhatyi) Ukulinganisa ubunzima ngee-unuthi ezingekho sesikweni kuquka ukubala ukuba zingaphi ii-unithi ezikhethiweyoezinibinzima obufanayo njengee-izinto ezilinganisiweyo. Umz irula inomlinganiselo ofanayo nomlinganiselo ngenje bloko ezilithoba. Abafundi mabalinganise iindidi zezinto usebenzisa iindidi zezinto njenge-unithi ezingekho sesikweni. Abafundi mabafundiswe ukuba bathethe rhoqo ngeeyunithi xa benikwe ubunzima umz incwadi enomlinganiselo omnye njengee mayibhile ezingama -34.	Izifundo ezi-3

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
4.3 **Umthamo**	**Ukufundisa umlinganiso osesikweni** • Ukuthelekisa, ukulandelelanisa nokurekhodisha ubunzima iphakeji yee-izinto ezithengiswayoe zinobinzima ubuxelwe ngeekhilogram umz iikhilogram ezimbini zereyisi kunye nekhilogram enye yomgubo • Linganisa ububanzi ngokwekhilogram usebenzisa isikali sendlu yokuhlambela.	**Ukufundisa umlinganiso osesikweni** • Ukuthelekisa, ukulandelelanisa nokurekhoditsha ubunzima iphakeji yee-izinto ezithengiswayoe zinobinzima ubuxelwe ngeekhilogram umz iikhilogram ezimbini zereyisi kunye nekhilogram enye yomgubo • Apho isikali sendlu yokuhlambela zikhoyo, Abafundi bangalinganisa ububanzi ngokwekhilogram besebenzisa isikali sendlu yokuhlambela. Okulindelekileyo kukuba Abafundi bafunda kuphela kwikhilogram epheleleyo ekufutshane.	Emva kokuba abafundi belinganise nayiphina iyunithi ngamaxesha amaninzi, mabathelekelele ukuba zingaphi iiyunithi ezinobunzima obulinganayo njengale izinto ilinganisiweyo. Ukuthelekelela phambi kokuba kubalulekile, kodwa oko kungenzeka kuphela xa abafundi sele benze umlinganiselo waloo yunithi. Abafundi kufuneka bafundiswe ukuba ukuze bakwazi ukuthelekisa ubunzima bezinto ezahlukileyo, iiyunithi ezifanayo mazisetyenziswe. Umz ukuba irula inobunzima obungama - 20 iibhloko neperi yezikere enemabli ezinibunzima ubungama-20,awunakutsho ukuba ziyafana ngobunzima okanye hayi,okanye yeyiphi enzima kakhulu.. **Ukurekhodisha imilinganiselo** Noxa umlinganiso usisakhono esipraktikhali abafundi mabarekhodishe umlinganiselo wabo lonke ixesha. **Ukusebenza ngeekhilogram** Abafundi bangaqala ukufundiswa ikhilogram ngokusebenzisa ngegrosari ethengiswa ngekhilogram, apho inani lekhilogram lixelwe epakethini. Umz Abafundi bangathelekisa ubunzima bee- iiphakhethi zezinto ezahlukileyo (umz irayisi, iswekile, umilimili, umgubo,okanye isephu engumgubo) ezithengiswa nge-amawunti eziyi- 1 kg. Bangazibeka ezi zinto kumlinganiselo ukuze babone ukuba noxa i iphakheth i zahlukile, zinemilinganiselo ongaphezulu nongaphantsi. Abafundi bangaqala ngokunikwa uluhlu lwephakheji lwezinto ezahlukeneyo ukze bazilandelelanise ukususka kwenzima kakhulu ukuya kwelula kakhulu, apho ulandelelaniso lwenzeke ngokobunzima obuxelwe kwipakheji umz 2 kg rayisi, 1 kg iswekile, 5 kg umili-mili, 10 kg umngqusho. **Ukufunda umlinganiselo kwizikali zendlu yokuhlambela** Apho izikala zendlu yokuhlambela zokhoyo abafundi bangazisebenzisa ukufunda ubunzima babo. Zimbini intlobo zobunzima beemitha: amanani nosiba. Izikali zamanani zilula ukuzifunda ngokuba ubunzima bubhalwe ngamanani. Ukuba isikali sendlu yokuhlambela jonga ukuba ixela ubunzima kuphela ngekhilogram epheleleyo. Ukuba awuboni sisete ukuze sibonakalise ikhilogram ezipheleleyo, fundisa Abafundi ukungakhathaleli/ukunganaki iindawo zekhilogram okwalo mzuzu. Izikali ezininzi zosiba zendlu yokuhlambela zinamanani ayi -10 kg, nemigca emide ebinisa ubume obuyi -5 kg. Imigca eyi khilogram enye ayinambarishwa. Oku kuyafana nendlela imigca namanani asebenza ngayo kwirula.	Izifundo ezi-3

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
4.3 **Umthamo**			Yenza Abafundi baqale ukubala bebona ukuba kukho izithuba ziyi - 10 spaces phambi kwemakhi eyi - 10 kg, ukuze isithuba ngasinye simele ikhilogram enye, ze ibenomgca omde omele 5 kg. Abafundi bangafunda ukulinganisa uqobo lwesikali sendlu yokuhlambela nemifanekiso yesikali sendlu yokuhlambela. Kulula ukufunda ubunzima bomfanekiso wesikali sendlu yokuhlambela kunesikali sokwenene. **Ukurekhodisha imilinganiselo** Noxa ukulinganisa isisakhono esenziwayo abafundi mabarekhodishe imilanganiselo yabo ngalo lonke ixesha. **Ukulinganisa ubunzima ngokwemeko ethile nokusombulula iingxaki zezibalo nokubala** Ngexesha ***lamanani, iziphumo zentsebenziswano yamanani, nokuzalana***, Abafundi bangasombulula iingxaki ngokusemxholwe we • Amalungiselelo angekho seSikweni obunzima. • **Umzekelo:** Idasta inobunzima obuzi mayibhile ezili – 11. Ibhokisi yekrayoni inobunzima obu ziimayibhile ezi – 8. • Xa zidibene ziba nobunzima bemabhile ezingaphi? • Ukulinganisa ubunzima ngokwe khilogram • **Umzekelo:** Puleka uze nomili-mili obunzima obu - 12 kg, 5 kg yeswekile ne 2kg yerayisi. Bungakanani ubunzima bezinto azakizithenga bubonke. Thabathela ingqalelo inani loluhlu olufanelekileyo ngekota, kwakunye noluhlu lweengxaki ezinqamene nekota.	Izifundo ezi-3

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
4.4 **Umthamo/ Ivolumu**	**Umlinganiso ongekho seSikweni** Ukuthelekelela, ukulinganisa,ukuthelekisa nokulandelelanisa umthamo weziqulatho(umlinganiso wesiqulatho ingabanjwa xa igcwele)ngokusebenzisa imilinganiso engekho sesikweni umz amacephe neekomityi. • Ukuchaza umthamo wesiqulatho ngokubala nokuxela ukuba zingaphi iiyunithi ezingekho seSikweni umz ibhotile inomthamo weekomityi ezine. **Ukufundisa umlinganiso osesikweni** • Ukuqikelela ukulinganisa, ukuthelekelela, ukulandelelanisa nokurekhodisha umthamo wezinto ngokulinganisa usebenzisa umlinganiselo weelitha.	Le resiphu ilandelayo equka ukubhaka, ibalulekile kumxholo apho Abafundi baprakthiza ukulinganisa. Khetha iresiphu apho izithako zinikwe ngokweekomityi, amacephe okanye iiunithi ezingekho sesikweni. Kulo nyaka kucetyiswa ukuba abafundi bagxininise: • Ekukhuliseni ulwimi nokuthetha ngomahluko phakathi komthamo. • Ekuthelekiseni umthamo kwiiziqulatho ezibini ezifanayo, • Ukuthelekisa umthamo weziqulatho ezimbini ezijongeka zifana ngakumbi iziqulatho ezibanzi kakhulu nezimxinwa kakhulu. • Ukulinganisa umthamo wezixhobo ezingekho mgangathweni neeyunithi. Ngexesha lomsebenzi izimeleyo Abafundi bangathelekelela, balinganise, bathelekise, balandelelanise ze barekhodishe umthamo ngezixhobo ezingekho seSikweni nomthamo weeyunithi ezingekho seSikweni. Ukupheka nokubhaka ziluncedo kumxholo apho abafundi bangaprakthiza ukulinganisa umthamo. Khetha iresiphi ezisebenzisekayo/eziluncedo apho umlinganiselo unikwe ngeekomityi, iitispuni neeyunithi ezingekho seSikweni. **Ukulinganisa ubunzima ngokwemeko ethile nokusombulula iingxaki zezibalo, nokubala** Ngexesha ***lamanani, imisebenzi nokuzalana***, abafundi bangasombulula iingxaki ngokusemxholweni womthamo womlinganiso ongekho seSikweni umz UMakhulu usebenzise iikomityi ezimbini zobisi ukwenza ipudini. Ukuba uyiphindaphindile iresipi, lungakanani ubisi alufunayo? Thabathela ingqalelo inani loluhlu olufanelekileyo ngekota, kwakunye noluhlu lweengxaki.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 2	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
	• Ukuthelekisa, ukulandelelanisa nokurekhodisha umthamo wezinto zentengiso ezipakishiweyo ezimthamo wayo uxelwe ngelitha umz iilitha ezi - 2 zobisi, ilitha eyi -1 yesiselo, ilitha ezi - 5 zepeyinti			

IBANGA LESI- 2 IKOTA YESI- 2 5. UKUSETYENZISWA KOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**IINQGIQO NEZAKHONO** **IIMFUNO ZOKUPHELA KONYAKA**	**IINGQOQO NEZAKHONO** **UGXININISO LWEKOTA 2**	**AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA**	**IXESHA** (Kwizifundo zeyure e-1 nemizuzu engama-24)
5.4 **Ukuqokelela nokula ndelelanisa ulwazi oluqokelelweyo**	**Ukuqokelela nokucwangcisa ulwazi oluqokelelweyo** • Qokelela ulwazi oluqokelelweyo emelunga neklasi okanye isikolo ukuphendula imibuzo ebizwa ngutitshala • Ukucwangcisa ulwazi oluqokelelweyo ngeethali			
5.5 **Ukubonisa ulwazi oluqokelelweyo**	**Ukubonisa ulwazi oluqokelelweyo** • Ukubonisa igrafu yemifanekiso ulwazi			
5.6 **Ukucalula nokutolika ulwazi oluqokelelweyo**	**Ukucalula nokutolika ulwazi oluqokelelweyo** • Ukubuza imibuzo malunga nolwazi lwegrafu yemifanekiso	Ukucalula ulwazi oluqokelelweyo kumelo olunikiweyo	Abafundi mabafumane amava malunga nolwazi olupheleleyo ngekota kwikota yokuqala, bangagxininisa ekucwangciseni umelo abalunikiweyo. Kucetyiswa ukuba abafundi bekota yesi- 2 mabacakace (phendula emibuzo emalunga) ubuncinane igrafu yamanani ibenye Abafundi mabaphendule imibuzo ebuzwa malunga nomfenekiso wegrafu umz • “ yeyiphi inkqubo yeTV egqamileyo eklasini?” • “yeyiphi inkqubo ethandwa ngabafundi abambalwa eklasini?” • “ingaba baninzi abafundi abayithandayo …. okanye …..?” • “bangaphi abafundi abaninzi abakhetha …. kuna ….?”	Isifundo esi- 1

IBANGA LESI- 2 IKOTA YESI- 3 1. AMANANI, IFANKSHINI NOLWALAMANO				
IZIHLOKO	**IINQGIQO NEZAKHONO** **IIMFUNO ZOKUPHELA KONYAKA**	**IINGQOQO NEZAKHONO** **UGXININISO LWEKOTA 3**	**AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA**	**IXESHA** (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.1 **Ukubala izinto**	**Ukubala izinto eziphathekayo** Thelekelela ze ubale ubuncinane izinto ngokuthembekileyo ezingama - 200 yonke imhla. Iindlela zokudibanisa ziyakhuthazwa.	Ukubala ubuncinane izinto ngokuthembekileyo zibe li-180 yonke imihla. Nika uthelekelelo olukholelekayo lwezinto zamanani ezinokujongwa ngokuzibala	**Yintoni eyahlukileyo kwikota 2?** Kwikota yesi- 2 uluhlu lwamanani lungandiswa ze abafundi babale izinto ezili- 180. Ukubala izinto kule kota makuqhubekeke kuxhaswa: • Izakhono zokubala eziyimfuneko yokuqonda zinika ixabiso; • Ukubala ngokucengceleza; • Ukubiza amagama amanani; • Ukuqonda iisimboli zamgama; ze • Izakhono eziyimfuneko Zokubala. Ukugxininsa kusekumaqela okubala besebenzisa iindidi zezixhobo ezakhiweyo okanye esele zibekwe ngamaqela.Kuluncedo ukusebenzisa ezi zixhobo zinye xa ujonga amaxabiso. Umz bafundi bangafunda iibhloko ezili -10 ukubala ngezishumi nokubonisa amaqela alishumi. Ukubuza abafundi imibuzo xa bebala izinto: • Wazi kanjani ukuba uwabalile amanani? • Ungajonga kanjani iimpendulo zakho?	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.2 **Ukubala usiya phambili ubuya umva**	**Ukubala isiya phambili nangasemva** • Izinye ukusuka nakweliphina inani phakathi kwe- 0 nama- 200 • Izishumi nakweziphina izibini phakathi kwe- 0 nama- 200 • Izihlanu ukusuka nakweziphina iziphindaphindwa eziphakathi kuka- 5 nama- 200 • Izibini ukusuka nakweziphina iziphindaphindwa eziphakathi kwe- 0 nama- 200 • Izithathu ukusuka nakweziphina iziphindaphinda eziphakathi kwe- 0 nama- 200 • Izine ukusuka nakweziphina iziphindaphinda zika- 4 eziphakathi kwe- 0 nama- 200	Ukubala usiya phambili nokubala usiya ngasemva: • Izinye ukusuka nakweliphina inani phakathi kwe- 0 ne- 180 • Izishumi nakweziphina izibini phakathi kwe- 0 ne- 180 • Izihlanu ukusuka nakweziphina iziphindaphindwa eziphakathi kuka- 5 ne-180 • Izibini ukusuka nakweziphina iziphindaphindwa eziphakathi kwe- 0 ne- 180 • Izithathu ukusuka nakweziphina iziphindaphinda eziphakathi kwe- 0 ne- 180 • Izine ukusuka nakweziphina iziphindaphinda zika- 4 eziphakathi kwe- 0 ne- 180	**Yintoni eyahlukileyo kwikota yesi- 2?** Uluhlu lwamanani kwikota Ikota yesi- 3 ukwanda ukusuka kwi- 150 ukuya kwi- 180. Xa ubala ngokucengceleza kufuneka ugxininise kumdla wabafundi kumanani njengoko bebala. Umz buza: Xa ubala ngezibini ukusuka kwi- 120 ukuya kwi- 140 siyalibala inani i- 121? Kutheni kungenjalo? Ingaba libalulekile ukuba inani lomgca nenegridi eli- 100 ingasetyenziswa ukubona amagama abawabizayo aqhakamshelelana nesakhiwo samanani. Abafundi kufuneka babe negridi yamanani ukusuka kwi- 100 ukuya kuma- 200 ukuzisebenzisa xa uchonga naxa ubala. Jonga amanqaku kwikota yesi- 2.	
UKUFUNDISA AMANANI APHELELEYO				

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.3 **Iisimboli zamanani kunye namagama amanani**	**Yazi ze ufunde amanani** • Yazi ze ufunde iisimboli zamanani u 0 - 200 • Bhala iisimboli zamamanani 0 - 200 • Yazi ze ufunde amagama amanani 0 -100 • Bhal amagama amanani 0 -100	**Yazi ze ufunde amanani** • Yazi ufunde iisimboli zamanani ukusuka kwi- 0 ukuya kwi- 180 • Bhala iisimboli zamanani ukusuka kwi- 0 ukuya kwi- 180 • Yazi uze ufunde amagama amanani ukusuka kwi – 0 ukuya kuma – 75.	**Yintoni eyahlukileyo kwikota 2?** Uluhlu lwamanani: • Ukwazi, ukufunda nokubhala iisimboli zamanani zandile ukuya kwi- 180; ze • Ukwazi, ukufunda nokubhala ukuya kuma- 75. Abafundi mabakwazi ukuchaza amanani ze baqale ukucacisa ngomahluko ngawabo amazwi.. Umz: Kufuneka bajonge kalo makhadi amanani alandelayo ze bakwazi ukuxela umahluko phakathi kwawo nawaphina amanai amabini. **16** **11** **16** **13** **16** Jonga amanqaku kwiKota yesi- 2	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.4 **Ukuchaza, uthelekise, uze ulandelelanise amanani**	**Ukulandelelanisa nokuthelekisa amanani ukuya kuma- 99** • **landelelanisa amanani apheleleyo ukuya ku** 99 ukusuka kwelincinci kakhulu ukuya kwelikhulu kakhulu, kwelikhulu kakhulu ukuya kwelincinci kakhulu • **Thelekisa amanani apheleleyo ukuya kuma-** 99 usebenzisa ubuncinci kakhulu kunenye, ubukhulu kakhulu kunenye, inkuku kunenye, incinci kunenye ilingana nenye. **Sebenzisa amanani alandelelanayo ukubonisa ulandelelwano, indawo okanye indawo-bume.** Ubume bezinto emgceni ukusuka kweyokuqala ukuya kweyeshumi okanye ekuqaleni ukuya ekugqibeleni umz isiqalo, isibini, isithathu ..... ukuya kumashumi amabini.	**Ukulandelelanisa nokuthelekisa amanani ukuya kuma- 75** • **Landelelanisa amanani apheleleyo** ukusuka kwelincinci kakhulu ukuya kwelikhulu kakhulu, kwelikhulu kakhulu ukuya kwelincinci kakhulu • **Thelekisa amanani apheleleyo** usebenzisa ubuncinci kakhulu kunenye, ubukhulu kakhulu kunenye, inkuku kunenye, incinci kunenye ilingana nenye. **Sebenzisa amanani alandelelanayo ukubonisa ulandelelwano, indawo okanye indawo-bume.** Ubume bezinto emgceni ukusuka kweyokuqala ukuya kweyeshumi okanye ekuqaleni ukuya ekugqibeleni umz isiqalo, isibini, isithathu	**Yintoni eyahlukileyo kwikota yesi- 2?** Kule kota abafundi baladelelanisa ze bathelekise amanani ukuya kuma- 75. Ukuza kutsho ngoku abafundi bathelekisa ze balandelelanise amanani ukwakha ubungakanani yamanani gokufanayo namanye. Imibuzo kumanani mayikhethwe ngobuchule ukuncedisa abafundi ukwakha izakhono eziphezulu/eziphakamielyo malunga nexabiso lamanani. Ncedisa kwakhona abafundi ukwakha ulwimi ukucacisa ukucinga kwabo Imizekelo yemibuzo ingaquka oku: • Ndinike amanani aphakathi kwa- 50 nama- 60. Ingaba la manani akufutshane kuma- 50 okanye ama- 60? Cacisa ngempendulo yakho usebenzisa umgca-manani. • Abafundi mabafundiswe ukucingangokulandelelana kwamanani ze bachaze ukuba kutheni i- 15 lilincinci kakhulu kunama- 50. Ukucacisa makuxhaswe ngokusebenzisa izixhobo eziphathekayo. Ekupheleni kwekota mababenze oku,umz: • Ukwazi ukuba ngawaphi amanani amancinci kunama- 50, angaphezulu kuma- 50; ze • Bakwazi ukubonisa indawo yamanani ngokwa- 30; 40 njalo njalo usebenzisa igridi yamanani • Endaweni yokusoloko unika Abafundi izivakalisi zamanani ukuze bazigqibezele ngamanye amaxesha mabasebenzise ezabo izivakalisi ukubonisa uzalano lwamanani umz: Yenza ezi zivakalisi zilandelayo zibe yinyani: • ☐ ingaba u- 1 ungaphezulu ku ☐ • ☐ ingaba u -1 ungaphantsi ku ☐ • ☐ ingaba i- 10 ungaphezulu ku ☐ • ☐ ingaba i- 10 ungaphantsi ku ☐ Jonga amanqaku kwekota yesi- 2.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.5 **Ixabiso lendawo elimi kuyo inani..**	**Qalisa ukuqonda ixabiso lendawo ubuncinane amanani amivo mi-2 ukuya kuma-99.** • Ukuqaphela ukuba umvo ngamnye umele ntoni. • Cazulula amanani amivo mi-2 ukuya kuma -99 abe ziziphinda phindi zama-10 kunye noononye / neeyunithi. • Chonga uze uxele ixabiso lendawo lomvo ngamnye.	**Qalisa ukuqonda ixabiso lendawo ubuncinane amanani amivo mi-2 ukuya kuma-75.** • Ukuqaphela ukuba umvo ngamnye umele ntoni. • Cazulula amanani amivo mi-2 abe ziziphindaphindwa ze-10 kunye noononye. • Chonga uze uxele ixabiso lendawo lomvo ngamnye.	**Yintoni eyahlukileyo kwikota yesi-2?** ngale kota Abafundi baqhubekeka nokuphuhlisa ingqiqo yabo ngeengqiqo zexabiso lendawo ame kuwo ama-75. Ngale kota abafundi bayaqhubeka: • Ukubala nokwahlula amanani ngokwamaqela ukubonisa amashumi nezinye ngeendlela ezahlukeneyo; • Ukubala ngezixhobo esele ziqunjanisiwe / esele zenziwe. • Ukusebenzisa amakhadi exabiso lendawo elimi kuyo inani ukubonisa inani eliqunjanisiweyo nelibalwayo; kunye • Ukubonisa amalungiselelo ohlukeneyo amanani. Umzekelo: Ama-35 anokuboniswa njengezinye ezizimeleyo zama-35, amashumi ama-3 nezinye ezizimeleyo ezi-5 namaqela ama-2 amashumi nezinye ezili-15. Umsebenzi ongasentla wenziwa kumaqela akhethekileyo nangexesha labafundi kuze kurekhodishwe oku kulandelayo: Ama-68 = 6 amaqela amashumi kunye nezinye ezizimeleyo zesi-8. 68 = 60 nesi-8 Oku kuxhaswa ngokusebenzisa oonotsheluza okanye amakhadi exabiso lendawo elimi kuyo inani. Abafundi kufanele bakwazi ukuphendula imibuzo nemiyalelo: • Liliphi inani elifana nama-50 nesi-7? • Ndibonise ama-75 usebenzise amakhadi exabiso lendawo lenani. • Ndibonise ama-75 akwi-abhakhasi. • Ndibonise ama-75 usebenzise isiseko seebloko ezilishumi. • Ndibonisa ama-75 usebenzisa iityhubhu ze-unifix. • Ndibonise ama-75 usebenzisa amaso asemsontweni. • Bala ngemicinga yematshisi engama-70 usebenzisa iinyanda ezili-10. Zingaphi iinyanda ezili-10 ozifumeneyo? Ukurekhodisha kwiklasi yeencwadi zokusebenza zaseklasini neencwadi zokusebenza bayaqhuba ngexesha elithile.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
SOMBULULA IINGXAKI ZOKUBALA KWIMEKO ETHILE				
1.6 **Iindlela ngeendlela zokusombulula iingxaki zezibalo**	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Sebenzisa iindlela ngeendlela ezilandelayo xa usombulula iingxaki zezibalo nokuchaza izisombululo kwiingxaki zezibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokwahlula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Abafundi kulindeleke ukuba basombulule izibalo ngokungekho mxholweni besebenzisa ezi ndlela zilandelayo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha okanye ukwahlula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani. Jonga kumanqaku akwikota yesi-2.	
1.7 **Ukudibanisa okuthabatha.** .	Sombulula iingxaki zokubala izibalo ngokusemxholweni nokucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma-99.	Sombulula iingxaki zokubala izibalo ngokusemxholweni nokucacisa isisombululo sakho kwiingxaki zezibalo kuquka ukudibanisa nokuthabatha ngeempendulo ukuya kutsho kuma-75.	**Yintoni eyahlukileyo kwikota yesi-2?** Abafundi baqhubeka nokusebenza ngeendidi ezahlukeneyo zezibalo zamagama ezixelwe kwisahluko sesi-2 kodwa uluhlu lwamanani lwandisiwe lwaya kuma-75. Jonga kumanqaku akwikota yesi-2.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.8 **Ukudibanisa ngokuphindiweyo okukhokelela kuphindaphindo lwamanani.**	Sombulula iingxaki zokubala izibalo ngokusemxholweni nokucacisa isisombululo sakho kwiingxaki zezibalo usebenzisa ukudibanisa ngokuphindaphindeneyo nophindaphindo oluneempendulo ukuya kuma-50.	Sombulula iingxaki zokubala izibalo ngokusemxholweni nokucacisa isisombululo sakho kwiingxaki zezibalo usebenzisa ukudibanisa ngokuphindaphindeneyo nophindaphindo oluneempendulo ukuya kuma-40.	**Yintoni eyahlukileyo kwikota yoku-1?** Abafundi baqhubeka nokusebenza ngeendidi ezahlukeneyo zezibalo zamagama ezixelwe kwisahluko sesi-2 kodwa uluhlu lwamanani lwandisiwe lwaya kuma-40. Jonga kumanqaku akwikota yesi-2.	
1.9 **Ukwahlula amanani nokwaba ngokulinganayo okukhokelela kulwahlulwa-hlulo.**	Sombulula uze ucacise izisombululo kwiingxaki zezibalo eziprekthikhali kuquka ukwaba ngokulinganayo nokuqukanisa amanani azeleyo ukuya kutsho kuma-99 kunye neempendulo eziquka iintsalela.	Sombulula uze ucacise izisombululo kwiingxaki zezibalo eziprekthikhali kuquka ukwaba ngokulinganayo nokuqukanisa amanani azeleyo ukuya kutsho kuma-75 kunye neempendulo eziquka iintsalela.	Ngale kota yalela abafundi basebenzise imizobo nezixhobo eziphathekayo ukubonisa iimpendulo zabo. Izivakalisi zamanani kufanele zisetyenziswe. Umntwana unokusebenzisa uthabatho oluphindaphindiweyo ukubonisa indlela afikelele ngayo kwimpendulo. Jonga kumanqaku akwikota yesi-2.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.10 **Ukwaba ngokulinganayo okukhokelela kumaqhezu.**	Sombulula uze ucacise izisombululo kwiingxaki eziprekthikhali zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu amanyeneyo, umzekelo, ½, ¼, 1/5 njalo njalo.	Sombulula uze ucacise izisombululo kwiingxaki eziprekthikhali zezibalo eziquka ukwaba ngokulinganayo kukhokelele kwizisombululo eziquka amaqhezu amanyeneyo, umzekelo, ½, ¼, 1/3, 1/5 njalo njalo.	Ugxinininiso kwiingxaki zamagama ezingezibalo zamagama ezingamaqhezu kule kota kuvumela abafundi bakwazi: • Ukwaba izinto ngokulinganayo; • Ukuxela izicwili zamaqhezu; • Ukufumana amaqhezu kwizinto eziphelelelyo; kunye • Ukuqaphela ukuba iqhezu yinxalenye yokuphelelelyo; kunye • Ukubhala amaqhezu njengesithathu esinye. ngale kota abafundi baxela izithathu nezine. Kubalulekile ukuba abafundi bafundiswe ngamaqhezu ngaphandle kwesiqingatha esinye nekota enye. Imizekelo yokubala izibalo ezinokwenziwa ngekota: • Abahlobo abathandathu babelana ngeswiti zemicinga ezisi-7 ngokulinganayo. Zoba umfanekiso ukubonisa impendulo yakho. Thelekisa impendulo yakho kunye neyomhlobo wakho. • Abahlobo abali-9 babelana ngeswiti zemicinga ezisi-7 ngokulinganayo. Zoba umfanekiso ukubonisa impendulo yakho. Thelekisa impendulo yakho kunye neyomhlobo wakho. • Ikota yesi-1 Jonga kumanqaku akwikota yesi-2.	
1.11 **Imali**	• Ukuqaphela nokwalatha imali eziinkozo yaseMzantsi Afrika (i-5c, 10c, 20c, 50c, R1, R2, R5 nengamaphepha). i-R10, R20, R50 • Sombulula iingxaki zezemali eziquka iitotali netshintshi yama-R99 kunye neesenti ukuya kuma-90c.	• Ukuqaphela nokwalatha imali eziinkozo yaseMzantsi Afrika (i-5c, 10c, 20c, 50c, R1, R2, R5 nengamaphepha). i-R10, R20, R50 • Ukusombulula iingxaki zezemali eziquka iitotali netshintshi ukuya kwi-75c okanye iirandi ukuya kwi-R75.	**Imizekelo yemibuzo enokubuzwa:** • Abafundi abangama-35 notitshala omnye uya kuhambo lwesikolo ukutyelela kuthango lwendalo. Isikolo sihlawula ama-R1.20 ngomfundi ukungena kwithango lendalo. Makubhatalwe malini? • UMaHewu uthenge iilofu ezi-2 zesonka ethengela usapho lwakhe usuku ngalunye. Ilofu Ibiza ama-R4.99. Uchitha malini ngeeveki ezi-5? Jonga kumanqaku akwikota yesi-2.	
IZIBALO EZINGALALULWA MEKO				

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.12 **Iindlela / ubuchule bokubala** (Iindlela okanye ubuchule)	Sebenzisa iindlela ngeendlela ezilandelayo zokubala xa usenza izibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Sebenzisa iindlela ngeendlela ezilandelayo zokubala xa usenza izibalo: • Imizobo okanye izixhobo eziphathekayo, umzekelo, iikhawunta / izixhobo zokubala. • Ukwakha nokucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani.	Abafundi kulindeleke ukuba basombulule izibalo ngokungekho mxholweni besebenzisa ezi ndlela zilandelayo: • Ukwakha okanye ukucazulula amanani. • Ukuphindaphinda nokwahlulahlula amanani. • Imigca-manani. • Jonga kumanqaku akwikota yesi-2.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha.**	• Yongeza kuma-99 • Thabatha kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+,-,=,☐) • Qhelanisa neebhondi zamanani ukuya kuma-20	• Yongeza kuma-75 • Thabatha kuma-75 • Sebenzisa iisimboli ezifanelekileyo (+,-,=,☐) • Qhelanisa neebhondi zamanani ukuya kuma-20.	Jonga kumanqaku akwikota yesi-2. Abafundi baqhubeka ukucazulula amanani nokuzithemba kwizicwangciso-qhinga zokurekhoda. Iimethodi ezikhoyo zokubonisa izibalo zokudibanisa nokuthabatha. **Ukucazulula inani libe zizicwilana ezincinane ukwenza izibalo zibe lula.** **Ukusebenzisa ulwazi lwexabiso lendawo elimi kuyo inani ngokulahlula libe zizishumi nezinye.** Ukudibanisa amagama amivo mibini ngokwahlula amanani amabini. 33 + 36 = ☐ 33 + 36 = (30 + 3) + (30 + 6) = (30 + 30) + (3 + 6) = 60 + 9 = 69 **Ukudibanisa ngokwahlula inani elinye.** 33 + 36 = ☐ 33 + (30 + 6) 33 + 30 → 63 + 6 = 69 Abafundi bahlula inani ngeendlela ezibalungeleyo. Oku kuthetha ukuba baza kukwenza oku ngeendlela ezahlukeneyo: 33 + 36 = ☐ 33 + (10 + 10 + 10 + 6) 33 + 10 → 43 + 10 → 53 + 10 → 63 + 6 = 69 **Ukuthabatha** • Ukwahlula amanani amabini. 75 – 54 = ☐ 75 – 54 = (70 + 7) – (50 + 4) = (70 – 50) + (7 – 4) = 20 + 3 = 23	

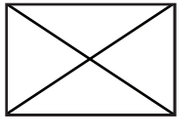
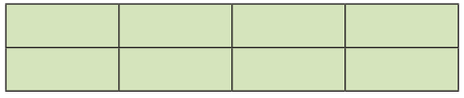
IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha.**	• Yongeza kuma-99 • Thabatha kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+,-,=,☐) • Qhelanisa neebhondi zamanani ukuya kuma-20	• Yongeza kuma-75 • Thabatha kuma-75 • Sebenzisa iisimboli ezifanelekileyo (+,-,=,☐) • Qhelanisa neebhondi zamanani ukuya kuma-20.	• Ukuthabatha ngokwahlula inani elinye. 75 – 54 = ☐ 75 – (50 + 4) 75 – 50 → 27 – 4 = 23 Kufuneka uyilindele ukuba abafundi bangawacazulula amanani ngeendlela ezahlukeneyo ukwenzela ukuba kube lula kubo ukubala: 75- 54 = ☐ 75- (20 + 20 + 10 + 6) 75- 20 → 57 – 20 → 37- 10 → 27- 4 = 23 **Ukusebenzisa ukwenza iziqingatha ukwahlula inani.** 59 + 12 59 + (6 + 6) 59 + 6 → 65 + 6 = 71 **Ukusebenzisa ulwazi osele unalo njengobuchule** Le ndlela yokubala iboniswe ngasezantsi ivumela abafundi bakwazi ukubala ngokuseSikweni kwaye bawazi namanani. Ukuziqhelanisa nale ndlela yokubala ingasezantsi kuza kukhuthaza abafundi bakwazi ukucinga nzulu ngolwalamano phakathi kwamanani kwaye kufuneka ufundise abafundi ukuba bangakwazi ukusebenzisa ulwazi lwabo ukubancedisa babale. **Ukubala uye phambili,ubale ubuya umva** 68 – 59 = ☐ Ukubala uye phambili ngezinye ukusuka kuma-59 yindlela echanekileyo kuba amanani asondelelene kwelinye. **Chonga uphindo kabini olusondeleyo.** 34 + 35 ukucacisa ukuba u-34 uphindaphindiwe kunye no-1 okanye u-35 uphindaphindiwe kwemka u-1. 34 + 34 + 1 Abafundi kungafuneka barekhode izicwangciso-qhinga besebenzisa iintolo: 34 + (30 + 4) + 1 34 + 30 → 64 + 4 → 68 + 1 = 69	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha.**	• Yongeza kuma-99 • Thabatha kuma-99 • Sebenzisa iisimboli ezifanelekileyo (+,-,=,☐) • Qhelanisa neebhondi zamanani ukuya kuma-20	• Yongeza kuma-75 • Thabatha kuma-75 • Sebenzisa iisimboli ezifanelekileyo (+,-,=,☐) • Qhelanisa neebhondi zamanani ukuya kuma-20.	**Tshintsha inani libe sisiphindaphindi seshumi uze emva koko uthabathe okanye udibanise imivo.** Bala uye phambili okanye emva ukuya kwi-10. 58 + 19 = ☐ Apha Abafundi kufuneka bazixelele ukuba baneendlela ezimbini. Tshintsha ama-58 okanye 19 aye kufikelela kwisiphindaphindwa esingu10. Bayazikhethela. Isibalo sinokubhalwa ngolu hlobo: 58 + 19 = 58 + 20 - 1 58 + 20 → 78 – 1 = 77 Abanye Abafundi banokucazulula u-20 abe ngamaqela ama-2 e-10 ukubala ngokuchanekileyo.	

<table>
<tr><th>IZIHLOKO</th><th>IINQGIQO NEZAKHONO
IIMFUNO ZOKUPHELA KONYAKA</th><th>IINGQOQO NEZAKHONO
UGXININISO LWEKOTA 3</th><th>AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA</th><th>IXESHA
(Kwizifundo zeyure e-1 nemizuzu engama-24)</th></tr>
<tr>
<td>1.14
Ukudibanisa okuphindiweyo oukhokelela kuphinda phindo lwamanani.</td>
<td>• Ukuphindaphinda amanani ngo-1 ku-10 ngo-1, 2, 5, 3 no-4.
• Sebenzisa iisimboli ezifanelekileyo (+, x, =, ☐)</td>
<td>• Ukuphindaphinda amanani ngo-1 ku-10 ngo-2, 5, 4.
• Sebenzisa iisimboli ezifanelekileyo (+, x, =, ☐)</td>
<td>Yintoni eyahlukileyo kwikota yesi-2?
ngale kota yesithathu abafundi baziqhelanisa ngengqiqo ngophindaphindo nokusebenzisa igridi yophindaphindo okokuqala.
Bayaqhubekeka:
Ukurekhodisha okulandelayo:
1 amaqela esi-2 ngu-2 okanye Ka-1 ngo-2 ngu-2 okanye 1 x 2 = 4
2 amaqela esi-2 ngu-4 okanye Ka-2 ngo-2 ngu- 4 okanye 2 x 2 = 4
3 amaqela esi-2 ngu-6 okanye Ka-3 ngo-2 ngu-6 okanye 2 x 2 = 6
ngale kota abafundi baqala ngokuphindaphinda ngo-4. Ukuphindaphinda ngo-2 no-5 kuyaqhubekeka ukwenziwa.
Imizobo emininzi yophindaphindo kufanele inikwe kwaye urekhodo oluninzi lwenziwe kwincwadi yokubhal yaseklasini. Ingqiqo yokuqonda inokubethelelwa kwiincwadi yokusebenza. imigca-manani, iiflowu-dayagram neetheyibhile zinokusetyenziswa ukwakha ingqiqo ngezibalo. Abafundi kufanele banikwe izivakalisi zamanani ezinikiweyo ukugqibezela:
6 x 2 = ☐
5 x 7 = ☐
4 x 6 = ☐
Abafundi kufanele basebenzise igridi yophindaphindo ukufumana iimpendulo. Oku kuza kuncedisana nabo ukufunda nokuqonda itheyibhile nophindaphindo
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<tr><th>×</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr>
<tr><td>2</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td><td>12</td><td>14</td><td>16</td><td>18</td><td>20</td></tr>
<tr><td>4</td><td>4</td><td>8</td><td>12</td><td>14</td><td>20</td><td>24</td><td>28</td><td>32</td><td>26</td><td>40</td></tr>
<tr><td>5</td><td>5</td><td>10</td><td>15</td><td>20</td><td>25</td><td>30</td><td>35</td><td>40</td><td>45</td><td>50</td></tr>
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IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.16 **Izibalo zentloko.**	Ingqiqo ngamanani: Uluhlu lwama-99 • Cwangcisa iseti enikiweyo yamanani akhethiweyo. • ukuthelekisa amanani ukuya kutsho ku-99 uze uxele 1, 2,2 3, 4, 5 ne-10 ungaphezulu okanye ungaphantsi. Ukukhumbula ngokukhawuleza: • Izinto eziyinyaniso ngokudibanisa nokuthabatha ukuya kuma-20. • Dibanisa okanye uthabathe izininzi zika-10 ukusuka ku-0 ukuya kwi-100. Izicwangciso-qhinga zokubala Sebenzisa ubuchule bokubala ukudibanisa nokuthabatha ngokukuko: • Beka inani elikhulwana kuqala ukuze ubale ukuya phambili okanye ngasemva. • Umgca-manani. • Ukuphindaphinda nokwahlulahlula amanani.	**Ingqiqo ngamanani: Uluhlu lwama-75** • Cwangcisa iseti enikiweyo yamanani akhethiweyo. • ukuthelekisa amanani ukuya kutsho ku-75 uze uxele 1, 2,2 3, 4, 5 ne-10 ungaphezulu okanye ungaphantsi. **Ukukhumbula ngokukhawuleza:** • Khumbuza ngezinto eziyinyaniso ngokudibanisa nokuthabatha ukuya ku-15. • Dibanisa okanye uthabathe izininzi zika-10 ukusuka ku-0 ukuya ku-50. **Ubuchule bokubala ngentloko** • Sebenzisa ubuchule bokubala ukudibanisa nokuthabatha ngokukuko: • Beka inani elikhulwana kuqala ukuze ubale ukuya phambili okanye ngasemva. • Umgca-manani. • Ukuphindaphinda nokwahlulahlula amanani.	**Imizekelo yemibuzo enokubuzwa:** **Ingqiqo ngamanani:** **Amagama amanani neesimboli** Ukuphakamisa ikhadi okanye ukubhala phantsi igama lenani. Ukukhetha umntwana oza kubhala inyumerali ematanisiweyo. **Ngaphezulu okanye ngaphantsi** Yintoni • u-1 ungaphantsi kwama-45 • u-1 ungaphezu kwama-69 • u-5 ungaphantsi kwama-36 • u-10 ungaphezu kwama-30 Nguwuphi unobumba wesi-5 kwi-alfabhethi? Yiyiphi inyanga yesi-9 yonyaka? **Ukucwangcisa nokuthelekisa.** Liliphi inani elingaphezulu: Kwama-21 okanye ama-121? Ndinike inani eliphakathi kwama-154 nama-159. **Izinto eziyinyaniso ngokudibanisa nokuthabatha.** • Yazi ngentloko zonke iibhondi zokuthabatha nokudibanisa amanani ukuya kutsho ku-20. □ + △ = 20 □ + △ = 16 18 = □ - △ Ukudibanisa nokuthabatha kuwo onke amanani ukuya kutsho ku-15. Umzekelo: 1 + 14 = 15 14 + 1 = 15 2 + 13 = 12 13 + 2 = 15 15 - 4 = 11 15 - 11 = 4 15 - 5 = 10 15 - 10 = 5	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.16 **Izibalo zentloko.**	• Ukwakha nokucazulula amanani. • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha.	• Ukwakha nokucazulula amanani. • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha.	Zikhumbuze ngokukhawuleza ngeziphindaphindwa zodibaniso ukuya kutsho ku-15. Oku kufanele kuquke izinto eziyinyaniso ngongqinelwano nothabatho. • 1 + 1 = 2 • 2 + 2 = 4 • 3 + 3 = 6 • 4 + 4 = 8 Ndibonise inani ukongenza ukwenza u-15 (bhala phantsi okanye usebenzise ixabiso lendawo yenani okanye oononotsheluza). • 8 • 2 • 9 Ndibonise inani elishiyekileyo xa..... Lithathwe ku-15 (ukubhala phantsi okanye ukusebenzisa ixabiso lendawo yenani okanye oonotsheluza) • 5 • 13 • 0 **Izicwangciso-qhinga zokubala:** Jonga kumanqaku akwikota yesi-2.	

IZIHLOKO	IINQGIQO NEZAKHONO IIMFUNO ZOKUPHELA KONYAKA	IINGQOQO NEZAKHONO UGXININISO LWEKOTA 3	AMANQAKU ENGCACISO OKANYE IZIKHOKHELO ZOKUFUNDA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
1.17 **Amaqhezu.**	• Sebenzisa uze uxele amaqhezu amanyeneyo ngokwemixholo eqhelekileyo kuquka iziqingatha, iikota, izithathu nezine. • Qaphela amaqhezu ngokodidi lomzobi. • Bhala amaqhezu njengesiqingatha esi-1, nezithathu ezi-2.	• Sebenzisa uze uxele amaqhezu amanyeneyo ngokwemixholo eqhelekileyo kuquka iziqingatha, iikota, izithathu nezine. • Qaphela amaqhezu ngokodidi lomzobi. • Bhala amaqhezu njengesiqingatha esi-1, nezithathu ezi-2.	**Yintoni eyahlukileyo kwikota yesi-2?** ngale kota ingqalelo yabafundi igxininisa kwindlela igama leqhezu elinxulunyaniswe ngayo nenani lezicwili ezilinganayo nokupheleleyo kuyohlulwahlulwa. iindidi zedayagram zinokusetyenziswa ukwakha ingqiqo epheleleyo. Umzekelo:  Ezi ndidi zemibuzo zilandelayo zinokubuzwa: Zingaphi izicwili ezilinganayo ezikhoyo? Siyibiza ngokuba yintoni inxenye nganye?  Zingaphi izicwili ezilinganayo ezikhoyo? Siyibiza ngokuba yintoni inxenye nganye?  Zingaphi izicwili ezilinganayo ezikhoyo? Siyibiza ngokuba yintoni inxenye nganye? Yiyiphi imilo ebonisa ezi zicwili zilandelayo: Ezi ndidi zemisebenzi zikhuthaza: • Ukwazi ukuba amaqhezu anamalungu alinganayo; • ukwalatha izicwili zamaqhezu; kunye • Ukuxela izicwili zamaqhezu. Ukubhala. Asikwazi kufundisa Abafundi ukubhala isimboli yamaqhezu. Abafundi bafunda ngendlela yokuleyibhelisha izicwili zamaqhesu njengekota yoku-1, isihlanu souk-1.	

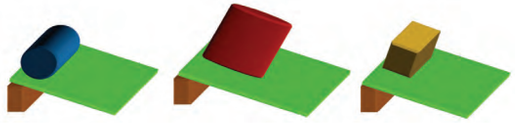
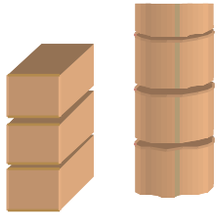
IBANGA 2 IKOTA 3 2. IIPATENI, II-FANSHINI NEALJIBRA				
IZIHLOKO	**IIKHONSEPTHI NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO** **UGQALISO LWEKOTA 3**	**AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA**	**IXESHA** (Kwizifundo zeyure e-1 nemizuzu engama-24)
2.1 **Ilpateni zejiyometri**	**Kopa, yandisa uze uchaze** **Kopa, yandisa uze uchaze** ngamagama • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwe ngemizobo eyimigca imilo nezinto. **Yila ezakho iipateni** Yila ezakho iipateni zejiyometri • ezenziwe ngezinto eziphathekayo. • ezenziwe ngemizobo eyimigca imilo nezinto **Iipateni ezisingqongileyo** Chonga uchaze ngamagama ukope iipateni zejiyometri • kwindalo • Ezivela kwintlalo yanamhlanje • Ezivela kwinkcubeko yamandulo	**Kopa, yandisa uze uchaze** **Kopa, yandisa uze uchaze** ngamagama • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwe ngemizobo eyimigca imilo nezinto **Yila ezakho iipateni** Yila ezakho iipateni zejiyometri • ezenziwe ngezinto eziphathekayo. • ezenziwe ngemizobo eyimigca imilo nezinto	Mabaqhubekeke banikwe Abafundi iipateni eziziindidi ndidi phantsi kommandla obekelwe eli banga. Ikota 2. Jonga manqaku abekelwe ikota 2. Nika Abafundi ithuba lokukopa ipateni kuqala, uze wandise ekugqibeleni uchaze ipateni. Xa kungoku bafanele ukuba bayakwazi ukuchaza ipateni ngaphandle koncedo lwemibuzo esisikhokelo .Mabaqhubekeke ukugqala ukukhulisa ulwimi olufunekayo ukuze babe nako ukuchaza iipateni.	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISO LWEKOTA 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (Kwizifundo zeyure e-1 nemizuzu engama-24)
2.2 **Iipateni zamanani**	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze amanani alandelelanayo ukuya kuma ku-200 **Yila ezakho iipateni** **Yila ezakho iipateni zamanani**	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze amanani ngokulandelelanisa ukuya kuma ebuncincini 180 Ukulandelelanisa makubonakalise ukubuya umva nokubala ukuya phambili.: • ngo1ukusuka kulo naliphi na inani phakathi ko- 0 no 180 • 10s ukusukela kuso nasiphi na isiphindwa sika 10 phakathi ko- 0 no180 • 5s ukusukela kuso nasiphi na isiphindwa sika 5 phakathi ko- 0 no180 • 2s ukusukela kuso nasiphi na isiphindwa sika 2 phakathi ko- 0 no180 • 3s no 4s ukusukela kuso nasiphi na isiphindwa sika 3 no 4 phakathi ko- 0 no 180 **Yenza ezakho iipateni zamanani.**	Jonga manqaku ekota yokuqala kodwa wangeze **uludwe** ukuwusa ku-Jonga manqaku ekota yoku-1, 180.	

IBANGA 2 IKOTA 3 2. IIPATENI, II-FANSHINI NEALJIBRA				
IZIHLOKO	**IIKHONSEPTHI NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO** **UGQALISO LWEKOTA 3**	**AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA**	**IXESHA** **(NGEYURE)**
2.1 **Ilpateni zejiyometri**	**Kopa, yandisa uze uchaze** **Kopa, yandisa uze uchaze** ngamagama • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwe ngemizobo eyimigca imilo nezinto. **Yila ezakho iipateni** Yila ezakho iipateni zejiyometri • ezenziwe ngezinto eziphathekayo. • ezenziwe ngemizobo eyimigca imilo nezinto **Iipateni ezisingqongileyo** Chonga uchaze ngamagama ukope iipateni zejiyometri • kwindalo • Ezivela kwintlalo yanamhlanje • Ezivela kwinkcubeko yamandulo	**Kopa, yandisa uze uchaze** **Kopa, yandisa uze uchaze** ngamagama • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwe ngemizobo eyimigca imilo nezinto **Yila ezakho iipateni** Yila ezakho iipateni zejiyometri • ezenziwe ngezinto eziphathekayo. • ezenziwe ngemizobo eyimigca imilo nezinto	Mabaqhubekeke banikwe abafundi iipateni eziziindidi ndidi phantsi kommandla obekelwe eli banga. Ikota 2. Jonga manqaku abekelwe ikota 2. Nika abafundi ithuba lokukopa ipateni kuqala, uze wandise ekugqibeleni uchaze ipateni. Xa kungoku bafanele ukuba bayakwazi ukuchaza ipateni ngaphandle koncedo lwemibuzo esisikhokelo .Mabaqhubekeke ukugqala ukukhulisa ulwimi olufunekayo ukuze babe nako ukuchaza iipateni.	1 isifundo

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISO LWEKOTA 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (NGEYURE)
2.2 **Iipateni zamanani**	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze amanani alandelelanayo ukuya kuma ku-200 **Yila ezakho iipateni** **Yila ezakho iipateni zamanani**	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze amanani ngokulandelelanisa ukuya kuma ebuncincini 180 Ukulandelelanisa makubonakalise ukubuya umva nokubala ukuya phambili.: • ngo1ukusuka kulo naliphi na inani phakathi kwe 0 nama180 • 10 ukusukela kuso nasiphi na isiphindwa sika 10 phakathi ko- 0 nama-180 • 5 ukusukela kuso nasiphi na isiphindwa sika 5 phakathi ko- 0 no180 • 2s ukusukela kuso nasiphi na isiphindwa sika 2 phakathi kwe- 0 nama-180 • 3 no 4 ukusukela kuso nasiphi na isiphindwa sika 3 ne 4 phakathi kwe- 0 nama -180 **Yenza ezakho iipateni zamanani.**	Jonga manqaku ekota yokuqala kodwa wangeze **uludwe** ukuwusa ku-Jonga manqaku ekota yoku-1, 180.	3 izifundo

IBANGA 2 IKOTA 3 3. ISITHUBA NESIMO				
IZIHLOKO	**IIKHONSEPTHI NEZAKHONO:** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO:** **Ugqaliso lwekota yesi 3**	**AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA**	**IXESHA** (in izifundo seyure enemizuzu engama-24)
3.1 **Indawo- bume nembono nakalo**	**Ulwimi lwendawo-bume** Chaza indawo-bume yento ngokunxulumene nenye umzekelo phezu kwe, phambi kwe, emva kwe, ecaleni kwe/ngakwi . **Indawo- bume** Tshatisa amacala ezinto zemihla ngemihla. **Indawo nezalathiso** Landela imiyalelo yokujikelelza kwigumibi lokufundela.	**Indawo –bume nembonakalo** • Tshatisa amacala ezinto ezinye zemihla ngemihla. **Indawo nezalathiso** • Landela izalathiso ukujikeleza kwigumbi lokufundela.	**Okucetyiswa ukuba kugxininiswe kuko kwikota yesi 3: Indawo- bume nemboniselo** **Yintoni elahluke ngayo eli banga kwele-1?** Kwibanga lesi- 2 Abafundi bayaziqhelisa badibanise oko sebekufundile malunga nokutshatisa izimvo ezahlukileyo zezinto zemihla ngemihla. **Indawo bume namacala ovele ngakuwo** Abafundi kwibanga elisisiseko kufuneka baqonde ukuba izinto zikhangeleka ngokwahlukieyo ngokwecala nendawo ovele ngakulo Abafundi bangayijonga kancinci into yookuba izinto ezifana neemoto zikhangeleka zincinci xa zikude kakhulu. Xa besebenza ngeencwadi ezinemifanekiso kufuneka babde baqonde ukuba izinto xa zisondeziwe zikhangeleka zinkulu kunaxa zibhekelisiwe . Ngexesha lokunika ingqwalasela kumaqela athile, Abafundi mabenziwe babeke izandla zabo bephamba umfanekiso /umbono wabo wezinto ezikude kakhulu. Kwibanga -2 Abafundi mabanikwe imisebenzi eza kubenza batshatise ukwahluka kwamacala ngokwe cala avele ngakulo umntwana.(xa evele ngaphezulu,xa evele ecaleni, naxa evele ngaphambili) kwizinto zemihla ngemihla. Oku kuya kubanceda Abafundi ukutolika imifanekiso yezinto zejiyometri ezijongwe kumacala awahlukileyo.	1 izifundo

IZIHLOKO	IIKHONSEPTHI NEZAKHONO: OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO: Ugqaliso lwekota yesi 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (in izifundo seyure enemizuzu engama-24)
3.2 **Izinto ezinokwakheka kuka - 3-D**	**Imimandla yezinto/ yeemilo** Ukunakana uthiye izinto ezinokwakheka kuka 3-D izinto kwigumbi lokufundela nakwimifanekiso. • Imilo ezibubhola, (into engqukuva eqinileyo) • Imilo zebhokisi (iprizimu) • iisilinda **IImpawu zezinto** Chaza, hlela uthelekisa 3-D izinto ngokwe; • ubungakanani • izinto eziqengqelekayo • izinto ezitshebelezayo **Imisebenzi enikwa ingqalelo** Qwalasela akhe izinto abazinikiweyo ezinokwakheka kuka-3-D-D izinto esebenzisa izinto eziphathekayo ezinje ngokusika imilo ezinokwkheka kuka ye- 2-D, iibolko zokwakha,ukusebenzisa okulahlwayo kwakhona izinto zokwakha kwakunye nezinye izinto zejiyometri ezinokwakheka kuka 3-D	**Imimandla yezinto/ yeemilo** Ukunakana uthiye izinto ezinokwakheka kuka- 3-D izinto kwigumbi lokufundela nakwimifanekiso. • Imilo ezibubhola, (into engqukuva eqinileyo) • Imilo zebhokisi (iprizimu) • iisilinda **IImpawu zezinto** Chaza, hlela uze uthelekise izinto ezinokwakheka kuka 3-D ngoko; • bungakanani • izinto eziqengqelekayo • izinto ezitshebelezayo	**Yintoni entsha kule kota 3:** Kongezwe iisilinda kwizinto ezijongwayo. **Izinto ezinokwakheka kuka ye-3-D kwibanga 2** Abafundi basebenza ngge • Bhola nezinto ezimile njengebhola; • iisilinda kunye nezinye izinto ezimile njengesilinda; kwakunye • neebhokisi eziziindidi ngeendidi kunye nezinto ezimile njenge iprizimu ebuxande okanye ibhokisi esikwere. **Ukugqala iimpawu zezinto ezinokwkheka kuka-3-D Izinto: Eziqengqelekayo nezitshebelezayo** Oku kuqhubeka ukusuka kwibanga loku-1 nakwikota yoku-1, intonayo ngoku kongezwe iisilinda.  Abafundi banga phanda iindlela zokupakisha ezi zinto besenza iintatyana kwakunye nezakhiwo ezibheke phezulu ngeebhola okanye iibhokisi esebenzisa iibhola zodwa, okanye iibhokisi zodwa,okanye iisilinda zodwa. 	2 izifundo

IZIHLOKO	IIKHONSEPTHI NEZAKHONO: OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO: Ugqaliso lwekota yesi 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (in izifundo seyure enemizuzu engama-24)
3.2 **Izinto ezinokwakheka kuka - 3-D**	**Imimandla yezinto/ yeemilo** Ukunakana uthiye izinto ezinokwakheka kuka 3-D izinto kwigumbi lokufundela nakwimifanekiso. • Imilo ezibubhola, (into engqukuva eqinileyo) • Imilo zebhokisi (iprizimu) • iisilinda **IImpawu zezinto** Chaza, hlela uthelekisa 3-D izinto ngokwe; • ubungakanani • izinto eziqengqelekayo • izinto ezitshebelezayo **Imisebenzi enikwa ingqalelo** Qwalasela akhe izinto abazinikiweyo ezinokwakheka kuka-3-D-D izinto esebenzisa izinto eziphathekayo ezinje ngokusika imilo ezinokwkheka kuka ye- 2-D, iibolko zokwakha,ukusebenzisa okulahlwayo kwakhona izinto zokwakha kwakunye nezinye izinto zejiyometri ezinokwakheka kuka 3-D	**Imimandla yezinto/ yeemilo** Ukunakana uthiye izinto ezinokwakheka kuka- 3-D izinto kwigumbi lokufundela nakwimifanekiso. • Imilo ezibubhola, (into engqukuva eqinileyo) • Imilo zebhokisi (iprizimu) • iisilinda **IImpawu zezinto** Chaza, hlela uze uthelekise izinto ezinokwakheka kuka 3-D ngoko; • bungakanani • izinto eziqengqelekayo • izinto ezitshebelezayo	**Ukunakana iibhola zithiywe amagama (into engqukuva eqinileyo) neebhokisi (iprizimu) kunye neesilinda.** Abafundi baqhubekeke ukuthiya,hlela baze bahlanganise izinto, kodwa ngoku kongezwe iisilinda. Abafundi mabanikwe imimandla yezinto ezimile njenge: • into engqukuva eqinileyo umz. iibhola okanye imilinganiselo eyahlukileyo, amabhastile, iiorenji njl. • iprizimu umz. iibhloko, izitena, iibhokisi ezinemilinganiselo eyahliklieyo umz. iibhokisi zematshisi,iibhokisi sesiriyeli, iibhokisi zeti, neebhikisi zentlama yamazinyo; kunye • neesilinda kuquka ezinde nezine nezibhityileyo umz. umzekelo ezikwilo yemibhobho ezimile okwesilinda, amaqweqwe ayimiphakathi kumaphepha okusula aziindidi ngeendidi ezibude nobubanzi obahlukeneyo.umz. isipoponi sepolishi yezihlangu,nezesniff njl. Abafundi bangafumana izinto ezimile njengebhola (nto engqukuva eqinileyo), okanye ezimile njenge (iprizimu) okanye ezimile njengesilinda xa benikwe ingqokelela yezinto. Abafundi mabafune babonise izinto ezimile njengebhokisi (iprizimu) eklasini. umz. “itoti yekofu emile njengesilinda Ngexesha lokuzisebenzela bodwa Abafundi bangaqhubekeka • besenza iibhola • neesilinda kunye nezinto ezikwimilo yebhokisi ezifana ne (iprizimu) ezenziwe ngomdongwe. **Imisebenzi ebhalwayo** Nangona lo msebenzi wezinto ezinokwakheka kuka-3-D kulula ukuwenza ngezandla kuyimfuneko ukuwuqukumbela ngemisetyenzana ebhaliweyo **Ulwimi** Baqhubekeke ukukhulisela Abafundi’ ekukwazini ukuthetha ngezinto ezimili enokwakheka kuka- 3-D3-D: Jonga kwikota yokuqala.	2 izifundo

IZIHLOKO	IIKHONSEPTHI NEZAKHONO: OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO: Ugqaliso lwekota yesi 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (in izifundo seyure enemizuzu engama-24)
3.3 **Ezinokwa khekha kuka-2-D**	**Imimandla yeemilo** • izangqa • oonxantathu • izikwere • iingxande **Iimpawu zemilo** Chaza, hlela uze uthelekisa iimilo ezinokwakheka kuka-2-D malunga ne: • Imilo • Amacala athe tse • Amacala angqukuva	Akukho migqalisela icetyiswayo malunga neemilo ezinokwakheka kuka-**2-D** kule kota yesi- 2. Kodwa kunjalo umsebenzi okwimilo ezinokwakheka kuka- 2-D ungaqukunjelwa ngemisetyenzana ebhalwayo ngelixa labo lokuzisebenzela bengaqhutywa. Abafundi bangaqhubekeka besenza imifanekiso enokwakheka kuka- 2-D ngexesha lokuzifundela bengaqhutywa nangexesha labo lezifundo zenkcubeko.		

IBANGA LESI-2 IKOTA YESI-3 4. UKULINGANISA				
IZIHLOKO	**IIKHONSEPTHI NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO** **IMIGQALISO YEKOTA - 3**	**AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA**	**IXESHA** (in izifundo of 1 hour 24 minutes)
4.1 **Ixesha**	**Ukuxela ixesha** • Xela alandelelanise iintsuku zeveki • Xela ulandelelanise iinyanga zonyaka • Faka imihla yokuzalwa, imibhiyozo yenkolo,iiholide zikawonke wonke, iziganeko ezingembali, iziganeko zesikolo kwikhalenda **Bala ubude bexesha nokudlula kwamaxesha.** Sebenzisa ikhalenda ukuba achaze ubude bexesha ngeentsuku okanye iiveki. Sebenzisa iwotshi ukubala ubude bexesha ngeeyure okanye iziqingatha zeyure kwakunye nekota zeyure.	**Ukuxela ixesha** • Xela alandelelanise iintsuku zeveki • Xela ulandelelanise iinyanga zonyaka • Faka imihla yokuzalwa, imibhiyozo yenkolo,iiholide zikawonke wonke, iziganeko ezingembali iziganeko zesikolo kwikhalenda • Xela ixesha ngokweeyure ezili-12 ngeeyure,ngamacala eeyure, ngeziqingatha okanye imikhono yeeyure, ngemizuzu kwiiwotshi zosiba. **Bala ubude bexesha nokudlula kwamaxesha.** Sebenzisa ikhalenda ukuba achaze ubude bexesha ngeentsuku okanye iiveki. • Sebenzisa iwotshi ukubala ubude bexesha ngeeyure okanye iziqingatha zeyure kwakunye nekota zeyure	Abafundi baqhubekeke ukuziqhelisa kuthetha ngobungakanani bexesha nokulandelelanisa amaxesha. Ngexesha lokufundisa uwonke wonke nangexesha lokunika ingqwalasela kumaqela athile, Abafundi baqhubekeke ukuthetha malunga neentsuku zeveki, iinyanga zonyaka kunye nomhla wemini kanye kanye le imiyo kanti nezinye ezisezayo. Abafundi baqhubekeke ukufaka oku kulandelayo kwikhalenda njengoko iziganeko zifika ngokufika. • Imihla yokuzalwa • Imibhiyozo yenkolo • Iziganeko ezingembali • Iziganeko zesikolo • Iiholide zikawonke wonke Ngexesha labo lukuzifundela Abafundi baqhubekeke ukulandelelanisa izehlo ngokokulandelana kwazo eminini mihla le, imifanekiso yezehlo ngokulandelelanisa Abafundi basebenza ngemisetyenzana ezifana nokuxela ixesha ngeeyure kwakunye neziqingatha zeyure. **Yahluke ngantoni le kota kweyesibini 2?** • Ukuxela ixesha ngeyure,iziqingatha zayo kwakunye nenikhono neekota zeyure. Kule kota yesithathu kugqalwa ukuxea ixesha ngeeyure neziqingatha zayo kwaneekota zeyureA focus esebenzisa iwotshi yosiba. Oku kungagqalwa kwizifundo ezibini. Ukuxela ixesha makusoloko kusenziwa oko kwikota le. Umzekelo, Abafundi bangenziwa baxele ixesha xa kungena isikolo ,ngamaxesha ekhefu nangamaxesha okugoduka,or naxa kutshintsha isifundo.Khetha amaxesha apho iwotshhi ibonakalisa iiyure ezizeleyo iziqingatha iikota ngokubeka iwotshi enkulu esebenzayo kwigumbi lokufundela ukuze ihlale isemboniselweni yAbafundi ngalo lonke ixesha. Ungamane ubayalela ukuba bakubonise amaxesha awahlukileyo. umz. “ndibonise intsimbi yeshumi, ndibonise ukuba belime njani ixesha ngomkhono phambi koku.”	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO IMIGQALISO YEKOTA - 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (in izifundo of 1 hour 24 minutes)
4.1 **Ixesha**	**Ukuxela ixesha** • Xela alandelelanise iintsuku zeveki • Xela ulandelelanise iinyanga zonyaka • Faka imihla yokuzalwa, imibhiyozo yenkolo,iiholide zikawonke wonke, iziganeko ezingembali, iziganeko zesikolo kwikhalenda **Bala ubude bexesha nokudlula kwamaxesha.** Sebenzisa ikhalenda ukuba achaze ubude bexesha ngeentsuku okanye iiveki. Sebenzisa iwotshi ukubala ubude bexesha ngeeyure okanye iziqingatha zeyure kwakunye nekota zeyure.	**Ukuxela ixesha** • Xela alandelelanise iintsuku zeveki • Xela ulandelelanise iinyanga zonyaka • Faka imihla yokuzalwa, imibhiyozo yenkolo,iiholide zikawonke wonke, iziganeko ezingembali iziganeko zesikolo kwikhalenda • Xela ixesha ngokweeyure ezili-12 ngeeyure,ngamacala eeyure, ngeziqingatha okanye imikhono yeeyure, ngemizuzu kwiiwotshi zosiba. **Bala ubude bexesha nokudlula kwamaxesha.** Sebenzisa ikhalenda ukuba achaze ubude bexesha ngeentsuku okanye iiveki. • Sebenzisa iwotshi ukubala ubude bexesha ngeeyure okanye iziqingatha zeyure kwakunye nekota zeyure	Abafundi mabenze izibalo besebenzisa kwa le wotshi umz. babonise ukuba ixesha kungentsimbi yeshumi elinesibini entloko okanye iya kube ingubani ixesha kwiiyure ezintathu emva koku. Basebenza ngokumana besusa iintsiba ezi zewotshi.(okanye bajonge kwiwotshi yeklasi okanye umfanekiso wewotshi) ukubala iimpendulo zabo zezibalo. Akukho mfuneko yokuba Abafundi babale ubude bexesha bengenabo ubuso bewotshi. • Sebenzisa iikhalenda ukubala bachaze ubude bexesha ngemini okanye ngeveki Abafundi mabagqale ukufunda iikhalenda. Abafundi bafunda iikhalenda. Bafumana banike imihla yeveki. Abafundi babala ubude bexesha ngeentsuku ngeeveki ngelixa bejonge ikhalenda. Calculate **Abafundi akulindelekanga ukuba babaliswe ngokuguqula ixesha ukusuka kwiveki ethile okany ephakathi kweentsuku.** **Abafundi abalindewllwanga ukuba kweli banga baza kwenza izibalo ezibandakanya ukubala ixesha phakathi kweentsuku bengenayo naloo khalenda.**	3 izifundo

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO IMIGQALISO YEKOTA - 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (in izifundo of 1 hour 24 minutes)
4.2 **Ubude**	**Ukulinganisa okungekho seSikweni** • Thelekelela, linganisa /kala, thelekisa, landelelanisa urekhode /bhala phantsi ubude esebenzisa iindlela ezingekho seSikweni kokukala umz. usebenzisa izandla hand spans, izantya, ubude beepensile, izinto zokubala njl-njl • Chaza ubude bezinto ngokubala uxele ubude ngeeyunithi ezingekho seSikweni. • Sebenzisa ulwimi lokuthelekisa umz. Ende kune, emfutshane, omde kuno, nebanzana/ ebanzi kunenye. **Ukuqalisa ukulinganisa/ kala okusesikweni** • Thelekelela, linganisa/ kala, thelekisa, landelelanisa urekhode ubude esebenzisa iimitha (ngeentonga ezizimitha okanye iintanjana ezibude buyimitha) njengemilinganiselo esesikweni yobude.	Kwikota yoku-1 kuyacetyiswa ukuba Abafundi bagqale ukuqikelela ukulinganisa, ukuthelekisa nokurekhoda ubude,ububanzi, ngemilinganiselo engekho seSikweni kodwa benze but baqikelele, balinganise, bathelekise baze barekhode ngemilinganiselo yemitha. Zonke ezi ndlela zokubala umlinganiselo wobude zingenziwa ngamaxesha Abafundi abazisebenzela ngawo apha ekoteni. Zombini ezi ndlela zokulinganisa ubude zingasetyenziswa ngexesha Abafundi abazisebenzela ngalo beziqhuba.Konke oku makuphelele ekubbhalweni kwiincwadi zabo. **Ukulinganisa ubude njengomxholo wokusombulula iingxaki nezibalo.** Ngexesha elabelwe amanani izibalo nolwalamano Abafundi bangasebenza kwimixholo esebenzisa. • Iindlela ezingekho seSikweni zokufumana ubude. umz. ziinyawo ezingama-27 ukuya kwiofisi yenqununu. Ziinyawo ezingama-36 ukuya esangweni lesikolo. Kungakudana kangakanani ukusuka kwisango lesikolo? • Ukulinganisa ubude ngeemitha. Thathela ingqalelo yemida okanye imimandla yeengxaki zezibalo ezisikelwe le kota.	

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4.3 **Umthamo**	**Ukubala imilinganiselo engekho seSikweni** • Qikelela/thelekelela, linganisa, thelekisa, landelelanisa uze urekhode ubunzima esebenzisa iindlela ezingekho seSikweni zokubala umlinganiselo wesikali umz. iibhloko,nezitena njl • Sebenzisa ulwimi ukuthetha ngokuthelekisa umz. khaphukhaphu, nzima, khaphukhaphana, nzinyana **Ukuqala iindlela ezisekweni zokuveyisha** • Qikelela/thelekelela, linganisa, thelekisa, landelelanisa uze urekhode ubunzima bezinto ezipakishelwe ukuthengiswa ngeekilogram umzekelo iikhilogram ezimbini zerayisi nekhilogram yengqolowa. • Babale umlinganiselo wabo ngeekhilogrem besebenzisa isikali sokuveyisha sasekhaya esihlala kwindlu yokuhlambela	Abafundi bangaqhubekeka beziqhelisa ukuqikelela, ukulinganisa, ukuthelekisa nokurekhoda ubunzima esebenzisa iindlela ezingekho seSikweni kunye nsikali sokulinganisa ukulingana kobunzima macala ngexesha lokuzisebenzelea bebodwa. **Ukulinganisa ubunzima njengomxholo wokusombulula iingxaki nokubala** Ngexesha elabelwe ukusebenza ngamanani,ukubala kunye nolwalamano Abafundi bangasombulula iingxaki kumxholo we; • Linganisa okungekho seSikweni yobunzima kunye; • nokulinganisa ubunzima ngeekilogrem Thathela ingqalelo imimandla elungele ikota kwanemimandla yeengxaki ezilungele ikota.		

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO IMIGQALISO YEKOTA - 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (in izifundo of 1 hour 24 minutes)
4.4 **Umthamo/ Ivolumu**	**Imilinganiselo engekho seSikweni** • Qikelela/thelekelela ulinganise, uthelekisa ulandelelanisa umthamo wesikhongozelo (okt. oko isikhongozelo sinako ukukuthwala xa sigcwele) ngokusebenzisa iindlela ezingekho seSikweni umz. Amacephe neekomityi. Chaza umthamo wesikhongozelo ngokubala uxele ukuba zingaphi iiyunithi ezingekho seSikweni ezikwazi ukugcwalisa eso sikhongozelo. umz. Ibhotile izala ziikomityi ezine **Ukuqalisa iindlela ezisesikweni zokulinganisela.** • Qikelela/thelekelela, linganisa, thelekisa, landelelanisa urekhode umthamo wezinto ngokulinganisa ngeelitha	**Imilinganiselo engekho seSikweni** • Qikelela/thelekelela ulinganise, uthelekisa ulandelelanisa umthamo wesikhongozelo (okt. oko isikhongozelo sinako ukukuthwala xa sigcwele) ngokusebenzisa iindlela ezingekho seSikweni umz. Amacephe neekomityi. Chaza umthamo wesikhongozelo ngokubala uxele ukuba zingaphi iiyunithi ezingekho seSikweni ezikwazi ukugcwalisa eso sikhongozelo. umz. Ibhotile izala ziikomityi ezine **Ukuqalisa iindlela ezisesikweni zokulinganisa** • Qikelela/thelekelela, linganisa, thelekisa, landelelanisa urekhode umthamo wezinto ngokulinganisa ngeelitha esebenzisa • Iibhotile ezinomthamo oyilitha. • Ijagi yomlinganiselo enamaqoqo omlinganiselo angeelitha ngaphandle	**Yintoni elahluke ngayo eli banga kwele-1?** Kwibanga 1 bekucetyiswe ukuba izifundo mazigqale uku; • Khulisa ulwimi lokuthetha ngomahluko kumyinge; • Thelekisa umyinge kwizikhongozelo ezibini ezifanayo/ ezithwala ngokulinganayo; • Thelekisa umyinge kwizikhongozelo ezibini ezingafaniyo ingakumbi ezinobubanzi okanye ezibhityileyio. • Imilinganiselo engekho seSikweni. Kwibanga lesi-2 Abafundi baqhubekeke ukuzinzisa ukugqala ekusebenziseni ezi ndlela zingekho seSikweni zokuthatha imlinganiselo yomyinge. Abafundi banokutsho bakhulise ukuqonda kwabo ubunzima ngokwelitha. **Yintoni umthamo ?** Umthamo ubhekisa koko kunokuthwalwa seso sikhongozelo(okanye ubungakanani besithuba sokuthwala esikhoyo esinokuthwala into ngaphakathi kuyo). Umyinge sisithuba esikhoyo esithathwa yinto kwisikhongozelo Oko kuthwelwe sisikhongozelo ngexesha elithile umzekelo. Ibhotile inako ukuba ibe nomthamo welitha kodwa ngexesha elithile ingangagcwali koko ibe nomyinge ongangekomityi yamanzi kuphela. **Ukuthatha imilinganiselo yomthamo esebenzisa iindlela ezingekho sesikweni** Abafundi bangafunda imithetho esisiseko ngeendlela zokulinganisa esebenzisa imilinganiselo engekho seSikweni. Makungajongelwa phantsi ukulinganisa ngemilinganiselo engekho seSikweni. Abafundi mabanikwe ithuba lokuthabatha umlinganiselo womyinge/umthamo esebenzisa imimandla yezinto njengemilinganiselo engekho seSikweni umz. iikomityi (ingekuba zezi zokwenza umlinganiselo), amacephe (ekunyanzelekanga abe ngawokulinganisa),iziciko zeebhotile ezifana neze litha ezimbini, iinkonkxa ezincinci,neebhotile ezincinci njl. Ukulinganisa umyinge nomthamo ngemilinganiselo engekho seSikweni ibandakanya ukubala ukuba iugcwalisa kanganphi okanye ugalela kangaphi ukuze ude ufumane owona mthamo okanye owona myinge ufunekayonvolves Abafundi mabaxelelwe ukuba mabasoloko besebenzisa iiyunithi zomlinganiselo qho xa bexela umlinganiselo wento. umz. amatispuni amanzi angama- 48 kwibhotile okanye kukho amanzi angaphantsi kwekomityi kwibhotile.	3 izifundo

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4.4 **Umthamo/ Ivolumu**	• Thelekisa, landelelanisa urekhode umthamo wemveliso ethengwayo ngokwendlela izikhongozelo ezibhalwe ngayo ngaphandle. umz. 2 litha zobisi, 1 litha yesiselo esibandayo, 5iilitha ezintlanu zepeyinti.	• Thelekisa, landelelanisa urekhode umthamo wemveliso ethengwayo ngokwendlela izikhongozelo ezibhalwe ngayo ngaphandle. umz. 2 litha zobisi, 1 litha yesiselo esibandayo, iilitha ezi-5 zepeyinti.	Bakuba Abafundi benze le milinganiselo amaxesha ngamaxesha, mabaqikelele umthamo okanye umyinge waloo nto. Ukuqikelela phambi kokuba kubalwe kubalulekile kodwa kungenzeka kuphela xa Abafundi sebeqalile ukwenza imilinganiselo ngaloo yunithi.. Abafundi kufuneka bakufundiswe ukuthelekelela ngokomyinge okanye umthamo mabasebenzise iyunithi enye rhoqo. Umzekelo, Ukuba iglasi ithwala iitispunieziyi- 20 zamanzi ize ikomityi ithwale i- 10 ishumil lamacephe amanzi awunakuthi iglasi ithwala amanzi amaninzi kunekomityi. Abafundi kufuneka banikwe izinto ezininzi zokuthatha umlinganiselo besebenzisa uludwe leeyunithi ezingamiselekangai ukuze • Baqale ukuqonda ukuba okuya iyunithi isibancinci kokukhona kufuneka ixesha elininzi ukusebenza ngayo (umzekelo ukugcwalisa okanye ukusebenzisa), umz. umyinge kule bhotile ungangamatispuni angama- 20 esenokuba yikomityi enye; • Uqalisa ukusebenzisa imilinganiselo efanele oko kulinganiswayo, umz. Ukulinganisa ibhotile eziilitha ezimbini ngamatispuni yinkcitha xesha.. **Ukuqalisa ukuthatha umlinganiselo ngokusesikweni** • Aqhelane nokusebenzisa iilitha Abafundi baxelelwa ukuba ilitha ngumlinganselo oqhelekileyo osesikweni wokuinganisa umthamo nomyinge. Kufuneka bafunde igama eli nseishunqulelo salo. Kuba kwizikhongozelo ezininzi zokuthengwayo ezivekileni nakwiijagi ezininzi kusetyenziswa ezi zishunqulelo. Abafundi mabakhulise ukuqonda ukuba ilitha ingakanani na ngokumana begalela okukuyo bazel bamane ukugalela kuyo besebenzisa ; • Izikhongozelo ezingafaniyo kodwa zikwanomthamo welitha.-1 ilitha, umz. iibhotile zesiselo, ezobisi,, amakatuni esiselo seziqhamo; kwakunye • Neejagi ezibonisa umgca ephela kuyo ilitha. Abafundi balinganisa iilitha besebenzisa nayiphi kwiizikhongozelo ekuthethwe ngazo. Bayaqikelela baze and balinganise umthamo wendidi ezininzi zezikhongozelo ezifana nezikhongozelo zeyogathi ezinkulu, ezeayisi khrim,iibhokisi zokuphatha isidlo sasemini, iijagi ezinkulu,iibhotile ezinkulu, amakhoba epeyinti esezinkonkxeni, amabhakethi njl. Izinto ezinomthamo owahlukileyo mazisetyenziswe. Abafundi mabachaze umthamo ngolwimi olungu “ ngaphantsi kwelitha enye’, iilitha ezi-2, phakathi ko- 1neelitha ezi- 2, iilitha ezi-5” njl.	3 izifundo

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO IMIGQALISO YEKOTA - 3	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (in izifundo of 1 hour 24 minutes)
4.4 **Umthamo/ Ivolumu**	• Thelekisa, landelelanisa urekhode umthamo wemveliso ethengwayo ngokwendlela izikhongozelo ezibhalwe ngayo ngaphandle. umz. 2 litha zobisi, 1 litha yesiselo esibandayo, 5iilitha ezintlanu zepeyinti.	• Thelekisa, landelelanisa urekhode umthamo wemveliso ethengwayo ngokwendlela izikhongozelo ezibhalwe ngayo ngaphandle. umz. 2 litha zobisi, 1 litha yesiselo esibandayo, iilitha ezi-5 zepeyinti.	Thelekisa, landelelanisa uze urekhode umthamo wezikhongozelo ezipakishelwe ukuthengiswa ezimthamo wazo uxelwe ngokweelitha umz iilitha ezimbini zobisi, ilitha e-1 yesiselo esibandayo, iilitha ezi-5 zepeyinti. **Ukurekhoda imilinganiselo** Nangona ukulinganisela isisakhono esifunekayo Abafundi mabarekhode imilinganiselo ngalo lonke ixesha, kuquka zonke iindlela ezisesikweni nezingekho seSikweni. **Ukulinganisa umthamo njengomxholo wokusombulula iingxaki kunye nokubala.** Ngexesha elabelwe amanani izibalo nonxulumano Abafundi bangasombulula iingxaki ezisebenzisa ukulinganisa kwimixholo ye; • Ukulinganisa okungekho seSikweni komthamo okanye umyinge, umz. Gogo usebenzisa iikomityi ezi- 2 ubisi milk ukwenza ipudini. Ukuba uyayiphinda phinda le resipi, angafuna ubisi olungakanani? • iilitha Thathela ingqalelo inani lemimandla efanele ikota kwaneendidi zeengxaki ezinika Abafundi amathuba okusebenza kwimimandla exeliweyo.	3 izifundo

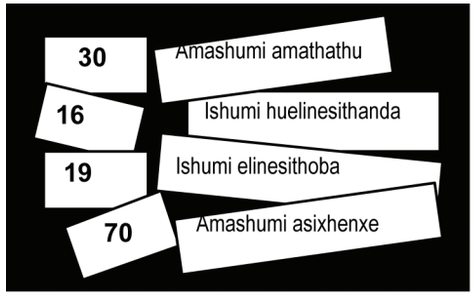
IBANGA 2 IKOTA 3 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**IIKHONSEPTHI NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO** **UGQALISELO LWEKOTA IKOTA- 3**	**AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA**	**IXESHA** (isifundo seyure e- 1 nemizuzu engama-24)
5.4 **Qokelela** **Ucwangcise ulwazi**	**Qokelela ucwangcise ulwazi** • Qokelela ulwazi ngeklasi okanye isikolo ukuze uphendule Imibuzo ebuzwe ngutitshala • Cwancgisa ulwazi kwiithali	**Qokelela ucwangcise ulwazi** • Qokelela ulwazi ngeklasi okanye isikolo ukuze uphendule Imibuzo ebuzwe ngutitshala **Ukusebenzisa umelo kulwazi** • Sebenzisa imifanekiso imele ulwazi. • **Cazulula utolike ulwazi** • Phendula Imibuzo ngolwazi olukwii grafu yemifanekiso	**Cwangcisa ulwazi** Kuyacetyiswa ukuba Abafundi basebenze umjikelo wolwazi wekota yoku-1 wonke. Kuyacetyiswa ukuba Abafundi kwikota yesi-3 benze iigrafu zabo ngemifanekiso abayithatha kwimifanekiso **Ukusebenzisa umelo kulwazi** Nanjengoko Abafundi bezakube bezoba yonke imifanekiso eyenza igrafu yemifanekiso, kubalulekile ukukhetha izihloko ezifanelekileyo ezenza ukuba kube lula kubafundi ukuzoba okanye ezinezintlu ekulula ukuzibona umz. iziselo abazithandayo, njengoko kulula ukuzoba inkonkxa kubo ukuze imele isiselo ngasinye. Neziqhamo kulula ukuzizoba ngoko ke mabanikwe umsebenzi ofuna bazobe iziqhamo abazithandayo.Ukuzoba imifanekiso ukubonisa imidlalo ethandwayo okanye iinkqubo zikamabonakude njl kunganzima kubafundi bebanga lesi-2.. Kuba lula kubafundi ukuzoba iigrafu xa benikwe iphepha esele lineebloko ezilungiselelwe oko. Khumbuza Abafundi ngeempawu eziphambili zegrafu ensebnzisa imifanekiso. (Jonga Ikota yoku-1). **Cazulula utolike ulwazi** Abafundi mabaphendule Imibuzo oyibuzayo ngegrafu esebenzisa imifanekiso:(Jonga Imibuzo efanelekileyo kwikota yoku-1).	3 izifundo
5.5 **Ukusebenzisa umelo kulwazi**	**Ukusebenzisa umelo kulwazi** Represent data in pictograph			
5.6 **Cazulula utolike ulwazi**	• **Cazulula utolike ulwazi** • Phendula Imibuzo ngolwazi olukwii grafu yemifanekiso			

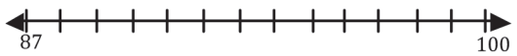
IBANGA LESI- 2 IKOTA YESI- 4 1. AMANANI, II-OPAREYSHINI NOLWALAMANO				
IZIHLOKO	**IIKHONSEPTHI NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO** **UGXINISO KWIKOTA YE- 4**	**AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA**	**IXESHA** (isifundo seyure e- 1 nemizuzu engama-24)
1.1 **Bala izinto**	**Bala izinto eziphathekayo** **Qikelelela ubale ngokuthembakeleyo ukuya kuma ebuncincini kwi-1000 lezinto. Kukhuthazwa indlela yokubala ngokuhlanganisa**	**Bala izinto eziphathekayo** **Qikelelela ubale ngokuthembakeleyo ukuya kuma ebuncincini kwi-1000 lezinto. Kukhuthazwa indlela yokubala ngokuhlanganisa**	**Yahluke ngantoni le kota kweye- 3?** Kule kota Abafundi babala izinto ukuya kuma kuma-200.Ukuphela kwale kota bafundi kufuneka babe sele bechukumise basebenza ngezinto ezingama-200. Kufuneka apha ezingqondweni babe benawo umbono wobuninzi buka-200. Baqhubekeke ukugqala ukuhlanganiswa kwezinto. Ukuphela kwekota kufuneka babe nako ukuphendula Imibuzo nemiyalelo efana nale;: • Bala izinto zokubala nngamaqela ezihlanu, amashumi. Bazibeke ngolunye uhlobo baze babale kwakhona. • Usenela nani leekhawuntari ubunalo? • Nazi izinto zokubala ezi-200. Zibale ngokuzihlanganisa ngamashumi. Ukubala zonke izinto zokubala ukhetha ukuzibala nagmaqela oo20 okanye oo25? Kuba kutheni? • Bathathe izigqibo ngeyona ndlela ilula yokubala ingqokelela yeepensile.. • Nazi izinto zokubala ezingama-80 zibale ngambini okanye ngalishumi. Ukuba sibala ngoo- 2s okanye oo-10, ingaba itotali iza kufana? • Bala izinto zokubala ezi-46 ngokuhlanganisa ngoo2. Ingaba iyakkukhawulezela into yokubala ngezibini ngaphezu kokubala nganye nganye? • Mangaphi amaqela ama-10 owafumene ngexesha obubala izinto zokubala ezi-120?	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.2 **Bala ukuya phambili nokubuya umva**	Bala ukuya phambili nokubuya umva ngoo: • 1 ukususka kuyo naliphi na inani phakathi kwe-0 nam a200 • 10 ukususka kuso nasiphi na isiphindaphindi phakathi ko- kwe-0 nama- 200 • 5 ukususkela kuso nasiphi na isiphindwa sika 5 phakathi ko- 0 and 200 • 2 ukususkela kuso nasiphi na isiphindwa sika 2 phakathi ko- 0 no 200 • 3 ukususkela kuso nasiphi na isiphindwa sika 3 phakathi ko- 0 no- 200 • 4s ukususkela kuso nasiphi na isiphindwa sika 4 phakathi ko- 0 no-200	Bala ukuya phambili nokubuya umva ngoo: • 1 ukususka kuyo naliphi na inani phakathi ko- 0 no 200 • 10 ukususka kuso nasiphi na isiphindaphindi phakathi ko- 0 no 200 • 5 ukususkela kuso nasiphi na isiphindwa sika 5 phakathi ko- 0 and 200 • 2 ukususkela kuso nasiphi na isiphindwa sika 2 phakathi ko- 0 no 200 • 3 ukususkela kuso nasiphi na isiphindwa sika 3 phakathi ko- 0 no- 200 • 4s ukususkela kuso nasiphi na isiphindwa sika 4 phakathi ko- 0 no-200	**Yahluke ngantoni le kota kweye3?** Kule kota Abafundi Bala ukuya phambili nokubuya umva ku-200. Xa sele iza kuphela ikota Abafundi kufuneka baqinise ulwazi lwabo lokubala ngokwalamanisa ukubala ngokumana utsiba amanani kwitheyibhile yokuphinda-phinda. Abafundi mabachaza abakubonayo kwitheyibhile yokuphinda-phinda baze babe nako to ukunakana oku xa bebala ngokutsiba amanani. Kufuneka baqalise ukusebenzisa isakhono sokuqikelela inani elilandelayo xa kubalwa ngokutsiba amanani. Buza Abafundi:Xa sibala ngezibini siza kulisebenzisa inani elingu-20? Ingaba eli nani lingu- 20 likhona kule theyibhile ka- 2 itheyibhile yokuphinda-phinda? Ukuphela kwekota bamele ukuba babe nako ukuphendula imibuzoenje ngale; • Bala ngamashumi ukususka ku170 ukuya ku- 200. • Bala ubuya umva ngamashumi ukususka ku-180 ukuya ku- 140. • Bala ngezihlanu ukususka ku- 115 ukuya ku- 145. • Bala ubuya umva ngezihlanu ukususka 135 ukuya ku-110. • Bala ngezithathu ukususka ku- 66 ukuya ku-81. • Bala ubuya umva ngezithathu ukususka ku- 190 ukuya 169. • Bala ngezine ukususka ku- 120ukuya ku- 140. • Bala ubuya umva ngezine 180 ukuya ku-160. Abafundi bangasebenzisa igridi yamanani, umgca manani, iitreki zamanani,i- abacus namaso okubala ukuncedisa ukubala kwabo.	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.3 **Iisimboli zamanani kunye namagama amanani**	**Kwazi ufunde amanani** • Kwazi ufunde iisimboli zamanani ukusuka ku- 0 - 200 • Bhala iisimboli zamanani 0 - 200 • Kwazi ufunde amagama amanani ukuska ku- 0-100 • Bhala amagama amanani ukusuka ku- 0-100		**Yahluke ngantoni le kota kweye3?** Kule kota Abafundi banakana, funda uze ubhale iisimboli zamanani ukuya ku- 200. Ulwazi lwemiqondiso manani luyaqiniswa xa bebala izinto besiya phambili baze ababuye umva. Ukuphela kwekota Abafundi kufuneka babe nako ukuphendula kwezi ntlobo zemibuzo nale miyalelo. Bhala iisimboli zamanani: amashumi amabini anesibini Amashumi mahlanu anesixhenxe Amashumi alithoba anesithoba Ikhulu elinethoba Ikhulu liineshumi elinanye Ikhulu limashumi mabini anesixhenxe. Tsahtisa imiqondiso namagama amanani	

66	Amashumi alithoba ananye
8	Amashumi mahlanu anesithathu
172	Amashumi amane
109	Amashumi amathathu anesibhozo
91	Ikhulu amshumi asixhenxe anambini
40	Amashumi amathandathu anesithandathu
53	Amashumi alithoba anethoba
38	Ikhulu elinethoba

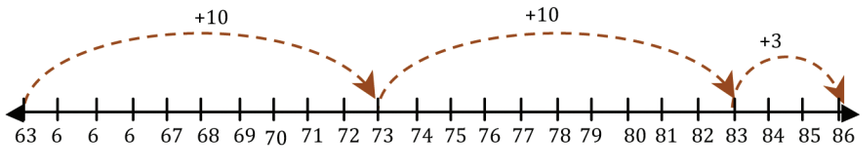
IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.3 **Iisimboli zamanani kunye namagama amanani**	**Kwazi ufunde amanani** • Kwazi ufunde iisimboli zamanani ukusuka ku- 0 - 200 • Bhala iisimboli zamanani 0 - 200 • Kwazi ufunde amagama amanani ukuska ku- 0-100 • Bhala amagama amanani ukusuka ku- 0-100		 Funda ngokukhwaza inani elikwikhadi ngalinye kula angezantsi: 198 67	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.4 **Chaza, Thelekisa, landelelanisa amanani**	**Landelelanisa uze u thelekise amanani ukuya kuma- 99** • Landelelanisa amanani apheleleyo ukuya kuma ngama- 99 ukusuka kwelona lincinci ukuya kweloona likhulu nokusuka kwelona lukhulu ukuya kwelona lincinci. • Thelekisa amananiapheleleyo ukuya kuma kuma- 99 esebenzisa ulincinci kune, khulu kune, ngaphezulu kwe, ngaphantsi kwe lingana ne. **Sebenzisa manani alandeleleanayo ukubonisa ukulandelelana indawo kunye nobume** Beka izinto kumqolo ukusuka kweyokuqala ukuya kuma kweyeshumi, kweyokuqal ukuya kweyokugqibela. Umz; kuqala okwesibini, ookwesithathu, ukuya kuma kweyamashumi amabini.		**Yahluke ngantoni le kota kweyesi- 3?** Uluhlu lwamanani lunyusiwe lwaya ku- 99. **Ukuphela kwekota babfundi kufuneka babe nako uku:** Sebenzisa ukufunda nokubhala. Kuqala, kwesibini, okwesithathu, okwesine, kwesihlanu, kwesithandathu…….. Sebenzisa ukufunda nokubhala ulandela ulwimi lokulandelelanisa nokuthelekisaUse, read and bhala the following ulwimi of ordering and comparing • Zingaphi…… • Ninzi njenge, inani elinye njenge… • Lingana ne, ngaphezulu kwe, lngaphantsi kwe, mbalwa kune, nkulu kune, ncinci kune, nkulu kune…… • Ezona zininzi, eyona incinci, eyona incinci, leyona inkulu • Landelellanisa, mqali, mgqibeli, phambi, emva, elandelayo, phakathi ko-, embindini, phakathi ko- Sebenzisa u = ukumela ukulingana Abafundi kufuneka babe nako ukuphendula imibbuzo efana: Nguabni ongowesibini apho kufolwe khona? Yiyiphi ipensile eyeyona imfutshane? Landelelanisa amanani ukuya ebuncincini ku- 100 alibeke endaweni yalo kumgca wamananiokanye esebenzisa igridi esikwere. Gcwalisa amanani angekhoyo kwiindawo ezifanelekileyo kwigridi yamanani  Bhala apho la mananai angina khona: 88, 90, 92...	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.4 **Chaza, Thelekisa, landelelanisa amanani**	**Landelelanisa uze u thelekise amanani ukuya kuma- 99** • Landelelanisa amanani apheleleyo ukuya kuma ngama- 99 ukusuka kwelona lincinci ukuya kweloona likhulu nokusuka kwelona lukhulu ukuya kwelona lincinci. • Thelekisa amananiapheleleyo ukuya kuma kuma- 99 esebenzisa ulincinci kune, khulu kune, ngaphezulu kwe, ngaphantsi kwe lingana ne. **Sebenzisa manani alandeleleanayo ukubonisa ukulandelelana indawo kunye nobume** Beka izinto kumqolo ukusuka kweyokuqala ukuya kuma kweyeshumi, kweyokuqal ukuya kweyokugqibela. Umz; kuqala okwesibini, ookwesithathu, ukuya kuma kweyamashumi amabini.		Gcwalisa ngenani elingekhoyo 115 | | 117 139 | | 141 187 | | 185 Phendula le mibuzo ilandelayo ngomlomo Ngawaphi amanani aphakathi ko- 82 no 87? Ngawaphi amanani aphakathi ko- 45 no 50? Ngawaphi amanani aphakathi ko- 69 no75? Bhala la manani ngkulandlelana ukusuka kwelona likhulu ukuya kwelona liincinci; 127, 132, 165, 111, 189, 173, 156 Bhala la manani ngokulandelelana ukusuka kwelona lincinci ukuya kwelona likhulu: 89, 62, 56, 72, 45, 39, 17 Bonisa, funda uze ubhale amanani alandelelelanayo.	
IXABISO LENDAWO				

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo ubuncinane iidijthi ezimbini ukuya kuma-99** • Ukuqaphela ukuba idijithi nganye imele ntoni. • Cazulula iidijithi ezi-2 zamanani zibe ziziphindaphindi zeshumi kunye nemivo(TU) uyokuma ngama-99 • Chonga uze uxele ixabiso lendawo ledijithi nganye.		**Ekupheleni kweKota kulindeleke ukuba abafundi babenako:** • Ukuqonda nokusebenzisa ixabiso lendawo: Ukusebenzisa, ukufunda nokubhala: Imivo okanye ii-yunithi, amashumi,idijithi, inani elinedijithi enye,iidijithi ezimbini, ... ixabiso lendawo. • Yahlula-hlula inani elineedijithi-2 zibe ziziphinda-phindi zeshumi kunye nemivo Bhala inani: 6 amashumi nesi- 3 semivo _____ 2 amashumi nesi- 5 semivo _____ 12 amashumi nesi-8 semivo _____ 18 amashumi nesi-4 semivo _____ • Sebenzisa izixhobo: Bonisa 4- amashumi ne- 5 yemivo usebenzisa i-abhakhasi. Bonisa 7 amashumi ne- 6 yemivo esebenzisa i-abhakhasi Ingaba idijithi -8 imele ntoni kwinani-28.No-2 . Leliphi inani elilingana ne- - 6 amashumi - Ithoba lamashumi nesi-3 semivo - Isihlanu samashumi nethoba lemivo Leliphi inani emalingene kwibhokisi nganye? a) 34 = □ + 4 b) 78 = 70 + □	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo ubuncinane iidijthi ezimbini ukuya kuma-99** • Ukuqaphela ukuba idijithi nganye imele ntoni. • Cazulula iidijithi ezi-2 zamanani zibe ziziphindaphindi zeshumi kunye nemivo(TU) uyokuma ngama-99 • Chonga uze uxele ixabiso lendawo ledijithi nganye.		**Izixhobo** Izinto ezinokuqokelelwa ngamaqela : • Iinkunana zokubhala • Izixhobo zokubala zinokubotshelelwa imisonto • Imicinga yematshisi • Iinkunana ze-ayisi khrimu • Iibhokisi ezisikwere eziqhagamsheleneyo	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
UKUSONJULULWA KWEENGXAKI				
1.6 **Izakhono zokusombulula iingxaki**	Sebenzisa ezi zakhono xa usombulula iingxaki ze unike ingcaciso: • imizobo okanye izixhobo eziphathekayo umz ; • iikhawuntari • Ukubumba nokucazulula amanani • Ukuphinda phinda kabini nokwahlula kabini • umgca manani		Abafundi kulindeleke ukuba bakwazi ukusombulula izibalo zamazwi besebenzisa ezi zakhono zilandelayo • Ukubumba nokucazulula amanani • kuphinda kabini nokuhlula kabini • Umgca manani Jonga kwiKota 1 neKota 2 ezi zinto zingezantsi: • Imizobo okanye izixhobo eziphathekayo umz ; • Ukubumba nokucazulula • Ukuphinda phinda kabini nokuhlula kabini **Umgca manani** Ukusebenzisa umgca manani ukuba babale, kunokubanceda abafundi bakwazi ukurekhodisha iingcinga zabo nokuba bazilandele. Yenza ukuba abafundi bagcine iimbono zabo abanokuzisebenzisa ekuchazeni ukuba bazisombulule njani iimbono zabo. Abafundi bebesoloko bebala ngomgca manani kwakwibanga 1. KwiKota 4 kulindeleke ukuba bakwazi ukuzenzela umgca manani ongabhalwanga manani, ze bazibhalele inani eliqalayo ukuze bakwazi ukuqhubekeka. Umzekelo wokuba abafundi bangawusebenzisa njani umgca manani: Abafundi abangama-23 bakukhenketho. Kushiyeke Abafundi abangama-.63 esikolweni. Ingaba babebangaphi Abafundi bebonke  Bavumele abafundi bazikhethele izakhono abazithandayo. Noko kunjalo, ukuba abafundi bathe bazikhelathela izakhono ezingafanelekanga bothi bancediswe.	

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1.6 **Izakhono zokusombulula iingxaki**	Sebenzisa ezi zakhono xa usombulula iingxaki ze unike ingcaciso: • imizobo okanye izixhobo eziphathekayo umz; • iikhawuntari • Ukubumba nokucazulula amanani • Ukuphinda phinda kabini nokwahlula kabini • umgca manani		Qaphela ukuba abafundi basoloko besebenzisa iindlela ezahlukeneyo zokusombulula iingxaki ezingeyiyo le nto utitshala ayilindeleyo. Umzekelo:Izibalo zokwahlula-hlula zinokusonjululwa ngokuphinda uthabathe, ngokuphinda udibanise okanye ngophinda-phindo. Indlela ababala ngayo abafundi iyohluka njengoko unyaka ubheka phambili, kuba ukuqhelana nezi zibalo ngokuye kukhula, kwaye nengqikelelo yabo yamanani iye ikhula	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.7 **Ukudibanisa okuthabatha.**	Sombulula izibalo zamazwi .kwiimeko ezithile ze ucacise izisombululo zakho zezibalo neempendulo usebenzisa ukudibanisa nokuthabatha uyokuma kuma-99		**Umzekelo wezibalo ekulindeleke ukuba bazazi ekupheleni kweKota** Ukudibanisa nokuthabatha Ubuncinane zintathu iintlobo zokubala zokudibanisa nokuthabatha, indlela nganye ibuzwa ngokwahlukeneyo indlela ezingundoqo zezi: **Guqula:** UNoluthando une - 25 eelekese. USilo umnike i -18 eelekese. Zingaphi iilekese anazo ngoku? UNoluthando une - 53 eelekese. Unike uSilo ama-32 eelekese. Zingaphi iilekese anazo ngoku? **Dibanisa**: Iklasi yebanga lesi-2 inAbafundi aba-37 yoonxantathu abaluhlaza okwengca ne-19 yoonxantathu abaluhlaza okwesibhakabhaka. Bangaphi oonxantathu abanabo? Bane- 63 yezangqa; ezingama-27 ziluhlaza okwesibhakabhaka ze eziseleyo zibeluhlaza okwesibhakabhaka. Zingaphi izangqa eziluhlaza okwesibhakabhaka abanazo? **Thelekisa**: UNosisi une-13 yeebhanana. UThemba une-5 yeebhanana. UNosisi wodlula uThemba ngeebhanana ezingaphi ? Buza umbuzo ngamnye ngeendlela ezahlukileyo Imibuzo mayibuzwe ngeendlela ezahlukeneyo. Umzekelo: Zombini ezi zizibalo zezetshintshi, kodwa iimpendulo ezingaziwayo zikwiindawo ezahlukeneyo zezibalo. UNoluthando uneelekese. USilo umongeze ngeelekese ezili -18. Ngoku uneelekese ezingama-43. Zingaphi iilekese ebenazo uNosisa ekuqaleni. UNoluthando ubenama-25 ee-apile.USilo umnike ii-apile ezimbalwa. Ngoku unama-43 ee-apile. Zingaphi ii-apile azinikwe nguSilo?	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.8 **Ukudibanisa okuphindiweyo okukhokelela kuphinda-phindo**	Sombulula izibalo zamazwi .kwiimeko ezithile ze ucacise izisombululo zakho zezibalo usebenzisa udibaniso oku-phindiweyo ezikhokelela kwiimpendulo zophinda-phindo uyokuma kuma-50		**Umzekelo wezibalo ekulindeleke ukuba abafundi bawazi ekupheleni kweKota** Ukuphinda- phinda ukubala Mangaphi amavili eebhayisekile ezingama-20? Hlela UThami uhamba iibhloki ezi-6 ngemini. Ingaba uhamba iibhloki ezingaphi ngeveki? Iigridi UMnumzana Khumalo utyala isi-7 semiqolo yeekhaphetshu. Umqolo ngamnye uneekhaphetshu ezisi-8. Zingaphi iikhaphetshu zizonke?	
1.9 **Ukwahlula ngokwamaqela nokwaba ngokulinga nayo okukhokelela kwizibalo zokwahlula-hlula**	Sombulula ucacise izisombululo kwizibalo eziphathekayo ezidibanisa ukwaba ngokulinganayo nokwenza amaqela uyokuma ngama-99 zibeneempendulo ezinentsalela .		**Umzekelo wezibalo ekulindeleke ukuba abafundi bawazi ekupheleni kwe** ngamaqela Yahlula ngamaqela, lahla intsalela UStella uthengisa ii-apile ngeengxowa ezine-10 lee-apile inye. Unama-80 ee-apile. Zingaphi iingxowa ezine-10 lee-apile inye anokuzenza? Hlanganisa ngamaqela, ukudityaniswa kwentsalela: Umfama unama-47 yamaqanda. Zingaphi ibhokisi zamaqanda ezinokufaka amaqanda ama-6 inye anokuzisebenzisa ukupakisha onke amaqanda. Ukwaba Ukwaba, ulahla intsalela Yabani ngokulinganayo ama- 54 eelekese phakathi kwe-7 yeetshomi.	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.10 **ukwaba ngokulingan ayooku khokelela kumaqhezu**	Sombulula ucacise izisombululo eziphathekayo usebenzisa ukwaba okulinganayo okukhokelela kwingcaciso ezibandakanya i-amaqhezu E-unitary umz. $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}, \frac{1}{5}$, njl-njl		Ukuthathela ingqalelo amaqhezu kwizibalo zamagama kule Kota kusaqhubela phambili ukwenzela ukuba abafundi bakwazi u- • Ukwaba nokuqokelela izinto zibengamaqela alinganayo • Nika amagama amaqhezu; • Funa amaqhezu ento epheleleyo /whole • Ukuqaphela ukuba iqhezu yinxalenye yento epheleleyo / whole; • Bhala amaqhezu njengakwisithathu eshumini. Kule kota abafundi bayakwazi ukubiza amagama amaninzi amaqhezu. Kubalulekile ukuba abafundi bafundiswe namanye amaqhezu ngaphandle kwesiqingatha nekota. **Umzekelo wezibalo ezinokusetyenziswa:** Ukwaba, ukukhokelela kumaqhezu • Yahlulela abahlobo bakho izitena ezi-3 zetshokolethi ezi-7 ngokulinganayo kungabikho ntsalela. • Ikeyiki ezi-3 zabelwa abahlobo aba-4 ngokulinganayo.Ingaba emnye unokufumana ezingaphi? Ekupheleni kweKota kulindeleke ukuba abafundi babonakalise le ngqiqo ilandelayo: Xa kusahlulwa into: • Amaceba amabini alinganayo kuthiwa ziziqingatha.iceba ngalinye kuthiwa sisiqingatha; • Amaceba amathathu alinganayo, iceba ngalinye kuthiwa sisithathu eshumini; • Amaceba amane alinganayo, iceba ngalinye kuthiwa ziikota ; • Amaceba amahlanu alinganayo, iceba ngalinye kuthiwa sisihlanu eshumini • Amaceba amathandathu alinganayo, iceba ngalinye kuthiwa sisithandathu eshumini. **Umzekelo wezibalo ekulindeleke ukuba abafundi bazazi ekupheleni kweKota.** Ukwaba,,okukhokelela kumaqhezu Yahlulela abahlobo ezi-4 izitena zetshokolethi ezi-11 ngokulinganayo kungabikho ntsalela.	

<table>
<tr><th>IZIHLOKO</th><th>IIKHONSEPTHI NEZAKHONO
OKULINDELEKILEYO EKUPHELENI KONYAKA</th><th>IIKHONSEPTHI NEZAKHONO
UGXINISO KWIKOTA YE- 4</th><th>AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA</th><th>IXESHA
(isifundo seyure e- 1 nemizuzu engama-24)</th></tr>
<tr><td>1.10
ukwaba ngokulingana ayooku khokelela kumaqhezu</td><td>Sombulula ucacise izisombululo eziphathekayo usebenzisa ukwaba okulinganayo okukhokelela kwingcaciso ezibandakanya i-amaqhezu E-unitary umz. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$, njl-njl.</td><td></td><td>Iqhezu lengqokelela
Umakhulu unika uKiki ii-orenji ezili-12. UKiki wenza incindi (juice) ngesithathu esinye ekhulwini see-orenji.
Zingaphi ii-orenji azisebenzisileyo.
Ezi zibalo mazenziwe xa umfundi sele ekwazi ukusombulula izibalo ezine okanye ezihlanu zokwaba nokukhokelela kumaqhezu kwaye awazi amagama amaqhezu.
Ukuhlanganisa amaqhezu
Umqeqeshi webhola yomnyazi unika umdlali ngamnye isiqingatha se-orenji. Abadlali bali-14. Zingaphi ii-orenji anokuzisebenzisa?
Ezi zibalo mazenziwe xa umfundi sele ekwazi ukusombulula izibalo ezine okanye ezihlanu zokwaba nokukhokelela kumaqhezu kwaye awazi amagama amaqhezu.</td><td></td></tr>
<tr><td>1.11
Imali</td><td>• Nakana imali eziinkozo aseMzantsi Afrika (5c, 10c, 20c, 50c, R1, R2, R5, namaphepha. R10, R20, R50
• Sombulula izibalo zemali usebenzisa iitotali netshintshi yeesenti uyokuma kuma-99 eesenti okanye ama- R99</td><td></td><td>Umzekelo wezibalo ekulindeleke ukuba abafundi bazazi ekupheleni kweKota
Iimeko zeengxaki zemisebenzi eyahlukeneyo yozalano lwamanani
UHeila uthengisa amaqebebengwana nge-R4 inye. Sebenzisa le tafile ukumnceda ukufumana amaxabiso ee-odolo ezinkulu.
<table>
<tr><td>Number of hotdogs</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr>
<tr><td>Cost in R</td><td>4</td><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
Sebenzisa itafile ukufumana ixabiso lamaqebengwana asi-7 namaqebengwana asi-15
USedick ugcina umntwana. Ubiza ama-R20 imali yokuhamba,ne-R5 ngeyure ukugcina umntwana. Mncedise ukugqibezela le tafile ingezantsi:
Inani leeyure
<table>
<tr><td>Number of hours</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>10</td></tr>
<tr><td>Cost in R</td><td>25</td><td>30</td><td></td><td></td><td></td><td></td></tr>
</table>
Qaphela ukuba ingxaki kaHeila noSedick azifani.</td><td></td></tr>
<tr><td colspan="5">IZIBALO EZINGALAWULWA MEKO</td></tr>
</table>

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.12 **Ubuchule bokubala** **(iindlela)**	Sebenzisa obu buchule bulandelayo xa usenza ezi zibalo Imizobo okanye izixhobo eziphathekayo:Umz: Izixhobo zokubala • Ukubumba nokucazulula amanani • Ukuphinda phinda kabini nokwahlula kabini • Umgca manani		Abafundi kulindeleke ukuba basombulule izibalo ezingalawulwa meko, besebenzisa obu buchule bulandelayo: • Ukubumba nokucazulula amanani • Ukuphinda phinda kabini nokuhlula kabini • Umgca manani Jonga umsebenzi kaKota 1 noKota 2	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ku- 99 • Thabatha ku - 99 • Sebenzisa isimboli zamanani efanelekileyo (+, -, =, ☐) • Ziqhelanise neebhodi zamanani- 20		Abafundi kulindeleke ukuba baqhubekeke ukucazulula amanani ukuze bakwazi ukubala Iindlela ezisebenzisekayo ukubonisa izibalo zokudibanisa nokuthabatha **Ukucalula amanani ukulungiselela ukukwazi ukubala lula ngakumbi** **Ukusebenzisa ulwazi lwexabiso lendawo ukucazulula amanani abengamashumi nemivo** Ukudibanisa amanani aneedijithi ezimbini ngokuthi wahlule amanani omabini 43 + 36 = ☐ 43 + 36 = (40 + 3) + (30 + 6) = (40 + 30) + (3 + 6) = 70 + 9 = 79 **Ukudibanisa ngokwahlula inani elinye** 43 + 36 = ☐ 43 + (30 + 6) 43 + 30 → 73 + 6 = 79 Abafundi banokucazulukla inani ngeendlela abazithandayo. Loo nto ithetha ukuthi banokuyenza ngeendlela ezahlukeneyo. 43 + 36 = ☐ 43 + (10 + 10 + 10 + 6) 43 + 10 → 53 + 10 → 63 + 10 → 73 + 6 = 79 **Ukuthabatha** Ukucazulula amanani omabini 87 – 56 = ☐ 87 – 56 = (80 + 7) – (50 + 6) = (80 – 50) + (7 -6) = 30 + 1 = 31	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ku- 99 • Thabatha ku - 99 • Sebenzisa isimboli zamanani efanelekileyo (+, -, =, ☐) • Ziqhelanise neebhodi zamanani- 20		• Ukuthabatha ngokucazulula inanani elinye 87 – 56 =☐ 87 – 56 = (80 + 7) - (50 + 6) = (80 - 50) + (7 - 6) = 30 + 1 = 31 Lindela ukuba abafundi banokucazulula inani ngeendlela ezahlukeneyo ukwenza izibalo zibelula: 7 - 56 = ☐ 87 - (20 + 20 + 10 + 6) 87 - 20 → 67 - 20 → 47 - 10 = 37 - 6 = 31 **Sebenzisa iziqingatha ukucazulula inani** 69 + 12 69 + (6 + 6) 69 + 6 → 75 + 6 = 81 **Bala ubheka phambili uphinde ubale ubuye umva** 78 - 69 = ☐ Ukubala ngemivo ukusuka ku- 69 bubuchule obufanelekileyo kuba amanani asondelelene. Chonga izibini ezikufutshane 34 + 35 Uchaza ukuba ama-34 kabini kunye no-1 okanye ama-35 kabini thabatha -1. 34 + 34 + 1 Abafundi banokurekhodisha ubuchule babo besebenzisa iintolo. 34 + (30 + 4) + 1 34 + 30 → 64 + 4 → 68 + 1 = 69 **Jika inani libe sisiphinda-phindi seshumi ze uthabathe okanye udibanise umvo** Bala usongeza , uphinde ubuye umva usondele kwishumi elikufutshane; 58 + 19 = ☐	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ku- 99 • Thabatha ku - 99 • Sebenzisa isimboli zamanani efanelekileyo (+, -, =, ☐) • Ziqhelanise neebhodi zamanani- 20		Apha abafundi mabathi banokukhetha kwiindlela ezimbini. Jika ama- 58 okanye i- 19 basondeze kwiziphinda-phindi zeshumi elikufutshane Mabazikhethele: Izibalo zinokubhalwa ngolu hlobo: 58 + 19 = 58 + 20 - 1 58 + 20 → 78 - 1 = 77 Abanye abafundi banokucazulula amashumi amabini ibengamaqela amabini ezishumi khon'ukuze babale ngokuchanekileyo **Ekupheleni konyaka abafundi kilindeleke ukuba babenako:** **Ukusebenzisa baze baqonde ulwimi lokudibanisa** Ukucacelwa ukuba ukudibanisa u-0 kushiya inani lingatshintshanga. 75 + 0 = 75 0 + 75 = 75 75 = 75 + 0 75 = 0 + 75 Phendula imibuzo ebhaliweyo ebuzwe ngeendlelela ezahlukeneyo njengale: • Dibanisa ama - 43 ne-9 • Dibanisa is-10 ku- 67 • I-11 dibanisa nama- 83 Dibanisa ama-20 ku- 50 • 80 = 62 + 8 + ☐ • Ngubani inani elingaphezulu ngo- 30 kuno- 60 • Ama-56 ne-14 benza bani xa bedibene ? • Dibanisa i-12 kumashumi asixhenxe anesihlanu • Ngubani inani elingaphezulu ngeshumi kunama -83. • Ungadibanisa bani kuma - 45 ukuze ufumane ama -78? • Ungadibanisa bani kuma -25 ukuze ufumane ama -78? • Ungadibanisa bani kuma-56 ukuze ndifumane ama-70? I-4 dibanisa namashumi ama- 3 • Amashumi dibanisa nemivo e-8 • 45 + 10 = ☐ 45 + 20 = ☐ 45 + 30 = ☐	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ku- 99 • Thabatha ku - 99 • Sebenzisa isimboli zamanani efanelekileyo (+, -, =, ☐) • Ziqhelanise neebhodi zamanani- 20		**Yazi ukuba ☐ umele inani elingaziwayo** 42 + 44 = ☐ 5 + 7 + ☐ = 80 57 + ☐ = 95 ☐ + 15 = 81 Ngoncedo lwesixhobo:Dibanisa amanan amathathu kunye. 26 + ☐ + ☐ = 72 Khetha amanani abemathathu kula manani: 15, 19, 22, 25 Wadibanise. Ziziphi ziiphumo ezahlukeneyo onokuzifumana? **Baphendula imibuzo ebhaliweyo ze bacacise indlela abafike ngayo kwimpendulo zabo.** • Dibanisa isi-6, 12 ne- 14. • Ufumana bani xa udibanise i-10, 5 ne-19. **Ukuqonda i izibalo zokuthabatha ekupheleni konyaka** Ekupheleni konyaka abafundi kufuneka babenako ukwenza oku kulandelayoUkucacelwa ze basebenzise isigama sokuthabatha: Ukuqonda nokusebenzisa isgama sokuthabatha Ukuthatha unikise/ukuhlutha,ukuthabatha, zingaphi ezishiyekileyo, incinci kangakanani,....., kune....., umahluko phakathi ko-, ingaphezulu kangakanani .... kune-...., kuzakwenziwa ezingaphi... ufunde ubhale olu phawu lokuthabatha (-) Bayaqhubekeka ukukhula kukucacelwa zizibalo zokuthabatha ezinjengezi: • Susa • Fumana umahluko phakathi ko-. Ukucacelwa ukuba ukuthabatha u-0 kushiya inani lingatshintshanga 92 – 0 = 92 92 = 92 – 0	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ku- 99 • Thabatha ku - 99 • Sebenzisa isimboli zamanani efanelekileyo (+, -, =, ☐) • Ziqhelanise neebhodi zamanani- 20		**Baphendula imibuzo ebhaliweyo ebuzwe ngeendlela ezahlukeneyo enjengale:** • 37 susa 3 • Thatha ama- 40 ku- 80 • 62 thabtha 42 • Thabatha- 45 kuma- 90 • Yintoni umahluko phakathi kwama -38 nama- 57? • Ungaphantsi kangakanani u-17 kuno-49 • Ngubani inani onokulithabatha ku-56 ukuze kusale ama- 22? • Ngubani inani onokulithabatha ku-56 ukuze ufumane ama-3 • Ngubani inani onokulithatha kuma-56 ukuze kusale ama-42? Funa izibini zamanani ezinomahluko oli-10 57 – 34 = ☐ 80 – 30 = ☐ 62 - ☐ = 48 98 – 42 = ☐ 87 - ☐ = 75 13 – 6 = 15 - ☐ ☐ - 18 = 24 Baqala ukuqonda ukuba: 25 – 10 wahlukile ku- 10 – 25 Sebenzisa ukuzalana phakathi kokudibanisa nokuthabatha Xela uze ubhale amanqaku ahambelanayo ezibalo zokuthabatha kwizibalo ozonikiweyo zokudibanisa. Phinda wenjenjalo ngokuphendulekileyo: 73 + 17 =90 ithetha ukuthi 90 – 17 = 73 17 + 73 = 90 ithetha ukuthi 90 – 73 = 17 42 – 18 = 24 ithetha ukuthi 24 + 18 = 42 42 – 24 = 18 itheththa ukuthi 18 + 24 = 42	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ku- 99 • Thabatha ku - 99 • Sebenzisa isimboli zamanani efanelekileyo (+, -, =, ☐) • Ziqhelanise neebhodi zamanani- 20		Phendula okulandelayo ngaphandle kwezixhobo: Ukuba uyazi ukuba ama- 62 + 29 = 91. Yintoni ama: 29 + 62 91 – 29 91 – 62 Ukuba uyazi ukuba ama- 66 – 50 = 16 Ayintoni ama-: 66 – 16 50 + 16 16 + 50 Bhala iimpendulo: 57 – 34 = 23 ☐ + 23 = 57 ☐ - 23 = 34 34 + 23 = ☐ 12 + 46 = 58 12 + ☐ = 58 58 - ☐ = 12 ☐ - 46 = 12 Bhala izivakalisi zamanani ezahlukeneyo usebenzisa amamani ama-3 . Umzekelo: 20, 30 and 50 20 + 30 = 50 30 + 20 = 50 50 – 30 = 20 50 - 20 = 30	

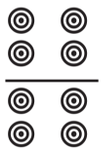
IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.14 Ukudibanisa okuphindiweyo okukhokelela kuphinda-phindo	• Phinda-phinda amanani -1 uyokuma nge-10 ngo- 1, 2, 5, 3 no 4 de uyokuma ngama- 50 • Sebenzisa isimboli zamanani efanelekileyo (+, x, =, ☐)		**Yintoni umahluko kwiKota -4?** Kule kota abafundi baza kwenza uphinda-phindo ngezithathu okokuqala. Jonga kwiKota -1 ukuqala ukwazisa iiKhonsepthi ezintsha. **Ekupheleni kwekota kulindeleke ukuba abafundi babenako:** Ukusebenzisa isigama sophinda-phindo kwimeko ezifanelekileyo. Iziphindwa kabini, phinda-phinda, phinda-phinda ngo-, iziphinda-phindi zika-, iingqokelela zika-, amaqela ka-, phinda ngo-,(khulu, de, banzi...) phinda kabini, kathathu, ze ufunde ubhale iimpawu zophinda-phindo (x) Sebenzisa esi sigama ukwenza izibalo zophinda-phindo Qonda uphinda-phindo njengokudibanisa okuphinda-phindiweyo Isi-6 esidityaniswe ngokuphindwe ka-3 siyafana ne- 6 + 6 + 6 = 18 3 amaqela ka- 6 = 18 3 ophindwe ngo- 6 = 18 6 x 3 = 18 3 x 5 = 18 Ukuqonda ukuphinda-phinda njengokuchaza ulungelelaniso lwamanani: ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ ◎ 5 x 3 =15 ◎ ◎ ◎ ◎ ◎ ◎ 3 x 5 = 15 Phendula imibuzo enjengale: Izihlanu ezine Izi-6 eziphindwe kabini Phinda isi-6 ka- 5	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.14 Ukudibanisa okuphindiweyo okukhokelela kuphinda-phindo	• Phinda-phinda amanani -1 uyokuma nge-10 ngo- 1, 2, 5, 3 no 4 de uyokuma ngama- 50 • Sebenzisa isimboli zamanani efanelekileyo (+, x, =, ☐)		Izixhobo zokubala ezintathu zisemqolweni.. Imiqolo mi-4 .Zingaphi izixhobo zokubala zizonke? Phinda-phinda isi-2 ngesi- 4 Phinda-phinda isi-8 ngesi- 2 Qaphela ukuba kusetyenziswa isemeli -nani ☐ ukumela inani elingaziwayo. 3 amaqela ka-2 enza - 6 okanye 3 phinda-phinda ngo-2 zenza - 6 okanye 3 x 2 = ☐ 4 amaqela ka- 3 enza -12 okanye 4 phinda-phinda ngo- 3 benza -12 okanye 4 x 3 = ☐ 6 amaqela ka- 3 enza 18 okanye 6 phinda-phinda ngo-3 zenza - 18 okanye 6 x ☐ = 18 7 + ☐ = 14 2 amaqeqla esi- 7 = ☐ 2 + ☐ + ☐ + ☐ + ☐ + ☐ + ☐ = 14 ☐ x 7 = 14 1 x 2 = ☐ 2 x 2 = ☐ 3 x 2 = ☐ 1 x 5 = ☐ 2 x 5 = ☐ 3 x 5 = ☐	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.16 **Izibalo zentloko**	**Ikhonsepthi yamanani: Imimandla 99** • Landelelanisa isethi oyinikiweyo yamanani. • Thelekisa amanani uyokuma kuma-99 ze utsho ukuba leliphi inani eliphantsa kulingana no- 1, 2, 3, 4, 5 kunye-10 **Khumbula ngokukhawuleza** • Khumbula amanqaku okudibanisa • nokuthabatha uyokuma ngama- 20 • Dibanisa okanye uthabathe iziphinda-phindi ze-10 ukusuka-0 uyokuma kwi-100 Ubuchule bokubala ngengqondo		Imizekelo yemibuzo enokubuzwa: **Ingqiqo yamanani:** **Amagama lamanani neesimboli** Phakamisa ikhadi okanye bhala phantsi igama lenani. Khetha umfundiwokubhala amanani ahambelanayo. **Ingaphezulu kune- okaye ingaphantsi kune-** Yintoni? • 1 ngaphantsi kunama-70 • 1 ngaphezulu kwama- 80 • 3 ngaphantsi kwama-51 • 4 ngaphantsi kwama-67 • 5 ngaphantsi kwama- 85 Ngowuphi unobumba wesi-5th kwi-alfabhethi? Ngowuphi unobumba wesi-5th kwii-alfabhethi? Yeyiphi inyanga yesi- 9th yonyaka? Ulandelelaniso nothelekiso Yeyiphi engaphezulu:ama- 21 okanye ama- 171? Nika inani eliphakathi kwama -154 nama-159 **Amanqaku okudibanisa nokuthabatha** • Cengceleza zonke iibhondi zamanani zokuthabatha nokudibanisa uyokuma kuma-20. □ + △ = 20 □ + △ = 16 19 = □ - △	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.16 **Izibalo zentloko**	Sebenzisa ubuchule bokubala bokudibanisa nokuthabatha ngokufanelekileyo. • Qala ngokubeka elona nani likhulu ukuze ukwazi ukubala ubheka phambili okanye ubala ubuya umva- • Sebenzisa ukuzalana phakathi kokudibanisa nokuthabatha • Umgca manani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo. • Yakha ze ucazulule amanani		Dibanisa ze uthabathe amanqaku amanani uyokuma ngama- 20. 1 + 11 = 12 11 + 1 = 12 2 + 10 = 12 10 + 2 = 12 3 + 9 = 12 9 + 3 = 12 18 – 4 = 14 18 – 14 = 4 18 – 5 = 13 18 – 13 = 5 18 – 6 = 12 18 – 12 = 6 Khumbula ngokukhawuleza iziphindwa kabini zokudibanisa uyokuma ngama-20. Oku kuquka ukunginelana kwamanqaku okuthabatha.. • 1 + 1 = 2 • 2 + 2 = 4 • 3 + 3 = 6 • 4 + 4 = 8 • 5 + 5 = 10 • 6 + 6 = 12 • 7 + 7 = 14 • 8 + 8 = 16 • 9 + 9 = 18 • 10 + 10 = 20 Ndibonise inani onokulidibanisa kuma-20 (Bhala phantsi okanye usebenzise ixabiso manani okanye ikhadi yeFladi). • 8 • 2 • 9 • 15 • 3	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.16 **Izibalo zentloko**			Ndibonise inani elishiyekileyo xa .....ethatyathwe ku-20 (Bhala phantsi okanye usebenzise ixabiso manani okanye ikhadi yeFladi). • 5 • 18 • 0 • 14 • 7 **Ubuchule bokubala:** Jonga umsebenzi weKota 2.	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.17 **Amaqhezu**	• Sebenzisa uze uxele amaqhezu amanyeneyo ngokwemixholo eqhelekileyo yokuquka iziqingatha, iikota;izithathu nezihlanu eshumini • Qaphela amaqhezu ngokodidi lomzobi • Bhala amaqhezu njengesiqingatha esi1 nezithathu ezi 2	• Sebenzisa uze uxele amaqhezu amanyeneyo ngokwemixholo eqhelekileyo yokuquka iziqingatha, iikota; izithathu nezihlanu eshumini • Qaphela amaqhezu ngokodidi lomzobi • Bhala amaqhezu njengesiqingatha esi1 nezithathu ezi 2	**Yintoni umahluko kwiKota -4?** Kule kota yesi-3 abafundi bagxininswa kumaqhezu indlela adibana ngayo namanani apheleleyo awenza i whole ngokwabelana lintlobo -ntlobo. Zemizobo zingasetyenziswa ukwakha ulwazi oluphangaleleyo. Baphinda bawabize amaqhezu xa besenza izibalo zamazwi. Bachonga amaqhezu baze bawabhale njengesiqingatha esi 1, nesithathu esi1, nekota e1. Kule kota makugxiniswe kwinto ephelelyo. Abafundi mababenako uku-: Gqibezela izivakalisi Iziqingatha ezibini ziyinto enye _____nento epheleleyo Isithathu ekhulwini yinto enye _____nento epheleleyo Iikota ezine ziyinto enye_____nento epheleleyo Kule kota abafundi bothi bafune ingqokelela yamaqhezu ezinto. Umzekelo: Ukusebenzisa izixhobo zokubala ezicwangcisiweyo kwenza abafundi bakwazi ukufumana: Isiqingatha esi- 1 zezixhobo zokubala ezisi-8  Abafundi banokwahlula izixhobo zokubala ezisi-8 zibengamaqela ama-2 ezine-f 4. 	

IZIHLOKO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXINISO KWIKOTA YE- 4	AMANQAKU ENGCACISO KUNYE NEZIKHOKELO ZOKUFUNDISA	IXESHA (isifundo seyure e- 1 nemizuzu engama-24)
1.17 **Amaqhezu**	• Sebenzisa uze uxele amaqhezu amanyeneyo ngokwemixholo eqhelekileyo yokuquka iziqingatha, iikota; izithathu nezihlanu eshumini • Qaphela amaqhezu ngokodidi lomzobi • Bhala amaqhezu njengesiqingatha esi1 nezithathu ezi 2	• Sebenzisa uze uxele amaqhezu amanyeneyo ngokwemixholo eqhelekileyo yokuquka iziqingatha,iikota;izithathu nezihlanu eshumini • Qaphela amaqhezu ngokodidi lomzobi • Bhala amaqhezu njengesiqingatha esi1 nezithathu ezi 2	Mabavunyelwe abafundi ukuba basebenzise izixhobo eziphathekayo ukwenza ezi zibalo ukuze bakwazi ukulungelelanisa amanani . Ekupheleni kweKota abafundi kulindeleke ukuba babenako ukufumana: • 1 isiqingatha sengqokelela yezinto; ; • 1 ikota yengqokelela yezinto; • 1 sesithathu sengqokelela yezinto; • 1 sesihlanu sengqokolela yezinto;	

IBANGA 2 IKOTA 4 2. IIPATENI, II-FANKSHINI NE- ALJIBRA				
IZIXHOBO	**INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA**	**INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4**	**INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA**
2.1 **iipateni zejiyometri**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezillula ezenziwe ngokukrwela imigca ukwenza imilo okanye izinto **Ukuyila nokuchaza iipateni zakho** • Ukuyila ezakho iipateni - Nezinto ezibonwayo - Ngokukrwela imigca, iimilo okanye izinto - Ukuchaza ezintsha iipateni **Iipateni ezisingqongileyo** Ukuchonga, ukuchaza ngamagama nokukopa iipateni zejiyometri • kwindalo • kwimpilo yangoku yemihla ngemihla • kwimbali ngenkcubeko yethu	**Iipateni ezisingqongileyo** Ukuchonga, ukuchaza ngamagama nokukopa iipateni zejiyometri • kwindalo • kwimpilo yangoku yemihla ngemihla • kwimbali ngenkcubeko yethu	Abafundi bayakufunda ngeepateni ezikwindalo, kwimpilo yangoku yemihla ngemihla, kwimbali ngenkcubeko yethu ukusuka kwiBanga 1 ukuya kwiBanga 6 Loo nto ithi utitshala ufundisa ngezinto neepateni zelo Banga. Abanye bafunda ngolingano macala. Makusetyenziswe iipateni ngezilwanyana, izinambuzane, iintaka njl. Abafundi bangasebenzisa nezi iipateni: • iingcingo • izitena nethayile zomgangatho; • uphahla • iimpahla nezixhobo; • iipleyiti,iikomityi neesosi; • iibhola zesoka; • izilwanyana ezinjenge: nkomo, bhabhathane, mibungu, iqwarhashe,indlulamthi, iintaka, ihlosi izinambuzane • iintyatyambo namagabi • amaphepha nezindlu ezingacwangciswanga, • amaso • iimbiza zomdongwe neebhasikithi ezolukiweyo **Bangazichaza njani abafundi iipateni ezibangqongileyo?** Zininzi iindlela zokuchza iipateni ezisingqongileyo. Ezinye zenziwe ngemigca, ngemilo, nangezinto. Iimilo okanye izinto azifuni kunxulumaniswa nejiyometri yezinto ezimacala mabini nezimacala mathathu ezisetyenziswa kwiBanga 2.Konke okujongwe ngabafundi koku: • phindiweyo, umz.amachaphaza, imigca,imilo; kunye ne • ndlela eziphindwe ngayo.	Isifundo 1

IZIXHOBO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
2.1 **iipateni zejiyometri**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonwayo • Iipateni ezillula ezenziwe ngokukrwela imigca ukwenza imilo okanye izinto **Ukuyila nokuchaza iipateni zakho** • Ukuyila ezakho iipateni - Nezinto ezibonwayo - Ngokukrwela imigca, iimilo okanye izinto - Ukuchaza ezintsha iipateni **Iipateni ezisingqongileyo** Ukuchonga, ukuchaza ngamagama nokukopa iipateni zejiyometri • kwindalo • kwimpilo yangoku yemihla ngemihla • kwimbali ngenkcubeko yethu	**Iipateni ezisingqongileyo** Ukuchonga, ukuchaza ngamagama nokukopa iipateni zejiyometri • kwindalo • kwimpilo yangoku yemihla ngemihla • kwimbali ngenkcubeko yethu	• Umzekelo: - Imigca engqalileyo enqamlezeneyo nakwizixhobo, - Imigca engamagophe xa isikwa into - Imigca egqamileyo, umz. eyeqwarashe njl. - Imigca esantini - Amachaphaza alinganayo nagoso-goso - Iimilo ezifanayo, umz. izitena, imibala - Iipateni zemilo enye nebonisa izalathisi ezahluka-hlukaneyo	Isifundo 1

IZIXHOBO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
2.2 **Iipateni zamanani**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kuma - 200 **Ukuyila iipateni** Ukuyila iipateni zakhe zamanani.	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kuma - 200 Ulandelelaniso malubonakalise ukubala usiya phambili nokuya emva: • 1ukusuka nakwiliphina inani phakathi ko - 0 nama - 200 • 10 ukusuka nakwisiphina isiphinda-phindi phakathi ko - 0 nama - 200 • 5 ukusuka nakwisiphina isiphinda-phindi sika – 5 phakathi ko - 0 nama - 200 • 2 ukusuka nakwisiphina isiphinda-phindi sika – 2 phakathi ko - 0 nama - 200 • 3 ukusuka nakwisiphina isiphinda-phindi sika – 3 phakathi ko - 0 nama - 200 • 4 ukusuka nakwisiphina isiphinda-phindi sika – 4 phakathi ko - 0 nama - 200	Bona amanqaku ekota 1, kodwa yandisa uluhlu lwamananiukuya kuma - 200	Izifundo ezi -3

IZIXHOBO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
2.2 **Iipateni zamanani**	**Ukukopa, ukwandisa nokuchaza** Ukukopa, ukwandisa nokuchaza ukulandelelana kwamanani alula ukuya ebuncinaneni kuma - 200 **Ukuyila iipateni** Ukuyila iipateni zakhe zamanani.	**Ukuyila ezakho iipateni** • Nezinto ezibonwayo • Ngokukrwela imigca, iimilo okanye izinto • Ukuchaza ezintsha iipateni		Izifundo ezi -3

IBANGA 2 IKOTA 4 3. ISITHUBA NEMILO				
IZIHLOKO	**INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA**	**INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4**	**INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ze yure e-1 nemizuzu engama - 24)
3.2 **Izinto ezinokwakheka kuka 3-D (3-D)**	**Uluhlu lwezinto** Ukunakana nokubiza ngamagama izinto ezinokwakheka kuka 3-D (3-D) eklasini nasemifanekisweni • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjengebhokisi (iprizimu) • isilinda **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D (3-D) objects ngoko: • ubungakanani • izinto eziqengqelekayo • izinto ezitshibilizayo	**Uluhlu lwezinto** Ukunakana nokubiza ngamagama izinto ezinokwakheka kuka 3-D (3-D) eklasini nasemifanekisweni • Iimilo ezifana nebhola (ezingqukuva) • Iimilo ezinjengebhokisi (iprizimu) • isilinda **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 3-D (3-D) ngoko: • ubungakanani • izinto eziqengqelekayo • izinto ezitshibilizayo	**Ugxininiso olucetyiswayo nokulandelelanisa imisebenzi yeKota 4** Ukusebenzisa imisebenzi ebhalwayo neshwankathelayo	Isifundo esi -1

IZIHLOKO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu engama - 24)
3.2 **Izinto ezinokwakheka kuka 3-D (3-D)**	**Imisebenzi egxininiswayo** • Ukuqwalasela nokwakha izinto ezinokwakheka kuka 3-D (3-D objects) eklasini usakha izinto usebenzisa izinto eziphathekayo / ezinokwakheka kuka 2-D (2-D shapes), umz. umdongwe, imicinga yokuvungula, imicinga yokufunxa, izinto ezinokwakheka kuka 3-D (3-D objects) nezinto zejiyometri			Isifundo esi -1

IZIHLOKO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu engama - 24)
3.3 izinto ezinokwakheka kuka 2-D (2-D shapes)	**Uluhlu lwezinto** • isangqa • unxantathu • isikwere • iingxande **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 2-D (2-D) objects ngoko: • imilo • ubungakanani • umbala • engqalileyo • isangqa	**Uluhlu lwezinto** • isangqa • unxantathu • isikwere • iingxande **Iimpawu zezinto** Ukuchaza, ukuhlela nokuthelekisa izinto ezinokwakheka kuka 2-D (2-D) objects ngoko: • imilo • ubungakanani • umbala • engqalileyo • isangqa	Bona amanqaku ekota 2 Kule kota ungaziqhelisa ngomsebenzi we izinto ezinokwakheka kuka 2-D (2-D shapes). Gxininisa ukunakana nokubiza amagama eemilo, umz. izangqa, izikwere, iingxande, onxantathu bachaze namacala angqalileyo nangqukuva. Yenza imisebenzi eyahlukeneyo ukusuka kwikota 2, kodwa ugcine iimpawu zemilo nokuzibiza.	Izifundo 3
3.4 **Ulingano-macala (isimetri)**	**Ulingano-macala** • Ukunakana umgca wolingano – macala izinto ezinokwakheka kuka 2-D (2-D) zejiyometri	**Ulingano-macala** • Ukunakana umgca wolingano – macala izinto ezinokwakheka kuka 2-D (2-D) zejiyometri.	Bona amanqaku ekota 2	Isifundo e -1l

IBANGA 2 IKOTA 4

4. UMLINGANISELO

IZIHLOKO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu engama - 24)
4.1 **Ixesha**	**Ukuchaza ixesha** • Ukubiza iintsuku zeveki ngokulandelelana • Ukubiza iinyanga zonyaka ngokulandelelana funda imihla kwikhalenda • Ukubeka imihla yokuzalwa, iminyhadala yezenkolo,iiholide zikawonke-wonke, iziganeko, iziganeko zezikolo kwikhalenda • Ukuxela iyure – 12 entloko, amacala eyure, nekota neyure **Ukubala ubude bexesha nexesha elidlulileyo** • Ukufunda imihla kwikhalenda • Ukubeka imihla yokuzalwa, iminyhadala yezenkolo, iiholide zikawonke-wonke, iziganeko, iziganeko zezikolo kwikhalenda	**Ukuchaza ixesha** • Ukuxela iiyure ezisentloko - iiyure - icala leeyure - ikota yeeyure kwiwotshi yosiba **Ukubala ubude bexesha nexesha elidlulileyo** • Sebenzisa iiwotshi ukubala ubude bexesha, iiyure, amacala eeyure, neekota zeeyure	Abafundi baziqhelisa ukuthetha ngexesha nokulandelelana kwalo. Ngexesha lokufundisa iklasi yonke nokugxininisa kwixesha leqela, Abafundi bayaqhubeka ukuthethangeentsuku zeveki, iinyanga zonyaka nemihla ebalulekileyo. Bathi baqhelane neekhalenda ngokuqhubeka ne; • Mihla yokuzalwa; • Iminyhadala yezenkolo; • Iziganeko ngezembali; • Iziganeko zesikolo; kunye • Neeholide zikawonke – wonke kwikhalenda **Ukuchaza ixesha ngeeyure, icala leeyure, nekota yeeyure** Bona amanqaku kwikota - 3.	1 lesson

IZIHLOKO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu engama - 24)
4.2 **Ubude**	**Umlinganiselo ongekho seSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude usebenzisa umlinganiselo ongekho seSikweni, umz. imilinganiselo ngesandla, izantya, ubude bepensile nezixhobo zokubala njl. • Ukuchaza ubude bezinto uzibala, ungazicwangcisanga • Ukusebenzisa ulwimi olusulungekileyo ethelekisa, umz. mde kunomnye,mfutshane kunomnye njl. • **Ukwazisa umlinganiselo oseSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude esebenzisa iimitha(intonga elingana nemitha, umtya olingana nemitha) njengomlinganiselo wobude	**Ukwazisa umlinganiselo oseSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude esebenzisa iimitha (intonga elingana nemitha, umtya olingana nemitha) njengomlinganiselo wobude	**Yintoni umahluko ukusuka kukota 1?** • Kwi kota 1 bekugxininiswe kukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude esebenzisa iimitha(intonga elingana nemitha, umtya olingana nemitha) njengomlinganiselo wobude • Kwikota 4 ugxininiso lunga kukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubude esebenzisa iimitha(intonga elingana nemitha, umtya olingana nemitha) njengomlinganiselo wobude: • Bona amanqaku kwikota 1 Oku kungaba yimisebenzi ebhalwayo	isifundo1

IZIHLOKO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu engama - 24)
4.3 Ubunzima	**Umlinganiselo ongekho seSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda ubunzima, esebenzisa isikali nemilinganiselo engacwangciswanga, umz. izitena, iibhloko. • Ukusebenzisa ulwimi olusulungekileyo ethelekisa, umz. ilula, inzima,ilula kunenye, inzima kunenye • **Ukwazisa umlinganiselo oseSikweni** • Ukuthelekisa, ukulandelelanisa nokurekhoda ubunzima bezinto ezithengiswayo, umz. • 2 kg irayisi, 1 kg umngqusho • Xa kukho isikala mabalinganise ubunzima babo. • Kulindeleke ukuba umntwana ngamnye afunde ubunzima	• **Ukwazisa umlinganiselo oseSikweni** • Abafundi babhala imisebenzi ukushwankathela oku kulandelayo: • Ukuthelekisa, ukulandelelanisa nokurekhoda ubunzima bezinto ezithengiswayo, umz. • 2 kg irayisi 1 kg umngqusho • Xa kukho isikala mabalinganise ubunzima babo. Kulindeleke ukuba umntwana ngamnye afunde ubunzima bebandakanya ukufunda imifanekiso ye: • Mveliso yezinto ezinobunzima obubhaliweyo, • Imifanekiso enobunzima kwizikali apho isalathiso saso sikhombe kubunzima obo.	Kwikota 2 Abafundi ba: • Linganisa ubunzima ngesikala bengakucwangcisanga; • Baoda iimveliso ngokobunzima abakunikiweyo apho kuzo; kwanoku • Funda isikali ndawonye neso semifanekiso. Bona amanqaku kwikota 2 Kwikota 4 Abafundi mabahlaziye ngenjongo yokuqukumbela izakhono ngokufunda izikali nezo zemifanekiso bezisa kubunzima obupheleleyo obukufutshane. Oku kungaba yimisebenzi ebhalwayo.	Isifundo 1

IZIHLOKO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu engama - 24)
4.4 Umthamo	**Umlinganiselo ongekhosesikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezinto (umthamo onokuthwalwa zezo zinto kugalelwa kuzo) esebenzisa imilinganiselo enjengamacephe nekomityi • Ukuchaza umthamo wento ngokubala ukuba zingaphi izinto ezingacwangciswanga ezingenza umthamo wento ethile, umz. ibhotile inomthamo weekomityi ezine		Xa besenza umsebenzi ngexesha labo lokuzifundela mabaqhubeleke: • Ukuqikelela, balinganise, bathelekise, balandelelanise nokurekhoda umthamo wezikhongozeli besebenzisa (umthamo onokuthwalwa zezo zinto kugalelwa kuzo) esebenzisa imilinganiselo engekho seSikweni . • Ukulandela iiresipi yiyona meko incedisayo ekunikeni amathuba okuba abafundi baziqhelanise nokuthatha imilinganiselo. • Khetha iiresipi apho izithako zinikwe ngeekomityi • Ukuthelekisa balandelelanise umthamo ngokoludwe lweebhotile apho umthamo ubhaliweyo, nakwizinto ezithengiweyo ezikukutya ezinomthamo obahliweyo kwipakethi, baze; • Basebenzise ilitha zeebhotile okanye ijagi ezizilitha ukuqikelela babale umlinganiselo, bathelekise, balandelelanise baze barekhode umthamo wesikhongozeli besebenzisa iilitha. Bona amanqaku kwikota 3. Abafundi mabanikwe misebenzi ebhalwayo ukuqinisa oku kulandelayo, kubandakanya ukufunda imifanekiso ye: • mveliso nemithamo yayo ebhalwe kuyo ukubonisa ulandelelwano • mifanekiso yejagi apho umthamo okumyimge welitha enye okanye ezi-2 **Ukulinganisa umthamo nengqiqo ukusombulula izibalo** Xa benikwa amanni, indlela asetyenziswa ngayo, ukuzalana kwawo babanakho ukuwasebenzisa ngokufanelekileyo, be: • senza umthamo, umz. Usisi usebenzisa iikomityi zobisi ezi-2 ukwenza ipudingi. Xa enokuphinda kabini ukwenza lomlinganiselo, lungakanani ubisi ayakulufuna? • iilitha Yenza uluhlu lwamanani ngekota, neentlobo zezisombululo ngokunjalo.	Isifundo 1

IZIHLOKO	INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA	INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4	INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze yure e-1 nemizuzu engama - 24)
4.4 Umthamo	**Ukuqalisa umlinganiselo oseSikweni** • Ukuqikelela, ukulinganisa, ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezinto ngeelitha - iibhotile ngomthamo welitha enye - umlinganiselo wejagi okwilitha enye • Ukuthelekisa, ukulandelelanisa nokurekhoda umthamo wezinto ezithengiswayo, umz. iilitha ezi-2 zobisi ilitha e-1 yesiselo esibandayo iilitha ezi-5 zepeyinti okanye imilmitha.	**Ukwazisa Umlinganiselo ongekhosesikweni** Abafundi mabenze imisebenzi ebhalwayo ukuqinisa oku kulandelayo, kubandakanya ukufunda imifanekiso ye: • mveliso nemithamo yayo ebhalwe kuyo ukubonisa ulandelelwano • mifanekiso yejagi apho umthamo okumyimge welitha enye okanye ezi-2 yokufunda umgca. Kulindeleke ukuba abafundi baphawule ngokusondeza kwowona ukufutshane umgca wokuhlela kweso sixhobo sibonisa umthamo. Mabachaze umthamo wenjenje, ibulingana/ iphantse/ ingaphezulu/ ingaphantsi/iyalingana ncam nelitha leyo njengoko befunda kwijagi.		Isifundo 1

IBANGA 2 IKOTA 4 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**INGQIQO NEZAKHONO EZIYIMFUNEKO UKUPHELA KONYAKA**	**INGQIQO NEZAKHONO EZIGXININISWA KWIKOTA 4**	**INGCACISO YAMANQAKUOKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ze yure e-1 nemizuzu engama - 24)
5.1 Ukuqokelela nokulungisa iinkcukacha	**Ukuqokelela nokulungisa iinkcukacha:** • Ukuqokelela ulwazi olungaklasi okanye isikolo ukuphendula imibuzo enikwa ngtitshala • Ukulungisa ulwazi ngokwemigca yongqinelwano (tallies)			
5.2 Ukunikezela iinkcukacha	**Ukubonisa ulwazi** Ukubonisa ulwazi ngeegrafu ezenziwe ngemifanekiso.			
5.3 Ukuhlela nokutolika iinkcukacha	**Ukuhlela nokutolika** Ukuphendula imibuzo ngolwazi olukwiigrafu ezenziwe ngemifanekiso.	**Ukuhlela nokutolika** Ukuhlalutya ulwazi kwimiboniso enikiweyo	**Ukuhlela nokutolika ulwazi olunikiweyo** Kweli xesha lonyaka, umntwana ngamnye ufanele ukuba uziqhelile iigrafu ezenziwe ngenifanekiso. Kucetyiswa ukuba kwikota 4, abafundi mabagxininise ekuhlalutyeni ulwazi. Banike ulwazi olukwimo yegrafu eyenziwe ngemifanekiso enye ubuncinane baluhlalutye. Abafundi mababenakho ukuphendula imibuzo enikwa ngutitshala emalunga negrafu okanye netheyibhile: Jonga imizekelo yolu hlobo lwemibuzo efanelekileyo kwikota yoku-1.	Isifundo 1

3.5.3 Ingcaciso ngomxholo – ibanga lesi-3

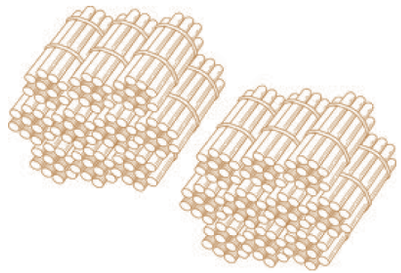
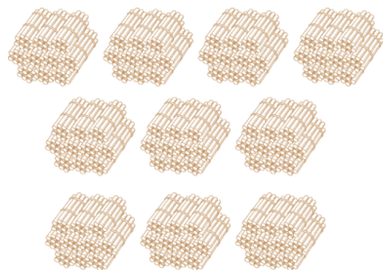
IBANGA LESI-3 IKOTA YOKU 1

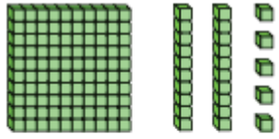
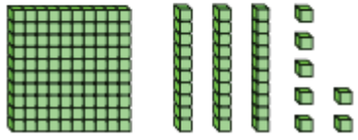
1. AMANANI, UKUBALA NOLALWAMANO

Abafundi bebanga lesi 3 ngoku babethelela abakufunde kwibanga lesi 2 baze basebenzise ezi zakhono ukusebenza ngamanani aphakathi kwe 0 nama 999.

Abafundi kwibanga lesi 3 ngoku baza:

- kufunda babhale amanani ngesimboli namagama ukuya kwi 1000
- baqhubeke ukuchonga nokubeka amanani ngokweendawo;
- Basebenzise ulwazi lexabiso lendawo ukukhangela amakhulu, amashumi kunye nemivo baze banike ingcaciso yolalwamano lwawo.
- Bahlule amanani anemivo emithathu. Bazakusebenzisa ulwazi lwabo lexabiso lendawo ukuthelekisa nokuhlela amanani banike nezizathu zokwenza ngolo hlobo.
- Baqhubekeke bebala besiya ngaphambili baze babale bebuya umva, ngoku ngezithuba zama 20, 25, 50 ne 100; ngoku bazakuthi baqonde ulwalamano phakathi kokubala ngezi 2 nange 4
- Bakwazi ukubala ingqokelela eninzi yezinto ngokuzihlanganisa.Ngoku babala ngendlela emisiweyo nethe ngqo baze bakwazi ukunika indlela yokukhangela isiphumo;
- Dibanisa uze uthabathe amanani ngentloko ukuya kuma 50;
- Sombulula iingxaki ezahlukileyo kwaye baza kufunda ukulungisa iimpendule zabo ezibhalilweyo ngendlela emiselweyo;
- Khetha ukusebenza okuchanekileyo xa esombulula iingxaki ezikwimeko ethile;
- Bakwazi ukurekhodisha indlela ababale ngayo besebenzisa uphawu lokudibanisa (+), lokuthabatha (-) lokuingana (=). Bayakwazi ukuchaza iimpendulo zabo baze bachaze iindlela abazisebenzisileyo;
- Sebenza ngeendlela ezisesikweni zokurekhodisha iindlela zokubala zokudibanisa nokuthabatha; umz baza kwahlula inani elinye okanye amabini ukudibanisa nokuthabatha;
- Nokukhetha kwiindlela ezininzi zokusombulula iingxaki.Umz.Ukuthabatha: 135-131, umntwana uya kukwazi ukuthabatha ngokubala ngokongeza okanye ebuya umva.
- Ikharityhulam ilindele ukuba abafundi bebanga lesi-3 basebenze kancinci ngezinto eziphathekayo ukumela ukudibanisa nokuthabatha. Ekugqibeleni abafundi kufuneka bakwazi ukuthabatha nokudibanisa besebenzisa indlela yokusebenzisa ipensile nephepha.
- Abafundi abaqala ibanga lesi-3 kufuneka baqonde ixabiso lendawo yamanani baze bakwazi ukwahlula amanani ukuze bakwazi ukubala.Abafundi sele beqalisile ukuqonda ama 78 njengemivo engama 78 kwaye abalindelekanga ukuba basebenzise izinto eziphathekayo zokubala ukuze bakuqonde oku.Kwibanga lesi 3 abafundi baqhubekeka beziqhelanisa nokwahlula amanani ukuze baqonde ixabiso baze basebenzise olu lwazi ukwahlula amanani ukuze bakwazi ukudibanisa nokuthabatha.

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.1 **Bala izinto**	**Bala izinto eziphathekayo** Qikelela uze ubale izinto ezili 1000.Ubuchule bokwahlula ngokwamaqela buyakhuthazwa.	• Hlula izinto ngokwamaqela ezingama 200 ukuqikelela nokubala ngokuthembekileyo. • Nika uqikelelo olufanelekileyo lenani lezinto ezinokuthi ziqinisekiswe ngoku balwa.	Kwibanga lesithathu 3 abafundi baqhubeka bebala izinto abazibona imihla ngemihla ngokukhwaza. Amanani abawaziyo ayakwanda ukuya kwi 1000 ekupheleni konyaka. Oku kuthetha ukuba makuthathelwe ingqalelo izinto abazisebenzisayo xa bebala: • Iibloko zeDienes • Amamkhadi abonisa ixabiso lamanani Kwikota yokuqala Abafundi mabaziqhelanise baze babethelekelele ukubala izinto ukuya kuma 200. Ingqalelo mayibe sekohluleni izinto ngokwamaqela.Abafundi kufuneka bazi ukuba kungcono, futhi bubuchule kwaye kuyakhawuleza ukubala ngokwamaqela ama 10,20,50 kunye nama 100 kunokubala ngemivo. Baqala ukubala ngama 100 ukuya phambili nokubuya umva kwikota yokuqala.Ukuxhasa ukubala ngentloko abafundi mabalungise izinto ngamaqela ama 100. **Umz:** Iqela ngalinye libonisa ikhulu.  	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.1 **Bala izinto**	**Bala izinto eziphathekayo** Qikelela uze ubale izinto ezili 1000.Ubuchule bokwahlula ngokwamaqela buyakhuthazwa.	• Hlula izinto ngokwamaqela ezingama 200 ukuqikelela nokubala ngokuthembekileyo. • Nika uqikelelo olufanelekileyo lenani lezinto ezinokuthi ziqinisekiswe ngoku balwa.	Kule kota nalapha enyakeni Abafundi kufuneka beqondisiwe ukuba ukubala izinto kuya kubanceda xa besesenza izibalo. **Umzekelo:** Ukubala izinto ngokuzahlula zibe ngamaqela ama 10, 20, 50 okanye ama 100 kuya kunceda Abafundi bangahlula amanani xa bedibanisa okanye bethabatha. 362 + 527 = (300 + 60 + 2) + (500 + 20 + 7). Abafundi babala amakhulu kunye kuba bakwenzile oko xa bebebala iqela lezinto ezili 100.Abafundi babala ngamashumi (bakwenzile oku oko beqale kwibanga lokuqala) baze babale ngemivo.Abafundi kufuneka baqonde ukuba kutheni bechitha ixesha labo bebala izinto.Olu nxibelelwano kufuneka lwenziwe lucace. Kule kota Abafundi bayakwazi ukubonisa amanani besebenzisa iibloko zeDienes okanye isiseko seebloko ezili 10. Abafundi bebezisebenzisile ezi zixhobo kwibanga lesi 2.   Abafundi kufuneka babenako ukugcwalisa lenkcazelo ilandelayo: Ixabiso leebloko lesi siseko ze 10 ngu _____ Abafundi banokusebenzisa amakhadi anexabiso lamanani ukubonisa ixabiso ledijithihi nganye Ingqalelo yale misebenzi ayikokubala izinto kodwa. Ngaxesha linye abafundi benza oku kilandelayo: • Baqonda ixabiso leedijithihi, • Ukwahlula okanye ukwakha amanani noku • funda iisimboli zamanani.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.2 **Bala ubheka phambili uze ubale ubuya umva**	Bala ubheka phambili uze ubale ubuya umva nge: • zithuba ezibalulwe kwibanga lesi 2 ngoluhlu lwamanani andisiweyo ukusuka kwel onani linikiweyo. • ngama 20,30,25,50,100 ukuya kwi 1 000	Bala ubheka phambili uze ubale ubuya umva nge: • zithuba ezibalulwe kwibanga lesi 2 ngoluhlu lwamanani andisiweyo ukusuka kwelo nani linikiweyo. • Ngama 100 ukuya kuma 500	**Yintoni engumahluko kwibanga lesi 2?** Abafundi babala ngama 100 okokuqala.Benza oku ukuya kuma 500.Abafundi bafuna izixhobo ezinenkxaso yamashumi ezifana nezi: • IIbhidzi zokubala • Iibloko zeDienes • Imigca manani • Iigridi yokubala Ukubala uqakatha kufuna ukunxulunyaniswa netheyibhile yophinda phindo.Ukubala ngo 4 kuya kubanceda abafundi xa besithi: • U- 4 omnye ngu- 4 • Oo- 4 aba 2 si- 8 • Oo -4 aba -3 Ii -12 Ukubala uqakatha kukwaxhasa ukuqonda uphinda phindo kwaye kuya kunceda abafundi xa begqibezela ukulandelelana kwamanani.	

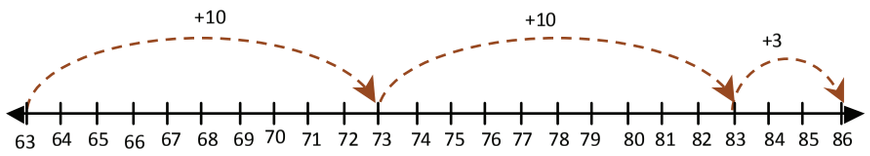
IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.3 **Iisimboli zamanani namagama amanani**	**Chonga unakane uze ufunde amanani** • Chonga,nakana uze ufunde iisimboli zamanani ukusuka kwi 0-1000 • Bhala iisimboli zamanani ukusuka kwi 0-1000 • Chonga,nakana uze ufunde amagama amanani ukusuka ku 0 -1 000 • Bhala amagama amanani ukusuka kwi 0 to 1000	**Chonga unakane uze ufunde amanani** • Chonga,nakana uze ufunde iisimboli zamanani ukusuka kwi 0 - 500 • Bhala iisimboli zamanani ukusuka kwi 0 - 500 • Chonga,nakana uze ufunde amagama amanani ukusuka kwi 0 - 250 • Bhala amagama amanani ukusuka ku- 0 - 500	**Yintoni engumahluko kwibanga** **Iesi 2?** Kule kota abafundi bayakwazi ukuchonga, bafunde kwaye babhale iisimboli zamanani ukuya kuma 500. Bafunda amagama amanani ukuya kuma 250 baze babhale amagama amanani ukuya kwi - 100 Ukufunda nokubbhala iisimboli zamanani kuyaqheliswa kwakhona xa be: • bala izinto; • bala usiya phambili uze ubale ubuya umva; • gqibezela ulandelelwano lwamanani aze • alungise aze athelekise amanani. Makukhathalelwe ukubizwa kwamanani ngokuchanekileyo,umntu kufuneka athi xa ebiza u 323 athi “amakhulu mathathu anamashumi amabini mathathu” angathi “323” Xa ebhala inani elinedijithi ezintathu, inani eliphakathi kwe 100 ne 110, 200 ne 210; 300 ne 310, 400 ne 410, idijithi ekwindawo yama 10 liqanda. Abanye abafundi bakufumana kunzima ukubhala la manani ngeesimboli xa benikwe amanani ngamagama. Umz. kunokuba nzima kwabanye abafundi ukubhala amakhulu amathathu anesine. Banokubhala 3004.Amakhadi anexabiso lamanani aluncedo ngakumbi ukunceda abafundi ukuba baqonde ukubonisa amanani ngokuchanekileyo. Abafundi kufuneka banikwe imisebenzi emininzi yokuziqhelanisa nokubhala amanani.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.4 **Chaza, thelekisa landelelanisa amanani**	**Chaza, thelekisa Chaza, thelekisa landelelanisa amanani ukuya kuma-999** • Chaza uze uthelekise amanani azeleyo ukuya kuma -999,besenzisa u ncinci kuno,nkulu kuno **Chaza uze uthelekisae amanani azezleyo ukuya kuma** 999 usebenzisa uncinci kuno,khulu kuno,ngaphezulu kuno,ngaphantsi kune kunye no lingana • Chaza uze uthelekise amanani azeleleyo ukuya kuma 999 ukusuka kwelona lincinci ukuya kwelona likhulu, ukusuka kwelona likhulu ukuya kwelona lincinci. **Sebenzisa amanani olandelelwano ukubonisa ukulandelelana,indawo** Sebenzisa, funda uze ubhale amanani olandelelwano.	**Chaza, thelekisa Chaza, thelekisa landelelanisa amanani ukuya kuma-99** • Chaza uze uthelekise amanani azeleyo ukuya kuma 999,besenzisa u ncinci kuno,nkulu kuno Chaza uze uthelekise amanani azeleyo ukuya kuma 999,besenzisa u ncinci kuno,nkulu kuno • **Chaza uze ulandelelanise** amanani apheleleyo ukuya kuma ku-99. Ukusuka kwelona lincinci ukuya kwelona likhulu,nokusuka kwelona likhulu ukuya kwelona lincinci. **Sebenzisa amanani olandelelwano ukubonisa ukulandelelana,indawo** Sebenzisa, funda uze ubhale amanani olandelelwano.	**Yintoni engumahluko kwibanga lesi 2?** Kule kota abafundi babethelela ukulandelelanisa nokuthelekelela amananai ukuya kuma 99 kwaye kufuneka bakwazi ukunika izizathu zokuba kutheni elinye inani lilikhulu kunelinye. Vumela abafundi basebenzise umgca manani, umkhondo wamanani,igridi yokubala okanye ulwazi lwabo lokwahlula amanani ukuya kumashumi nemivo nokubonisa ukuqonda kwabo.Xa belandelanisa amanani abafundi kufuneka bakwazi ukutsho ukuba kutheni inani elithile lillikhulu kunelinye besebenzisa ixabiso ledijithi ukuchaza izizathu zeempendulo zabo. **Umzekelo:** 39 mancinci kunama 59 kuba: Ndiyazi ukuba ama 39 = 30 = no 9 kwaye 59 = 5= no 9. ՝Kwaye ama- 30 ziinyanda ezintathu zamashumi wona ama- 50 ziinyanda ezintlanu zamashumii.Kukho iinyandai ezininzi kuma- 50 kunama -30. Ukusebenza ngamanani olandelelwano ikhalenda yeyona nto enokunceda kuba ivumela abafundi ukuba bathethe ngomhla wamashumi amabini anesithathu okanye umhla wamashumi amathathu enyangeni.Abafundi kufuneka baziqhelanise nokufunda nokubhala ngendlela efinyeziweyo.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo lenani elineedijithi ezi 3 ukuya ku 999** • Nakana ukuba idijithi imele ntoni • Caluzulula inani elinedijithi ezintathu ukuya ku 999 uzise kwisiphindaphindi sama 100, isiphindaphindi samashumi kunye nemivo • Chonga uze uxele ixabiso ledijithi nganye	**Nakana ixabiso lendawo lamanani ukuya 99** • Nakana ukuba idijithi imele ntoni • Cazulula inani elineedijithni ezimbini ukuya kuma- 99 isiphindaphindi samashumi kunye nemivo • Chonga uze uxele ixabiso ledijithi nganye	**Yintoni engumahluko kwibanga lesi 2?** Le kota yeyokubethelela ukuqonda kwabo ixabiso lendawo ebebelifunde kwibanga lesi.Abafundi baqhubeka ukwenza imisebenzi elolu hlobo njengoko bekwenziwe kwibanaga lesibini ikota yesine: **Qonda uze usebenzise isigama sexabiso lendawo:** Sebenzisa,funda uze uqalise ukubhala: Imivo, amashumi, ... ixabiso lendawo ... **Yahlula amanani aneedijithi ezimbini ukuya kwiziphinda phindi ze 10 kunye nemivo** Abafundi banokucazulula amanani kwi: Abafundi can calucalula amanani into: • Ixabiso lamashumi kunye nemivo umz: 73 = 70 + 3 (aamakhadi abonisa ixabiso lenani angaluncedo ukubonisa oku) • Iziphinda phindi zamashumi kunye nemivo Isiphindaphindi samashumi nemivo umz 73 = 7 amashumi + 3 imivo **Ukwakha amanani aneedijithi ezibini kwixabiso leendawo zamanani** **Umzekelo** Bhala inani: a) Amashumi ama 6 nemivo emi 3 _____ b) Amashumi ama 2 nemivo emi 5 _____ c) 12 Amashumi ali 12 nemivo esi 8 _____ d) Amashumi ali 18 nemivo emi 4 _____ **Sebenzisa izixhobo ukubonisa ukwahlulwa hlulwa kwamanani:** • I- Abhakhasi a) Bonisa amashumi ama 4 nemivo emi 5 besebenzisa i-abacus. b) Bonisa amashumi asi 7 nemivo emi 5 esebenzisa i-abacus. • Amakhadi abonisa ixabiso lendawo lenani	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo lenani elineedijithi ezi 3 ukuya ku 999** • Nakana ukuba idijithi imele ntoni • Caluzulula inani elinedijithi ezintathu ukuya ku 999 uzise kwisiphindaphindi sama 100, isiphindaphindi samashumi kunye nemivo • Chonga uze uxele ixabiso ledijithi nganye	**Nakana ixabiso lendawo lamanani ukuya 99** • Nakana ukuba idijithi imele ntoni • Cazulula inani elineedijithni ezimbini ukuya kuma- 99 isiphindaphindi samashumi kunye nemivo • Chonga uze uxele ixabiso ledijithi nganye	Abafundi bangasebenzisa amakhadi exabiso lendawo ukubonisa izintlu zamanani.  **Umzekelo:** **Le mibuzo ilandelayo inokubuzwa:** • Xela ukuba idijithi isi 8 kuma 28 amele ntoni? U- 2? • Xela ukuba leliphi inani elilingana: a) namashumi ama 6 b) amashumi asi 9 nemivo emi 6 c) amashumi ama 5 nemivo esi 9	
SOMBULULA INGXAKI KWIMEKO ETHILE				

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.6 **Ubuchule bokusombulula iingxaki**	Sebenzisa obu buchule bulandelayo xa besombulula iingxaki kwaye banike inkcazelo yezo zisombululo: • ukwakha nokwahlula amanani • ukuphinda-phinda kabini nokuhlula kubini ngokulinganayo. • imigca manani • ukusondeza kumashumi.	Sebenzisa obu buchule bulandelayo xa usombulula iingxaki: • ukwakha nokwahlula amanani • ukuphinda-phinda kabini nokwahlula kabini ngokulinganayo (ukwenza iziqingatha) • imigca manani	**Yintoni into engumahluko kwibanga lesi 2?** Abafundi balindeleke ukuba basombulule izibalo zamagama besebenzisa obu buchule bulandelayo: • Ukwakha nokwahlula amanani • Ukuphinda-phinda kabini nokwenza iziqingatha • Imigca manani Ukuzoba izinto uye kufika kuma 99 nganye makungakhuthazwa kwaye ayibobuchulei. Khuthazwa ukufakelwa kweesimboli yamanani xa bebhala, bafakele imifanekiso. Abafundi banokukhuthazwa ukuba babhale izivakalisi zamanani. Vumela abafundi ukuba bakhethe obona buchule okanye eyona ndlela bayifumana ilula kubo. Uludwe lwamanani nohlobo lwengxaki luya kuthi lukhokele kwindlela eyakuthi isetyenziswe. Kodwa ke ukuba abafundi basebenzisa indlela ethile engabancedisiyo kufuneka bekhokelwe ukuba basebenzise ezinye iindlela ezibancedisayo.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.6 **Ubuchule bokusombulula iingxaki**	Sebenzisa obu buchule bulandelayo xa besombulula iingxaki kwaye banike inkcazelo yezo zisombululo: • ukwakha nokwahlula amanani • ukuphinda-phinda kabini nokuhlula kubini ngokulinganayo. • imigca manani • ukusondeza kumashumi.	Sebenzisa obu buchule bulandelayo xa usombulula iingxaki: • ukwakha nokwahlula amanani • ukuphinda-phinda kabini nokwahlula kabini ngokulinganayo (ukwenza iziqingatha) • imigca manani	**Ukwakha nokwahlula amanani** Obu bobunye bobuchule obubalulekileyo kiMfundo esisiseko. Ukusebenzisa obu buchule buvumela abafundi ukuba bohlule baze badibanise kwakhona amanani ukubanceda ukuba babale ngokulula.Baya kuthi basebenzise obu buchule kwakhona kwisigaba esiphakathi. **Ukuphinda-phinda kabini nokohlula kabini ngokulinganayo(ukwenza iziqingatha)** Obu buchule bunzima kakhulu kwaye bufuna ukukwazi ukusebenzisa amanani. Abafundi abakwaziyo ukukhetha obu buchule bayakwazi ukusebenzisa obu buchule kwiimeko ngemeko. Ukukwazi ukuphinda-phinda kabini kuya kuvumela abafundi ukuba basebenzise ubuchule bokusondeza kuphindo kabini. Umzekelo: Izibalo zamazwi: Ngenye imini ekliniki ethile, abafundi abangama 45 bagonyelwa iiflu. Ngosuku olulandela abanga 46 baye bagonywa. Ingaba bangaphi abagonyiweyo bebonke? Ingxaki ingasonjululwa ngokusebenzisa uphinda phindo. Umntwana unokuthi aphinde kabini ama 45 aze adibanise u 1 okanyea phinde kabini u 46 uze uthabathe u 1. **Imigca manani** Ukusebenzisa imigca manani ukuze bancedakale ekubaleni kuya kunika abafundi indlela yokurekhodisha izinto abazicingayo baze bagcine oko bakwenzileyo.Ivumela abafundi barekhodishe oko banokuthi bakusebenzise ukuchaza indlela abasombulule ngayo ingxaki. Abafundi bebesoloko besebenzisa imigca manani ukusukela kwibanga lokuqala. Abafundi kufuneka babenako ukwakha imigca manani engenanto apho bathi babhale inani lokuqala baze baxele ukuba basuka njani kwelinye inani ukuya kwelinye. Umzekelo wendlela abanokuthi abafundi basebenzise imigca manani: Abafundi abangama 28 bathathe uhambo namhlanje. Abafundi abashiyeke esikolweni bangamashumi asi 70. Ingaba ekuqaleni bebebangaphi Abafundi bebonke? Umgca manani oqala kuma- 70, obonisa imitsi e- 2 ye- 10, kwaye nomtsi we- 8  	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.7 **Ukudibanisa noku thabatha**	Sombulula izibalo zamagama kwimeko ethile uze uchaze isisombululo sakho kwingxaki equka ukudibanisa nokuthabatha ezineziphumo ukuya kuma 999.	Sombulula izibalo zamagama kwimeko ethile uze uchaze isisombululo sakho kwiingxaki ezinokudibanisa nokuthabatha ezineziphumo ukuya kuma 99.	**Imizekelo yeengxaki ezinokwenziwa kule kota** Kule kota abafundi babethelela umsebenzi ebebewenze kwibanga lesibini.Jonga kumanqaku angezisombululo zeengxaki kwibanga lesibini isahluko sesibini.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.8 **ukudibanisa okuphindiweyo okukhokelela kuphinda phindo**	Sombulula izibalo zamagama kwimeko ethile uze uchaze isisombululo sakho sezo ngxaki usebenzisa uphinda phindo oluneempendulo ukuya kuma 99.	Sombulula iingxaki zamanani kwimeko ethile uze uchaze isisombululo kwiingxaki ezinophinda phindo ezineempendulo ukuya kuma 50.	**Imizekelo weengxaki ezinokwenziwa kule kota** • Umakhi ufuna ukubeka imiqolo emi 6 yezitena zokwakha,umqolo ngamnye unezitena ezisibhozo. Ingaba zingaph izitena aza kufuna? • UNomsa uneengxowa ezi 4 zeelekese. Ingxowa nganye ineelekese ezi 6 . Zingaphi iilekese zizonke? • Umama ufuna ukubhaka ikeyiki ezili 12 .Ukuba ikeyiki nganye ufuna amaqanda ama 2, mangaphi amaqanda umama ekufuneka ewathengile? • Ukuba umntwana ngamnye ufunda iincwadi ezi 3 ngoJulayi, zingaphi iincwadi ezinokuthi zifundwe yiklasi enabafundi abangama 20? **Uhlobo lwengxaki 9: Ucwangciso ngendlela ethile lwamanani** • Igadi yemifuno inemiqolo yezityalo eli 12. Umqolo ngamnye unezityalo ezisi 7.Zingaphi izzityalo zizonke egadini? • Igadi yemifuno inemiqolo yezityalo eli 12.Umqolo ngamnye unezityalo ezilinganayo.Ukuba izityalo zizonke zingama 48, zingaphi izityalo kumqolo ngamnye? • Igadi yemifuno inezityalo inezityalo ezingama 48 ezilinywe kwimiqolo. Kumqolo ngamnye kulinywe izityalo ezisi 7. Mingaphi imiqolo iyonke? **Ukusebenzisa ukuphinda-phinda kabini ukusombulula iingxaki** • UThemba uneminyaka esi 8 • Umnakwabo omkhulu mdala ngokuphindwe kabini kuno Themba. • Utata wakhe mdala ngokuphindwe kane kuno Themba. • Utatomkhulu wakhe mdala ngokuphindwe kabini kunootata wakhe. • Mingaphi iminyaka yomntu ngamnye? • Incwadi kaShepi inamaphepha angama 48 ubude.Ukwiphepha lamashumi angama 26, ingaba ufunde ngaphaya kwesiqingatha sencwadi yakhe? Kwibanga lesithathu abafundi balindelekeukuba banakane uphinda phindo yezibalo zamagama. Abafundi kufuneka bakhuthazwe ukuba basebenzise amanani, bangawasebenzisa kunye nemifanekiso kunokuba basebenzise izixhobo kuphela okanye imifanekiso yodwa.	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.9 **Ukwahlula ngokwamaqela kunye nokwaba ngokulin ganayo olukhokelela kulwahlula hlulo**	Sombulula uze uchaze izisombululo zeengxaki ezibambekayo, iingxaki ezinokwakwaba ngokulinganayo ezibandakanya ukwahlula ngokwamaqela ukuya kuma 200 neempendulo ezinokuba nentsalela.	Sombulula uze uchaze izisombululo zeengxaki ezibambekayo, iingxaki ezinokwakwaba ngokulinganayo ezibandakanya ukwahlula ngokwamaqela ukuya kuma 50 neempendulo ezinokuba nentsalela.	Kule kota kufundiswa uphawu lokwahlula .Kubalulekile ukuba abafundi baziqonde ezi zakhono zilandelayo zokwahlula hlula phambi kokuba basebenzise uphawu: Iingxaki ezibandakanya ukwabelana zisoloko zingoku kulandelayo: • Ukwabelana ngokulinganayo nokuba • Ufumana zibe ngaphi umntu ngamnye. Iingxaki zokwabelana zisoloko zingoku kulandelayo: • Mangaphi amaqela anokwenziwa? **Umzekelo weengxaki ezinikwenziwa kule kota** • Ukuba abafundi abangama 47 neetitshala ezi 3 baya ekonsathini kwaye abantu abali 11 banokwanela kwibhasi encinci, ingaba ibhasi kufuneka ithuthe kangaphi phambi kokuba bonke abafundi babe bathuthwe ukuya ekonsathini? • UMongezi upakisha Izinto zokubala ezingama 47 kwimiqolo esi 9. Zingaphi izinto zokubala kumqolo ngamnye? • Amantombazana anga 35 afuna ukudlala ibhola.Ukuba iqela ngalinye linamantombazana asi 7.Ingaba aza kuba mangaphi amaqela ewonke? • Qikelela kuqala: • Ingaba aza kuba ngaphezulu okanye ngaphantsi kwe 10? • Ingaba aya kuba ngaphezulu okanye ngaphantsi kwe 20? • UAndiswa uthenga iilekese ezingama 44. Wohlula ezi lekese ngokulinganayo ngokwengxowa ezi- 4.Ingaba zingaphi iilekese kwingxowa nganye? • UAndiswa uthenga iilekese ezingama 48. Ufuna ukuzahlula zibe kwiingxowa, kwaye ingxowa nganye ibe neelekese ezi 6 .Kufuneka abe neengxowa ezingaphi?	

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1.10 **Amaqhezu**	Sombulula uze uchaze izisombululo zeengxaki ezibandakanya ukwaba ngokulinganayo ezikhokelela kwizisombululo ezibandakanya amaqhezu a-*unitary* nangekho *unitary* umz. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{2}{5}$, njl.	Sombulula uze uchaze izisombululo iingxaki ezibandakanya ukwabelana ngokulinganayo ezikhokelela kwizisombululo ezibandakanya amaqhezu (*unitary)* (*non-unitary)* umz.$\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{2}{5}$, njl.	Kwibanga lesibini abafundi bafundiswa amaqhezu baze benze oku: • Baba izinto bazohlule ngokwamaqela ngokulinganayo; • Baxela amaqhezu; • Bachonga amaqhezu kwimeko ezahlukileyo; • Babhala amagama amaqhezu umz isithathu eshumini,isihlanu eshumini • Bafu na amaqhezu ezinto ezipheleleyo kunye • namaqhezu engqokelela ezinto. **Yintoni into engumahluko kwibanga lesi 2?** Kule kota, abafundi baqhubekeka besebenza ngamaqhezu afana nesiqingatha,isithathu eshumini,ikota,isishlanu eshumini Abafundi bafundiswa kwakhona amaqhezu (*non- unitary* umz iikota ezi 3 . Abafundi akuyomfuneko ukuba basebenzise la magama (*unitary and non-unitary.)* **Umzekelo weengxaki ezinokwenziwa kule kota** • Ukwaba ngokulinganayo,okukhokelela kumaqhezu • Yabelana ngeetshokolethi ezi 3 nabahlobo bakho ukuze wonke umntu afumane ngokulinganayo ukuze kungabikho tshokolethi ishiyekileyo. • Amaqhezu engqokelela a) Yintoni ikota yeelekese ezili 16. b) Iiswitsi ezisi 8 leliphi iqhezu leelekese ezingama 24? c) Umakhulu unika u Kiki i R12. UKiki ufuna ukugcina isithathu eshumini salemali. Kufuneka egcine malini? d) Ezi ntlobo zeengxaki kufuneka zibuzwe emveni kokuba Abafundi besombulule iingxaki ezi 4 okanye ezi 5 zokwabelana ezikhokelela kumaqhezu baze bawazi amagama amaqhezu. **Ukubhala amaqhezu** Abafundi akuyomfuneko ukuba babhale iisimboli zamaqhezu. Abafundi bafunde indlela yokuleyibhela amaqhezu njenge kota ezi 3, amaqhezu ama 2. Oku kuqala kubanceda ukuba baqonde ukuba amagama amaqhezu achaza ukuba ingaba into epheleleyo yahlulwe yanezahlulo ezingaphi ezilinganayo. Oku kunceda kuqala ukuba baqonde ukuba amagama amaqhezu achaza, umzekelo iqhezu, ikota, njl njl kwaye okwesibini zingaphi izahlulo ekubhekiselelwe kuzo umz amaqhezu ama 2.	

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1.10 **Amaqhezu**	Sombulula uze uchaze izisombululo zeengxaki ezibandakanya ukwaba ngokulinganayo ezikhokelela kwizisombululo ezibandakanya amaqhezu a-*unitary* nangekho *unitary* umz. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{2}{5}$, njl.	Sombulula uze uchaze izisombululo iingxaki ezibandakanya ukwabelana ngokulinganayo ezikhokelela kwizisombululo ezibandakanya amaqhezu (*unitary)* (*non-unitary)* umz. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{2}{5}$,, njl.	**Ukubonisa amaqhezu ezibalo zamagama** • Abafundi mabazobe iimpendulo zabo ukubonisa ukuba bayilandela ingxaki. • Lindela ukuba abanye abafundi banokuzoba amaqhezu ngokuchanekileyo kodwa bangawabizi ngokuchanekileyo. Bancedise abafundi ukubiza amagama amaqhezu ngokufanelekileyo.(Jonga amanqaku abhekiselele ekuthiyeni amaqhezu amagama phantsi kwezibalo ezingasekwanga mxholweni) • Abafundi mabaxele amaqhezu abanikise ngawo ngokuwabhala ngokwee zithathu eshumini umzekelo isibini kwisithathu.	
1.11 **Imali**	• Nakan aze achonge imali ezinkozo nengamaphepha yase Mzantsi Afrika • Sombulula iingxaki zemali ezinetotali kunye netshintshi ngokwemali engamaphepha okanye iinkozo. • Guqula iirandi neesenti	• Nakana aze achonge imali ezinkozo nengamaphepha yase Mzantsi Afrika • Sombulula iingxaki zemali ezineziphumo kunye netshintshi ngokwemali engamaphepha okanye iinkozo.	Kule kota abafundi basombulula iingxaki zemali. **Umzekelo:** Kwibanga lesi 3 abafundi bafuna imali enganga R759 ukuze baye ekhempini. Sele beqokelele i R250.Ingaba yimalini ekusafuneka beyifunile? • Bhala iisenti ezingama 325 njenge randi neesenti. • Zingaphi iindlela ezahlukileyo onokuzenza ukwenza amaR400 usebenzisa imali engamaphepha? Wazi njani ukuba unazo zonke izisombululo? • UThemba uneenkozo zemali ezizezi-:50 c enye kunye nama -20 c amane. Ithofi ibiza iR1,20. Yimalini itshintshi aza kuyifumana? • Ukuba itreksuti yesikolo ixabisa iR150, ingaba iitreksuti ezimbini ziya kuxabisa malini? **Iingxaki zokuthenga nokuthengisa** **Umzekelo** • Umakhulu kaVuyisa umnika i R5. Ingaba zeziphi iilekese ezintathu anokuzithenga kwezi ? Itshokolethi ye R2, 70; itshungama ye R1, 80; iilekese ezimuncu ze R1, 40; iilekese zepesika ze R1,60; iiminti ze R2,20; ithofi ye R1,20. • UThemba uthenge iincwadi ezintathu ngama R80 inye, ingaba iyakuba yimalini itshintshi kuma R300? • IIpakethi zeeminti ezi 5 zixabisa ama 44c inye. Umnu King ufuna iiminti ezingama 88.Ingaba zingaphi iipakethi amakazithenge?Uza kubhatala malini?	

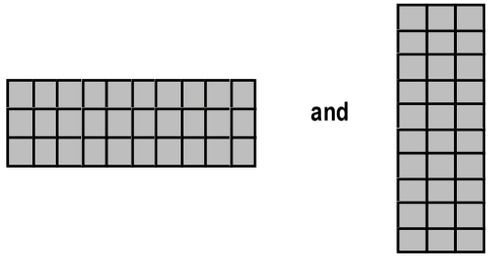
IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
IZIBALO EZINGASEKWANGA MXHOLWENI				
1.12 **Ubuchule** **(okanye iindlela)**	Sebenzisa obu buchule bu landelayo xa ubala: • Ukwakha nokwahlula amanani • ukuphinda kabini nokohlula kabini ngokulinganayo (ukwenza iziqingatha) • imigca manani • ukusondeza kuma mashumi	Sebenzisa obu buchule bulandelayo xa ubala: • ukwakha no ukwahlula amanani • ukuphinda-phinda kabini ukohlula kabini ngokulinganayo (ukwenza iziqingatha) • imigca manani	Ezi ndlela ziza kusetyenziswa ukusombulula iingxaki nakwizibalo ezingalawulwa meko ithile. **Ukwakha nokwahlula** Le yenye yendlela okanye ubuchule obubalulekileyo kwiMfundo eSisiseko. Ukusebenzisa obu buchule buvumela abafundi ukuba bohlule baze baphinde badibanise amanani ukunceda ukuba babale lula.Baya kusebenzisa obu buchule nakwiMfundo ephakathi. Kubalulekile ukubaabafundi basebenzise ulwazi lwabo xa besohlula amanani. Umz: Kubalulekile ukuba abafundi basebenzise ulwazi lwaboxa besohlula amanani umz. • ukohlula usebenzisa ixabiso lendawo; • ukohlula usebenzisa isiphindaphindi ze o10; kunye • nokohlula amanani ngokwezibini **Imigca manani** Abafundi baya kuqhubeka besebenzisa kwaye bezakhela imigca manani yabo ukuze bakwazi ukubala. Imigca manani iya kusetyenziswa kakhulu xa besenza izibalo zokudibanisa nokuthabatha. **Ukudibanisa nokuthabatha.** Abafundi kufuneka bazakhele eyabo imigca manani baze bohlule amanani ukuya kwizahlulelo abaza kukwazi ukusebenza ngazo. ima **Umzekelo:** 45 + 27 Imigca manani mayiqale kuma -45 baze abafundi benze imitsi emi -2 kwimitsi eli-10 baze benze umtsi omnye obonisa isi -7. **Uphinda phindo** Imigca manani kufuneka iqhubeke ukuxhasa ukudibanisa okuphindindiweyo. Imitsi elinganayo kufuneka ibhalwe kumgca manani nezivakalisi ezixhasayo zinokubhalwa.	

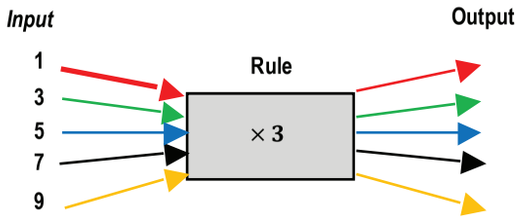
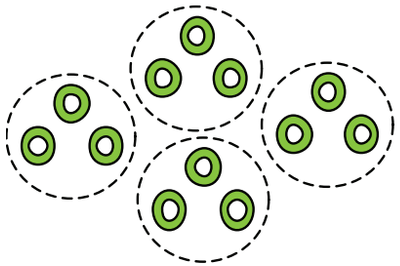
IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.13 **Ukudibanisa noku ukuthabatha**	• Dibanisa ukuya kuma 999 • Thabatha kuma 999 (+, –, =, ☐) • Sebenzisa iisimboli ezifanelekileyo • Ziqhelanise neebhondi zamanani ukuya ku 30	• Dibanisa ukuya kuma 999 • Thabatha kuma 999 • Sebenzisa iisimboli ezifanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuya ku 20	Kule kota abafundi baziqhelanisa baze babethelele umsebenzi ebebewenze kwibanga lesi 2. Ukuba abafundi ba: • Sebenza kuphela ngezinto zokubala ezinganye nganye; • Zoba umfanekiso wonye kuphela • Bala konke ngoonye xa besebenza ngeziphumo ezingaphaya kwama 30,iyasithoba isantya sabo, yandisa kananjalo amathuba okwenza iimpazamo xa bebala. Oku kwenza kubaluleke ukuba bavelise iindlela ezinobuchule. Ukwakhaa nokwahlula amanani buba bobona buchule bubalulekileyo obuza kusetyenziswa kule kota. Iindlela ezinokusetyenziswa kwizibalo zokudibanisa nokuthabatha. **Ukwahlula amanani abe zizahlulo ezincinci kwenza ukuba ukubala kube lula** Abafundi banokwahlula amanani ngeendlela ezininzi abanokuziphumelelisa. Oku kuthetha ukuba banokwenza oku ngeendlela ezininzi. **Ukusebenzisa ulwazi lexabiso lendawo ukwahlula amanani abengamashumi nemivo** • Dibanisa amanani anedijithi ezimbini ngokwahlula omabini amanani 43 + 36 = ☐ 43 + 36 = (40 + 3) + (30 + 6) = (40 + 30) + (3 + 6) = 70 + 9 = 79 • Dibanisa ngokwahlula inani elinye 43 + 36 = ☐ 43 + (30 + 6) 43 + 30 → 73 + 6 = 79 • Yahlula ngokwamaqela amashumi 43 + 36 = ☐ 43 + (10 + 10 + 10 + 6) 43 + 10→ 53 + 10→ 63 + 10→ 73 + 6 = 79	

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1.13 **Ukudibanisa noku ukuthabatha**	• Dibanisa ukuya kuma 999 • Thabatha kuma 999 (+, –, =, ☐) • Sebenzisa iisimboli ezifanelekileyo • Ziqhelanise neebhondi zamanani ukuya ku 30	• Dibanisa ukuya kuma 999 • Thabatha kuma 999 • Sebenzisa iisimboli ezifanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuya ku 20	**Ukuthabatha** • Thabathai ngokwahlula amanani omabini 87– 56 = ☐ 87– 56 = (80 + 7) – (50 + 6) = (80– 50) + (7– 6) = 30 + 1 = 31 • Thabatha ngokwahlula inani elinye 87–56 = ☐ 87– (50 + 6) 87– 50 → 37 – 6 = 1 Lindela ukuba abanye abafundi banokwahlula amanani ngendlela ezahlukileyo ukwenza lula ukuba babale: • Yahlula use kwiziphindaphindi zama 10 87– 56 = ☐ 87– (20 + 20 + 10 + 6) 87– 20 → 67–20 → 47– 10 → 37– 6 → 31 **Ukusetyenziswa kolwazi lwangaphambili njengobuchule** • Ukusebenzisa ukwahlula kubini ukwahlula amanani 69 + 12 69 + (6 + 6) 69 + 6 → 75 + 6 = 81 • Ukubala ngokongeza nokubala ngokuphungula 78 – 69 = ☐ Ukubala ubheka phezulu ngemivo ukusuka kuma 69 yeyona ndlela ifanelekileyo kuba amanani asondelelene. • Chonga uphindo kabini olusondeleyo 34 + 35 uchaze ukuba ama-34 aphindwe kabini okanye ama-35 aphindwe kabini uthabathe u-1. 34 + 34 + 1	

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1.13 **Ukudibanisa noku ukuthabatha**	• Dibanisa ukuya kuma 999 • Thabatha kuma 999 (+, –, =, ☐) • Sebenzisa iisimboli ezifanelekileyo • Ziqhelanise neebhondi zamanani ukuya ku 30	• Dibanisa ukuya kuma 999 • Thabatha kuma 999 • Sebenzisa iisimboli ezifanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuya ku 20	Abafundi banokubhala iindlela abazisebenzisileyo besebenzisa iintolo ukulandela umkhondo wezibalo zabo 34 + (30 + 4) + 1 34 + 30 → 64 + 4 → 68 + 1 → 69 • Tshintsha inani ukuya kwisiphindaphindi kabini seshumi uze uthabathe okanye udibanise imivo **Bala ubheka phezul okanye ubheka ezantsi ukuya kwi-10 elisondeleyo** 58 + 19 = ☐ Apha Abafundi kufuneka batsho ukuba baneendlela ezimbini.Tshintsha ama 58 okanye i 19 usise kwisiphindaphindi se10 esikufutshane. Mabazikhethele. Isibalo sinokubhalwa nje: 58 + 19 = 58 + 20 – 1 58 + 20 → 78 – 1 = 77 Abanye Abafundi banokwahlula ama 20 abe ngamaqela ama 2 ukuze bakwazi ukubala ngokuchanekileyo. **Ziqhelanise nee bhondi zamanani ukuya kuma 20** IiBhondi ukuya kuma 20 mazenziwe kusetyenziswa intlobo ngeentlobo zemifanekiso exhasayo. **Ukuvelisa nokuziqhelanisa nezakhono zokudibanisa nokuthabatha** Abafundi kufuneka baziqhelanise nezakhono ezithile zokudibanisa nokuthabatha. • Dibanisa okanye thabatha idijithi enye kulo naliphi na inani elinedijithi ezimbini ngaphandle kokuqabela kumashumi: Umzekelo**:** a) 65 + 4 b) 89 – 3 • Dibanisa idijithi enye kwisiphindaphindi sama 10 Umzekelo: a) 70 + 5 b) 90 + 3	

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1.13 **Ukudibanisa noku ukuthabatha**	• Dibanisa ukuya kuma 999 • Thabatha kuma 999 (+, –, =, ☐) • Sebenzisa iisimboli ezifanelekileyo • Ziqhelanise neebhondi zamanani ukuya ku 30	• Dibanisa ukuya kuma 999 • Thabatha kuma 999 • Sebenzisa iisimboli ezifanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuya ku 20	• Thabatha idijithi enye kwisiphindaphindi se 10 Umzekelo: a) 80 – 6 b) 50 – 3 • Dibanisa okanye thabatha i10 kulo nakweliphi inani elineedijithi ezimbini Umzekelo: a) 56 + 10 b) 68 + 10 c) 79 – 10 d) 57 – 10 • Dibanisa okanye thabatha izibini zeziphindaphindi 10 ngaphandle kokuqabela kuma 100. a) 40 + 30 b) 80 – 50 **Ukuqinisekisa iziphumo zezibalo** Ukugweba ukufaneleka kwezisombululo Abafundi kufuneka bafundiswe ukugweba ukufaneleka kwezisombululo. Enye yendlela yokwenza oku kukqikelela iziphumo zabo phambi kokuba babale. Xa bedibanisa amanani amabini asondeleleneyo umz. 45 nama 46, abafundi banokusebenzisa sebenzisaukuphinda phinda kabini njengendlela yokuqikelela iimpendulo. Qinisekisa izisombululo Abafundi kufuneka bazi ukuba banakho uku: • Qinisekisa izibalo zokudibanisa ngokuthabatha. Umzekelo: Ukuba ama 36 + 18 = 54; ngoko ama 54– 18 = 36 • Qinisekisa izibalo zookuthabatha ngokudibanisa Umzekelo 84 – 48 = 36, ngoko ama 36 + 48 = 84 Ukusebenzisa ukusebenza ngokuguqula (ukubala ngokuphendulela) ukuqinisekisa izisombululo yenye yezizathu zokufundisa ukudibanisa nokuthabatha kunye .	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.14 **Udibaniso oluphinda phindiweyo olukhokelela kuphinda phindo**	• Phinda phinda kabini amanani ukusuka ku 1 ukuya 10 ngo 2,3, 4,5, 10 ukuya kwisiphumo sama 99 • Sebenzisa isimboli zokubala ezifanelekileyo (x, =, ☐)	• Phinda phinda amanani ukusuka ku 1 ukuya kwi10 ngo 2, 5, 3, 4 • Sebenzisa isimboli yokubala efanelekileyo (x, =, ☐)	Kwibanga lesi 2 abafundi baphinda phinde amanani ukusuka ku-11 ukuya kwi -10 ngo 1, 2, 5, 3 nesi 4 ukuya kuma 5050. Baziswe kuphawu lokuphindaphinda baza balisebenzisa kwi zivakalisi zezibalo. Abafundi kwibanga lesi 3 kufuneka baqhubeke ukuziqhelanisa ukusebenzisa ulwimi lokuphinda phinda ngokwenza kwiimeko;, kabini, phinda phinda, phinda phindwa ngo..., uninzi, iqela le ..... Ulwimi kufuneka lusetyenziswe xa kusenziwa izibalo zophinda phindos. Kule kota abafundi baza kube bephinda phinda ngezithathu okuqala. Abafundi abaqala ibanga lesi 3 banako ukubonisa ukudibanisa okuphindwayobesebenzisa uphawu lophinda phindo. Abafundi bayakwazi ukuchaza uphinda phindo ngeendlela ezininzi. Bayakuqonda ukuba amaqela ama 3 esi 6 anokubhalwa ngolu hlobo: 6 + 6 + 6. Kukwakho umqondo wokuba u 3 phinda phinda ngesi 6 unokubhalwa ngolu hlobo: 3 x 6. Olu lwazi luyaqhubekeka lusandiswa kwibanga lesi 3. Abafundi baya kuqhubeka besebenzisa izinto ezibambekayo, izicwangciso manani kunye nemigca manani ukuqonda nokubonisa uphinda phindo Ukusuka kwibanga lesi 3 abafundi kufuneka baqphele ukuba uphinda phindo lungenziwa nokuba kungeyiphina indlela. **Umzekelo:** Abafundi kufuneka babe nako ukuqonda nokubhala ezi zilandelayo: 3 × 10 = ☐ 10 × 3 = ☐ 30 = 10 × ☐ 30 = 3 × ☐ Ezi ngxelo zingentla mazixhaswe ngokusebenzisa imifanekiso eza kuvumela Abafundi ukuba babone ukuba isi 3×10 3×10 ne 10×3 10×3 zinika isiphumo esinye. **Umzekelo:**  **and**	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.14 **Udibaniso oluphinda phindiweyo olukhokelela kuphinda phindo**	• Phinda phinda kabini amanani ukusuka ku 1 ukuya 10 ngo 2,3, 4,5, 10 ukuya kwisiphumo sama 99 • Sebenzisa isimboli zokubala ezifanelekileyo (x, =, ☐)	• Phinda phinda amanani ukusuka ku 1 ukuya kwi10 ngo 2, 5, 3, 4 • Sebenzisa isimboli yokubala efanelekileyo (x, =, ☐)	Ekupheleni kwekota abafundi kufuneka babe bayaqonda ukuba uphinda phindo lungenziwa nokuba kungayiphina indlela.Makuqhutyekekwe kuqhelaniswa Abafundi nale khonsepthi unyaka wonke. Abafundi banokusebenzisa umzobo ukubhalaamanqaku ngophinda phindo. Umzekelo  	
1.15 **Ukwahlula hlula**	• Hlula hlula amanani ukuya kume 99 ngala manani 2, 3, 4, 5, 10 • Sebenzisa imiqondiso efanelekileyo (÷,=, ☐)	• Hlula hlula amanani ukuya kume 50 ngala manani 2, 5, 10 • Sebenzisa imiqondiso efanelekileyo (÷,=, ☐)	Uphawu lokwahlula hlula lwaziswa kwibanga lesithathu. Kwiminyaka emibini Abafundi bebeziqhelanise nesakhono sokwabelana nokwahlula hlula. Isimboli yokwahlula inokwaziswa xa Abafundi besenza izibalo zamagama. Ukwazisa kwemiqondiso kungaxhaswa ngokusebenzisa imifanekiso engezantsi.Kubalilekile ukuba sisebenzise imifanekiso eqhelekileyo. **Umzekelo:** i-12 elahlulwe ngkwamaqela ama-3 likunika amaqela ama-4  $4 \times 3 = 12$ i-12 elahlulwe phakathi kwesi-4 samaqela likunika isi-3 iqela lilinye i-12 elahlulwe ngkwamaqela ama-4 likunika amaqela ama-3  $3 \times 4 = 12$ i-12 elahlulwe phakathi kwesi-3 samaqela likunika isi-4 iqela lilinye 12 ÷ 3 = 4 **ithetha:** 12 hlula hlula nge 3 zenza amaqela ama 4, 12 hlula hlula phakathi kwe 3 zenza 4.	

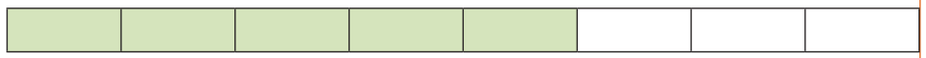
IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.16 **Izibalo zentloko**	**Ingqiqo yamanani:** **Uludwe: 999** • Landelelanisa iseti yamanani athile owanikiweyo • Thelekisa amanani ukuya kuma 999 kwaye utsho ukuba leliphi elingaphezulu okanye elingaphantsi ngo 1,2,3,4,5 ne10 **Khumbula ngokukhawuleza:** • Ukudibanisa noukuthabatha ukuya kuma 20 • Dibanisa okanye thabatha isiphindaphindis sama 10 ukusuka kwi 0 ukuya kwi 100 • Uphinda phindo no kwahlula hlula: • Itheybhile yezibini ukuya kwi 2 x 10 • Itheyibhile yeshumi ukuya kwi 10 x 10. **Ubuchule bokubala** Sebenzisa obu buchule bulandelayo: • Beka amanani amakhulu kuqala ukuze ukuwazi ukubala ubheka phambili okanye ubuya umva • Imigca manani	**ngqiqo yamanani: Uludwe: 200** • Landelelanisa iseti yamanani athile owanikiweyo -200 • Thelekisa amanani ukuya kuma 200 kwaye utsho ukuba leliphi elingaphezulu okanye elingaphantsi ngo 1,2,3,4,5 ne10 **Khumbula ngokukhawuleza:** • Khumbula ukudibanisa noku thabatha ukuya kuma 20 • Dibanisa okanye thabatha isiphindaphindi se 10 ukusuka kwi 0 ukuya kwi 100. **Ubuchule bokubala ngentloko** Sebenzisa ubuchule bokubala: • Beka amanani amakhulu kuqala ukuze ukuwazi ukubala ubheka phambili okanye ubuya umva • Imigca manani • Ukuphinda phinda no kwenza iziqingatha • Ukonyusa nokwahlula hlula • Ukonyusa nokwahlula	Ubuchule bokubala, ingqiqo zamanani, ulwazi lwamanani lukhuliswa ngokusombululo iingxaki nezibalo. Abafundi bangaziqhelisa noku xa besenza izibalo zentloko. Oku kunceda Abafundi ukuba bazisebenzise ngokulula xa bebala besombulula iingxaki kwimeko ethile. Kule kota Abafundi baqhubeka bevelisa isakhono sabo sokukwazi ukusebenza ngokukhululekileyo ngamanani. Ubuchule bokubala ngentloko obuveliswa ngAbafundi buya kubanceda xa besenza izibalo ezibhalwayo kwaye buya kubanceda ukuba bakwazi ukwenza uqikelelo. Umzekelo wemibuzo enokubuzwa: ingqiqo yamanani: Amagama amanani nemiqondiso yamanani Phakamisa ikhadi okanye bhala phantsi igama lenani. Khetha umntwana ukuba atshatise inani aze alibhale phantsi. **Ngaphezulu okanye ngaphantsi** Ngubani u • 1 ngaphantsi kwama 200 • 1 ngaphezulu kwe 199 • 2 ngaphezulu kune 102 • 2 ngaphantsi kwe 105 • 3 ngaphezulu kuma 77 • 3 ngaphantsi kuna 51 • 4 ngaphezulu kuna 68 • 4 ngaphantsi kune 167 • 5ngaphezulu kune129 • 5 ngaphantsi kwe 185 • 10 ngaphezulu kuna 90 • 10 ngaphantsi kwe160 Ngubani unobumba wesi 5 kwi alfabhethi? Ngubani inyanga yesithoba yonyaka?	

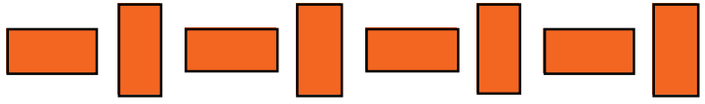
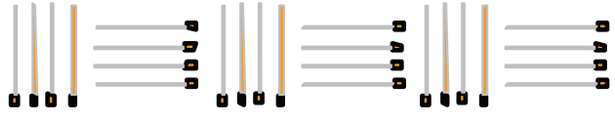
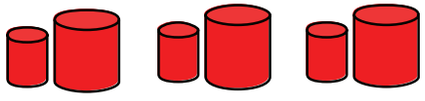
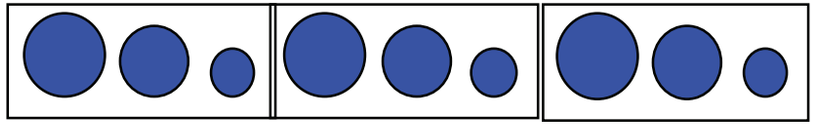
IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.16 **Izibalo zentloko**	• Ukuphinda-phinda kabini nokwenza iziqingatha • Ukonyusa nokwahlula • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha • Sebenzisa ulwalamano phakathi kophinda phindo no kwahlula hlula	• Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha	**Ukulandelelanisa nokuthelekisa** Leliphi elingaphezulu kunelinye: 21 okanye 171? Ndinike inani eliphakathi kwe 151 ne 159. **Ukukhumbula ngokukhawuleza** Ukudibanisa nokuthabatha: • Yazi ngentloko ukudibanisa nokuthabatha iibhodi zamanani ukuya kuma 20 **Umzekelo:** a) _____+ △ = 20 b) _____+ △ = 16 Dibanisa nokuthabatha amanani ukuya kuma 20 **Umzekelo:** a) 1 + 11 = 12 b) 18 – 4 = 14 c) 11 + 1 = 12 d) 18 – 14 = 4 e) 2 + 10 = 12 f) 18 – 5 = 13 g) 10 + 2 = 12 h) 18 – 13 = 5 i) 3 + 9 = 12 j) 18 – 6 = 12 k) 9 + 3 = 12 l) 18 – 12 = 6 Khumbula ngokukhawuleza ukudibanisa okuphinda phindwe kabini ukuya kuma 2020. Oku kunokuquka ukuthabatha okuhambelana nako. **Umzekelo:** a) 1 + 1 = 2 b) 6 + 6 = 12 c) 2 + 2 = 4 d) 7 + 7 = 14 e) 3 + 3 = 6 f) 8 + 8 = 16 g) 4 + 4 = 8 h) 9 + 9 = 18 i) 5 + 5 = 10 j) 10 + 10 = 20	

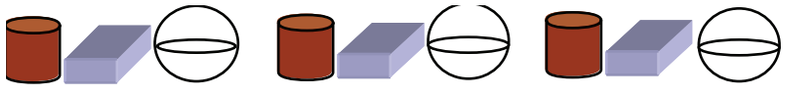
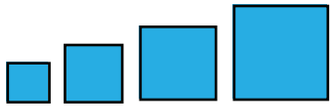
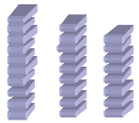
IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.16 **Izibalo zentloko**			**Umzekelo:** Ndibonise inani onokulidibanisa ne..... ukwenza ama 20 (ukubhala phantsi okanye ukusebenzisa ixabiso lendawo okanye unotsheluza). a) 8 b) 2 c) 9 d) 15 e) 3 **Umzekelo:** Ndibonise inani elishiyekileyo xa … ethatyathwe kuma 20 (ukubhala phantsi okanye ukusebenzisa ixabiso lendawo okanye unotsheluza). a) 5 b) 18 c) 0 d) 14 e) 7 Dibanisa okanye thabatha iziphindaphindi ze1010 ukususka kwi 100. Umzekelo**:** a) Xela ukuba mangaphi amanqanaba amakathathwe kumigca manani ukususka kumat 3030 ukuya kwi 100100 okanye ukususka kwi 100100 ukuya kuma 50. b) Fumana izibini zamakhadi ukwenza i 100. c) Beka amanani ebhokisini ukwenza 100: □ + 70 = 100 20 + □ = 100 100 – □ = 90 100 – 40 = □ **Ubuchule bokubala:** Sebenzisa ubuchule bokubala ukudibanisa nokuthabatha ngokufanelekileyo.	

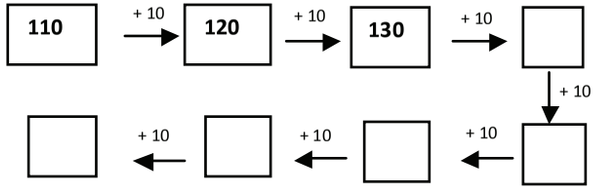
IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.16 **Izibalo zentloko**			Dibanisa amanani amaninzi ngokusebenzisa ubuchule obufana nobu: • Khangela izibini zamanani ukwenza i10 uze usebenzise ezi zibini kuqala 2 + 7 + 8 2 + 8 benza i10 uze udibanise isi 7. Beka inani elikhulu kuqala ukuze ubale ubheka phambili okanye ubuya umva • Qala ngelona nani likhulu 5 + 15 Xela kwakhona isivakalisi samanani: 15 + 5 ubale ngokwangeza ukuya kuma kuma 20 • Tshintsha inani ulise kwi 10 uze uthabathe okanye udibanise u- 1 Umzekelo: 8 + 9 = 17 uze uchaze ukuba u 1 unokwenza 8 + 9 = 8 + 10 – 1 6 + 11 = 17 uze uchaze ukuba u 1 unokwenza 6 + 10 + 1 17 – 9 = 8 uze uchaze ukuba u 1 unokwenza 17 – 10 + 1 • Hlula amanani abe zizahlulelo uze uwadibanise Nyusa okanye hlula amanani: Qhubeka uhlula amanani abe ngamasuntswana 8 + 12 = 8+ (10+2) = 8 + 2 + 10 = 10 + 10 = 20 • Sebenzisa ukuphinda-phinda kabini njengobuchule bokubala ngentloko Chonga ngokusondeza kuphindo kabini Umzekelo: 5 + 6 = 11 uchaza ukuba kukuphinda kabini isi 5 udibanise u 1 okanye uphinda kabini isi 6 uthabathe u 1. Nakana ukuba xa amanani amabini ephantsa kulingana ngobukhulu kuba lula ukufumana umahluko ngokuthi ubale ubheke phezulu, ungabali ubuya umva. 15 - 11 = 4 uze uchaze ukuba ukubala ubheke phezulu ukusuka kwi 11 ukuya kwi 15 ufumana isi 4	

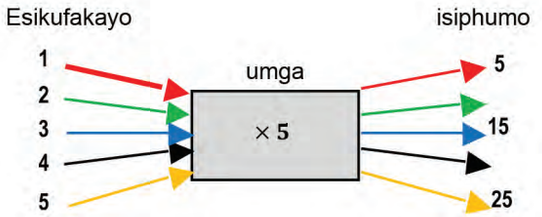
IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.16 Izibalo zentloko			Izibalo zengqondo zinokwenziwa ngaphandle kwezixhobo, kodwa kungaluncedo ukwenza izibalo zengqondo usebenzisa izixhobo. Izixhobo ekucetyiswa ukuba zisetyenziswe • imigca manani (ezinesakhiwo nezingenanto) • i gridi yokubala • ikhadi elinexabiso lendawo (oonotsheluza) • iibhidzi zokubala	
1.17 Amaqhezu (unitary)	• Sebenzisa baxele amagama amaqhezu kwimeeko eziqhelekileyo eziquka isiqingatha,iikota • Nakana amaqhezu kumzobo • Qalisa ukunakana iziqingatha ezibini neethedi ezintathu zenza into epheleleyo enye neziqingatha ezibini nehafu ziyalingana • Bhala iqhezu njengesiqingatha okanye ithedi ezimbini	• Sebenzisa baxele amagama amaqhezu kwimeeko eziqhelekileyo eziquka isiqingatha,iikota • Nakana amaqhezu kumzobo • Qalisa ukunakana iziqingatha ezibini neethedi ezintathu zenza into epheleleyo enye neziqingatha ezibini nehafu • Bhala iqhezu njengesiqingatha okanye ithedi	Kwibanga lesi 2 Abafundi bebefundiswe amaqhezu. Benze oku kulandelayo • Babelane baza bahlula hlula izinto ngokulinganayo; • Baxela amagama amaqhezu • Ibachonga amaqhezu kwimeko ezahlukeneyo; • Babhala amagama amaqhezu njenge kota e 1;isiqingatha e 1 • Bafumana amaqhezu ezinto eziphelelelyo • Bafumana amaqhezu engqokelela ezinto. Kule kota abafundi baziswa kumaqhezu umz iikota ezi 3. Baqhubeka besebenza ngamaqhezu. Bakwasebenza nangezibhozo eshumini nezithandathu eshumini. Imizekelo yemibuzo: Ingaba lemilo yohlulwe yazizohlulello ezilinganayo ezingaphi? Zingaphi izahlulelo zemilo ezifakwe umbala? Leliphi iqhezu elifakwe umbala ? Leliphi iqhezu elingafakwanga umbala?	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
1.17 Amaqhezu (unitary)	• Sebenzisa baxele amagama amaqhezu kwimeeko eziqhelekileyo eziquka isiqingatha,iikota • Nakana amaqhezu kumzobo • Qalisa ukunakana iziqingatha ezibini neethedi ezintathu zenza into epheleleyo enye neziqingatha ezibini nehafu ziyalingana • Bhala iqhezu njengesiqingatha okanye ithedi ezimbini	• Sebenzisa baxele amagama amaqhezu kwimeeko eziqhelekileyo eziquka isiqingatha,iikota • Nakana amaqhezu kumzobo • Qalisa ukunakana iziqingatha ezibini neethedi ezintathu zenza into epheleleyo enye neziqingatha ezibini nehafu • Bhala iqhezu njengesiqingatha okanye ithedi	A.  B  C  D  Abafundi mabanikwe ithuba lokufaka umbala kwezi milo Umzekelo: A.  Faka umbala kwi 2/3 kule milo B  Faka umbala kwiikota ezi- 2 zale milo C  Faka umbala kwisine esihlanwini kule milo D  Faka umbala kwisithandathu eshumini kule milo	

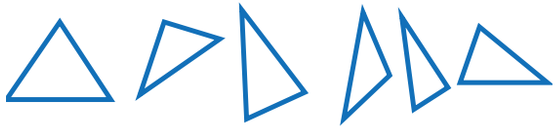
IBANGA LESI-3 IKOTA YESI -1 2. IIPATENI, IMISEBENZI NE ALJIBRA				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA YOKU 1**	**AMANQAKU NGENYE YENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA**	**IXESHA**
2.1 **Iipateni zejiometri**	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonakalayo/ ezibambekayo • Iipateni ezilula ezenziwe ngemizobo yemigca,iimilo okanye izinto ezibonakalayo/ ezibambekayo **Yenza ipateni yakho** Yenza ipateni yakho yejiyometri • Ngezinto ezibonakalayo/ ezibambekayo • ngokuzoba imigca,iimilo okanye izinto **Singqongwe ziipateni** Chonga,uchaze ngamazwi uze ukope iipateni zejiyometri • kwindalo • kwizinto zale mihla ezenzeka empilweni yethu • ezivela kwinkcubeko yethu	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonakalayo/ ezibambekayo • Iipateni ezilula ezenziwe ngemizobo yemigca,iimilo okanye izinto ezibonakalayo/ ezibambekayo **Udweliso lweepateni**: Iipateni ezilula apho iimilo, okanye iqela leemilo ziphinda phindwa ngendlela efana twatse. **Yenza ipateni yakho** Yenza ipateni yakho yejiyometri • ezibonakalayo/ ezibambekayo • ngokuzoba imigca,iimilo oknye izinto	Kwibanga lesi3 Abafundi banokusebenza ngeepateni apho • izinto ziboniswe ngendlela enye; • ubukhulu bemilo buyatshintsha ngendlela enokuxelwa kwangaphambili • inani leemilo okanye izinto buyatshintsha ngendlela enokuxelwa kwangaphambili. Iipateni zinokwenziwa ngokusebenzisa into enye kodwa iimibala yalonto intshintshe rhoqo umz. can be made by using one object but having the colour.  Iipateni zinokwenziwa kusetyenziswa imilo enye okanye into kodwa indawo yemilo okanye into itshintshe rhoqo Umzekelo: a)  b)  Ezinye iipateni zineqela leemilo ezifana twatse okanye izinto eziphinda phindwayo, apho ubukhulu bemilo kwiqela ngalinye butshintsha rhoqo ngendlela enokuxelwa kwangaphambili.umz ubukhulu be buba bukhulu okanye bube buncinci. Umzekelo: Ubungakanani bemilo buba bukhulwana  Umzekelo: Ubungakanani bemilo buba buncinanana 	

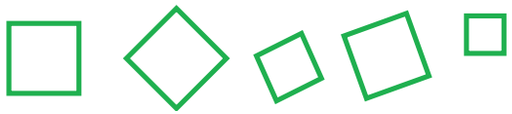
ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NGENYE YENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
2.1 **Iipateni zejiometri**	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonakalayo/ ezibambekayo • Iipateni ezilula ezenziwe ngemizobo yemigca,iimilo okanye izinto ezibonakalayo/ ezibambekayo **Yenza ipateni yakho** Yenza ipateni yakho yejiyometri • Ngezinto ezibonakalayo/ ezibambekayo • ngokuzoba imigca,iimilo okanye izinto **Singqongwe ziipateni** Chonga,uchaze ngamazwi uze ukope iipateni zejiyometri • kwindalo • kwizinto zale mihla ezenzeka empilweni yethu • ezivela kwinkcubeko yethu	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ngamazwi • Iipateni ezilula ezenziwe ngezinto ezibonakalayo/ ezibambekayo • Iipateni ezilula ezenziwe ngemizobo yemigca,iimilo okanye izinto ezibonakalayo/ ezibambekayo **Udweliso lweepateni**: Iipateni ezilula apho iimilo, okanye iqela leemilo ziphinda phindwa ngendlela efana twatse. **Yenza ipateni yakho** Yenza ipateni yakho yejiyometri • ezibonakalayo/ ezibambekayo • ngokuzoba imigca,iimilo oknye izinto	Iipateni inokwenziwa ngokwenza amaqela afana twatse apho iqela ngalinye linohlobo lwento enye kodwa indawo yezinto kwiqela itshintshayo.Amaqela afanayo ayaphinda phindwa. Umzekelo:  Ezinye iipateni zenziwa ngohlobo lwemilo enye kodwa umzekelo wemilo nganye ubamkhulu okanye unciphe ngobungakanani .Umzekelo:  Ezinye iipateni zenziwa ngamaqela apho kubakho imilo efanayo yezinto, kodwa inani lemilo nganye okanye izinto liyanda okanye linciphe rhoqo. Umzekelo:   • Ukukopa ipateni kunceda Abafundi ukuba babone ukuba ipateni zenziwe ngokuqiqa. • Ukongeza ipateni kunceda Abafundi ukuba baqinisekise ukuba bayayiqonda indlela eqiqiqweyo ezenziwe ngayo iipateni. • Uchaza iipateni kunceda Abafundi ukukhulisa ulwimi nezakhono zokuthetha. Ikwanceda ukubona ukuba Abafundi bakwazile ukutolika ipateni. Kudla ngokubalula kubafundi ukuthetha ngepateni emveni kokuba bezenzile. Ngoku Abafundi bafaneleke ukuba bayakwazi ukuchaza iipateni ngaphandle kokunikwa imibuzo ebakhokelayo.	Isifundo esi -1l

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU 1	AMANQAKU NGENYE YENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA
2.2 **Iipateni zamanani**	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ulandelelwano lwamanani alula ukuya kwi-1000 **Yenza uze uchaze ipateni yakho** Yenza ipateni yakho yamanani	**Kopa,andisa uze uchaze** Kopa,andisa uze uchaze ulandelelwano lwamanani alula ukuya kwi-100 • Ulandelelwano malubonise ukubala ubheka phambili nokubala ubuya umva ngoo: - 1 ukusuka nokuba kuleliphi inani phakathi kwe 0 nama 200 - Ngama 10 ukusuka kuso nasiphina isiphinda phindi se 10 esiphakathi kwe 0 nama 200 - Ngezi 5 ukusuka kuso nasiphina isiphindaphindi sesi 5 esiphakathi kwe 0 nama 200 - Ngezi 2 ukusuka kuso nasiphina isiphinda phindi sesi 2 esiphakathi kwe 0 nama 200 - Ngoo 3 ukusuka kuso nasiphina isiphinda phindi sesi 2 esiphakathi kwe 0 nama 200 - Ngo 4 ukusuka kuso nasiphina isiphinda phindi sesi 4 esiphakathi kwe 0 nama 200 - I-100 ukuya kwi 500.	Ukulandelelanisa amanani kungadityaniswa kwaye kuxhase ukubala. Njengokuba izakhono zokubala zAbafundi zitshintsha, uhlobo lolandelelwano lwamanani Abafundi abasebenza ngalo nalo luyakhula. Ukulandelelanisa kufuneka kubonise ukubala ubheka phambili nokubala ubuya umva: • Ngoo 1 ukusuka kuso nasiphina isiphinda phindi phakathi kwe 0 ne 200 • Ngama 10 ukusuka kuso nasiphina isiphinda phindi se 10 phakathi kwe 0 ne 200 • Ngezi 5 ukusuka kuso nasiphina isiphinda phindi sesi 5 phakathi kwe 0 ne 20 • Ngezi 2 ukusuka kuso nasiphina isiphinda phindi sika 2 phakathi kwe 0 ne 200 • Ngo 3 ukusuka kuso nasiphina isiphinda phindi sika 3 phakathi kwe 0 ne 200 • Ngezi 4 ukusuka kuso nasiphina isiphinda phindi sesi 4 phakathi kwe 0 ne 200 • Ngama 100 ukusuka kuso nasiphina isiphinda phindi se 10o phakathi kwe 100 neama 500 Abafundi bangawalatha amanani lo gama bebala.Kubalulekile oku kuba kunika Abafundi ulandelelwano lwamanani ngeendlela ezininzi. Umzekelo • Ulandelelwano lwamanani olubhaliweyo 200, 199, 198, 197, 196,... • Imigca manani - Obonisa amanani abaliweyo kuphela - Amacandelo omgca manani umz 150 - 200. • Iigridi yokubala • Amatsheyina amanani Abafundi banokugquma, bafake umbala kanye benze isangqa emananini njengokuba bebala kwimigca manani nakwiigridi zokubala. Abafundi bangafakela amanani ashiyiweyo kwimigca manani, iigridi zamanani, kulandelelwano lwamanani olubhaliweyo kunye namatsheyina amanani. Umzekelo 	Izifundo ezi-3

<table>
<tr><th>ISIHLOKO</th><th>IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA</th><th>IINGQIQO NEZAKHONO ZEKOTA YOKU 1</th><th>AMANQAKU NGENYE YENGCACISO OKANYE ISIKHOKELO SOKUFUNDISA</th><th>IXESHA</th></tr>
<tr>
<td>2.2
Iipateni zamanani</td>
<td>Kopa,andisa uze uchaze
Kopa,andisa uze uchaze ulandelelwano lwamanani alula ukuya kwi-1000
Yenza uze uchaze ipateni yakho
Yenza ipateni yakho yamanani</td>
<td>Kopa,andisa uze uchaze
Kopa,andisa uze uchaze ulandelelwano lwamanani alula ukuya kwi-100
• Ulandelelwano malubonise ukubala ubheka phambili nokubala ubuya umva ngoo:
- 1 ukusuka nokuba kuleliphi inani phakathi kwe 0 nama 200
- Ngama 10 ukusuka kuso nasiphina isiphinda phindi se 10 esiphakathi kwe 0 nama 200
- Ngezi 5 ukusuka kuso nasiphina isiphindaphindi sesi 5 esiphakathi kwe 0 nama 200
- Ngezi 2 ukusuka kuso nasiphina isiphinda phindi sesi 2 esiphakathi kwe 0 nama 200
- Ngoo 3 ukusuka kuso nasiphina isiphinda phindi sesi 2 esiphakathi kwe 0 nama 200
- Ngo 4 ukusuka kuso nasiphina isiphinda phindi sesi 4 esiphakathi kwe 0 nama 200
- I-100 ukuya kwi 500.</td>
<td>Njengokuba ulandelelwano lwamanani lunokuxhasa ukubala ukuze Abafundi bakwazi ukubala ngamaqela nokuba zizinto okanye imifanekiso baze bawabhale amanani kwakhona kwiitheyibhile nakwimizobo yeflow njengendlela yokukhulisa nokuxhasa uphinda phindo.
Kwikota 1 gqalisela kwizi 2, 5 kunye nama 10 umz.
Bala ngezihlanu
<table>
<tr><td>R5 (imali ezinkozo)</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Imali lyonke</td><td>R5</td><td>R10</td><td>R15</td><td>R20</td><td>R25</td><td>R30</td><td>R35</td><td>R40</td><td>R45</td></tr>
</table>


Ekupheleni kwekota Abafundi basebenza ngolandelelwano lwamanani ukuya nokusuka kwi 100.</td>
<td>Izifundo ezi-3</td>
</tr>
</table>

IBANGA LESI -3 IKOTA YOKU- 1 3. ISITHUBA NE IMILO				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA YOKU -1**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24in)
3.3 **Izinto ezinokwakekha kuka 2-D**	**Uluhlu lweemilo** • Izangqa • Oonxantathu • Izikwere • Amaxande **Iimpawu zeemilo** Chaza,hlela uze uthelekise, lungisa uze thelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • milo • amacala athe tse • amacala angqukuva **Ukuzoba iimilo** • Izangqa • Oonxantathu • Izikwere • Amaxande	**Uluhlu lweemilo** • Izangqa • Oonxantathu • Izikwere • Amaxande **Iimpawu zeemilo** Chaza,hlela uze uthelekise,lungisa uze thelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • imilo • amacala athe tse • amacala angqukuva	**Yintoni engumahluko kwibanga lesibini** Kwibanga lesi 3 abafundi babethelela umsebenzi wemilo ezingumlinganiselo onokwakheka kuka 2-D iimilo obufundwe kwibanga lesi 2, kodwa akukho mfuneko yakugqala ubukhulu okanye umbala xa besebenza ngeemilo. Oku kuvumela Abafundi ixesha elininzi lokugqala? umsebenzi omtsha wezinto ezingumlinganiselo we- 3-Dobjects,indawo,ukufumana indawo apho ikhoyo,indlela esibona ngayo kunye nokulingana macala. Wonke umsebenzi owenziwe kwibanga lesi 3 wenziwa ngokwenza ngezinto ezibambekayo.Wonke umsebenzi mawubethelelwe ngemisebenzi obhalwayo. **Ukunakana nokuxela amagama ezangqa,izikwere namaxande** Abafundi kufuneka basebenze ngezangqa ezinobukhulu obahlukeneyo noonxantathu abaneemilo ezahlukileyo. Kubalulekile ukuba Abafundi bangaboniswa umzekelo omnye wemilo nganye. Uninzi lweemilo ezithengwayo zinika umzekelo omnye kanxantathu. Abafundi kufuneka bakwazi ukunakana: • Izangqa ezinobukhulu obahlukileyo Umzekelo:  • Oonxantathu abaneemilo ezahlukileyo kwaye babekwe ukubabeka ngeendlela okanye ngeendawo ezahlikileyo. Umzekelo: 	Izifundo ezi-2

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
3.3 **Izinto ezinokwakekha kuka 2-D**	**Uluhlu lweemilo** • Izangqa • Oonxantathu • Izikwere • Amaxande **limpawu zeemilo** Chaza,hlela uze uthelekise, lungisa uze thelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • milo • amacala athe tse • amacala angqukuva **Ukuzoba iimilo** • Izangqa • Oonxantathu • Izikwere • Amaxande	**Uluhlu lweemilo** • Izangqa • Oonxantathu • Izikwere • Amaxande **limpawu zeemilo** Chaza,hlela uze uthelekise,lungisa uze thelekisa iimilo ezinokwakheka kuka 2-D ngokwe: • imilo • amacala athe tse • amacala angqukuva	• Izikwere ezinobukhulu obahlukileyo ababekwe kwiindawo ezahlukileyo Umzekelo:  • Amaxande anobukhulu obahlukileyo ababekwe kwiindawo ezahlukileyo Umzekelo:  Kuluncedo ukuba Abafundi basebenze ngeemodeli zeemilo ezisikwe kakuhle kwikhadibhodi. Oku kuvumela Abafundi ukuba babone oonxantathu,izikwere,amaxande awohlikileyo ababekwe kwiindawo ezahlukileyo. Abafundi bahlela iimilo ngokokuba banamacala athe tse okanye angqukuva. Abafundi bahlela baze babeke iimilo ngokwamaqela baxele ukuba ingaba zingoonxant athu,amaxade,izikwere okanye izangqa. Umsebenzi ubethelelwa ngokwenza umsebenzi obhalwayo	Izifundo ezi-2

IBANGA 3 IKOTA 1 4. UMLINGANISELO				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA YOKU -1**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24in)
4.1 **IXESHA**	**UKUXELA IXESHA** • Funda imihla kwiikhalenda • Bhala imihla yokuzalwa, umbhiyozo wezenkolo,iholide kawonke wonke,iziganeko zembali,iziganeko zesikolo ezikwikhalenda. • Xela ixesha leeyure ezili 12 nge: - Iyure - Isiqingatha seyure - Ikota yeyure - imizuzu kwiwotshi yosiba okanye yamanani kwakunye nezinye izibonisi maxesha ezikhoyo umz oonomyayi/ iselula **Bala ubude bexesha namaxesha adlulayo** Sebenzisa ikhalenda ukubala Uze uchaze ubude bexesha ngeeveki neentsuku neenyanga • Guqula iintsuku uzise ezivekini • Guqula iiveki uzise ezinyangeni	**UKUXELA IXESHA** • Funda imihla kwiikhalenda • Bhala imihla yokuzalwa, umbhiyozo wezenkolo, iholide kawonke wonke, iziganeko zembali, iziganeko zesikolo ezikwikhalenda. • Xela ixesha leeyure ezili 12 nge: - Iyure - Isiqingatha seyure - Ikota yeyure - imizuzu kwiwotshi yosiba okanye yamanani kwakunye nezinye izibonisi maxesha ezikhoyo umz oonomyayi/ iselula	**Yintoni eyahlukileyo kwibanga lesibini?** Izixhobo zedijithi ziza kwaziswa. Kwibanga lesi 2 Abafundi bafunda ixesha ngokweeyure, isiqingatha nekota yeyure kwiwotshi yosiba. Kwibanga lesi 3 Abafundi basebenza ngezixhobo zedijithali okokuqala. Bakwasebenzisa ixesha leeyure ezili 12 basebenzise u- a.m.no p.m. xa kuyimfuneko. Abafundi baqhubekeke ukuziqhelisa kuthetha ngobude bexesha nokulandelelanisa amaxesha. Ngexesha lokufundisa uwonke wonke nangexesha lokunika ingqwalasela kumaqela athile, Abafundi baqhubekeke ukuthetha malunga neentsuku zeveki, iinyanga zonyaka kunye nomhla wemini kanye kanye le imiyo kanti nezinye ezisezayo. Abafundi baqhubekeke ukufaka oku kulandelayo kwikhalenda njengoko iziganeko zifika ngokufika. • Imihla yokuzalwa • Imibhiyozo yenkolo • Iziganeko ezingembali • Iziganeko zesikolo • Iiholide zikawonke wonke Qhubekeka ubuza Abafundi ukuba bakuxelele ixesha ngokweeyure, isiqingatha nekota y besebenzisa iwotshi yosiba rhoqo ngamaxesha athile phantse iintsuku zonke, umzekelo Abafundi banokubuzwa ukuba baxele ixesha xa isikolo siqala, ngexesha lekhefu nexesha lokugoduka okanye xa betshintsha izifundo. Khetha ixesha apho iwotshi ibonisa nqo iyure, isiqingatha seyure okanye ikota yeyure.Kuluncedo ukuba newotshi enkulu esebenzayo enokuthi ixhonywe egumbini lokufunda ukuze Abafundi babe nokuyisebenzisa.Abafundi banokuzenzela iimodeli zeewotshi.Utitshala unokubuza Abafundi ukuba babonise kwiimodeli zabo amaxesha awohlukileyo. Angafakela izibalo ezithile kwimibuzo yakhe, umz “ndibonise intsimbi yeshumi entloko. Ibingubani ixesha xa ibiyikota yeyure phambi keentsimbi ye- 10? “	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.1 **Ixesha**	Sebenzisa iwotshi ukubala ubude bexesha ngeeyure namacala eeyure.		Ngexesha lokusebenza ngabanye Abafundi baqhubeka besenza imisebenzi enxulumene nawokuxela ixesha ngeeyure, isiqingatha seyure nekota yeyure kwiiwotshi zosiba.Abafundi banokwenza izibalo bebala iiveki okanye iintsuku zeeveki ukuba banikwe ikhalenda okanye izahlukwana ezithile zekhalenda umz khangela imhla uze ubale umahluko okhoyo ngokwamaxesha. **Ixesha elijongwa ngokwamanani** • Ixesha liboniswa ngokwemilo yamanani leyure ezinga 12 kwizixhobo ezininzi zexesha esinazo emakhayeni ethu umz; imicro wave, icellphone/unomyayi, izidlali macwecwe - CD ne DVD njl njl.Ixesha liboniswa ngokwemilo yamanani leeyure ezinga -12. Abafundi banokuba baliqhelile olu hlobo lwexesha kunexesha eliboniswa yiwotshi yosiba. Chitha malunga nezifundo ezi 3 uqhelisa Abafundi nexesha eliboniswa ngokwemilo yamanani leyure ezinga 12. • Khumbuza abafundi ngentsingiselo ka a.m. no p.m. • Bonisa abafundi ukuba ngawaphi amanani abonisa iiyure kwaye ingawaphi abonisa imizuzu kwixesha elijongwa ngokwamanani. • Cacisa ukuba iyure inemizuzu engama 60, ngoko ke isiqingatha seyure sinemizuzu engama -30, ikota yeyure inemizuzu eli 15. Oku kuza kubanceda Abafundi ukunxulumanisa imizuzu nokufunda ngokweeyure, isiqingatha seyure nekota yeyure kwiwotshi yosiba.Oku bebekwenzile kwibanga lesibini. • Nika Abafundi ithuba elaneleyo lokuziqhelanisa nokufunda ixesha eliboniswa ngokwemilo yamanani leeyure ezinga 12. • Ukuba newotshi yamanani (iwotshi yedijithali) esebenzayo exhonywe egumbini lokufunda.Buza Abafundi ukuba bakuxelele ixesha rhoqo ngexesha lasemini unyaka wonke. Abafundi banokuzenzela iimodeli zeewotshi abanokuzisebenzisa ukuxela ixesha baze babale umahluko kumaxesha.	Izifundo ezi-3

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.2 **Ubude**	**Umlinganiselo ongekho sesikweni** • Thelekelela, linganisela, thelekisa, landelelanisa urekhode /bhala phantsi ubude esebenzisa iindlela ezingamiselekanga zokuthatha umlinganiselo umz. usebenzisa izandla hand spans, izantya, ubude beepensile, izinto zokubala njl-njl • Chaza ubude bezinto ngokubala uxele ubude ngeeyunithi ezingekho seSikweni. • Sebenzisa ulwimi lokuthelekisa umz. ndana, mfutshanana, ndana nebanzana **Fundisa umlinganiselo osesikweni** • Qikelela uze uthathe umlinganiselo wobude usebenzisa isentimitha usebenzisa irula Akukho kuguqulwa kufunekayo phakathi kwemitha neesentimitha	**Ukuqalisa ukulinganisa/ kala okusesikweni** • Thelekelela, linganisa/ kala, thelekisa, ubhale phantsi ubude esebenzisa iimitha (ngeentonga ezizimitha okanye iintanjana ezibude buyimitha) njengomlinganiselo omiselweyo wobude njengemilinganiselo esesikweni yobude. • Thelekelela ulinganise ubude in ngeesentimitha esebenzisa irula. Akukho mfuneko yakuguqulela ukusuka kwiimitha ukuya kwiisentimitha.	Kwibanga lesibini bekucetyiswe ukuba Abafundi bagqale kuqikelelo, ukuthatha umlinganiselo, ukuthelekisa,nokubhala phantsi ububanzi nobude. • Ngomlinganiselo ongekho sesikweni • Ngokuthatha umlinganiselo ngeemitha usebenzisa intonga engangemitha yokuthatha umlinganiselo okanye umtya obude buyimitha Ngethuba lokuba Abafundi bezisebenzela ngabanye Abafundi banokusebenzisa izakhono zabo zokuthatha umlinganiselo. **Ukuthatha umlinganiselo wobude njengemeko ukusombulula iingxaki nokubala.** Ngexesha eleyibhelawe amanani, ulwalamano, Izibalo,Abafundi bangasombulula iingxaki besebenzisa imeko yo • Kuthatha umlinganiselo wobude no • Kuthatha umlinganiselo wobude ngeemitha. Thathela ingqalelo woludwe lamanani afanelekileyo ekota kwakhona thathela ingqalelo uludwe lweengxaki zezibalo ezifanelekileyo kule kota. Izifundo ezigqalisele kumlinganiselowobude ziya kuqala kwikota yesi-2.	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.3 **Umthamo**	**Ukuthatha Umlinganiselo ongekho sesikweni** • Thelekelela, linganisela, thelekisa / bhala phantsi ubude esebenzisa iindlela ezingamiselekanga kunye nomlinganiselo wesikali umz iibloko,izitena njl-njl • Sebenzisa ulwimi lokuthelekisa umz. ikhaphukhaphu, inzima, ikhaphukhaphana, inzinyana **Ukwazisa ukuthatha umlinganiselo osesikweni** • Thelekisa, hlela uze ubhale phantsi ubunzima beepakethi yezinto ezithengwayo ezinobunzima obuxelwe ngekilogram umz iikilogram ezi -2 zerayisi okanye ikilogram e -1 yomgubo okanye iigram ezingama-500 zetyuwa. • Thatha umlinganiselo wobunzima bakho ngeekilogram usebenzisa isikali sasegumbini lokuhlambela. Akukho kuguqulwa kufunekayo phakathi kweegrams neekilograms.	Kwibanga lesi 2 Abafundi • Bathatha umlinganiselo wobunzima ngokungekho seSikweni besebenzisa thatha umlinganise ongekho sesikweni besebenzisa isikali sokulinganisa • Hlela izinto ngokobunzima obuxelwe ngaphandle eqweqweni; • Bafunda isikeyile zasegumbini lokuhlambela (zombini isikeyile sokwenyani nemifanekiso yezikeyile). Ngexesha lokuba Abafundi bezisebanzela bebodwa Abafundi banokwenza imisetyenzana yokuziqhelanisa nezakhono zokuthatha umlinganiselo. **Ukuthatha umlinganiselo wobunzima njengemeko yokusombulula iingxaki nokubala** Ngexesha eleyibhelawe Amanani, Ulwalamano,Izibalo Abafundi bangasombulula iingxaki besebenzisa imeko zoku: • thatha umlinganiselo wobunzima ngendlela engekho seSikweni. • thatha umlinganiselo wobunzima besebenzisa iikilogram. Thathela ingqalelo woludwe lamanani afanelekileyo ekota kwakhona thathela ingqalelo uludwe lweengxaki zezibalo ezifanelekileyo kule kota. Izifundo ezigqalisele kumlinganiselo wobunzima ziya kuqala kwikota yesi-2.	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.4 Umthamo	**Ukuthatha umlinganiselo ongekho sesikweni** • Thelekelela uze thathe umlinganiselo, thelekisa uze hlele umthamo wezikhongozeli (oko kukuthi isikhongozeli sithatha kangakanani xa sinokuthi sizaliswe) ngokusebenzisa umlinganiselo ongamiselekanga. using umz. amacephe neekomityi • Chaza umthamo wesikhongozeli ngokubala aze axela ukuba ingaba zingaphi iyunithi ezingamiselekanga ezisetyenzisiweyo ukuzalisa umthamo wesikhongozeli umz. ibhotile inomthamo weekomityi ezine.	**Ukuthatha umlinganiselo ongekho sesikweni** • Thelekelela uze thathe umlinganiselo, thelekisa uze hlele umthamo wezikhongozeli (oko kukuthi isikhongozeli sithatha kangakanani xa sinokuthi sizaliswe) ngokusebenzisa umlinganiselo ongamiselekanga. using umz. amacephe neekomityi Chaza umthamo wesikhongozeli ngokubala aze axela ukuba ingaba zingaphi iyunithi ezingamiselekanga ezisetyenzisiweyo ukuzalisa umthamo wesikhongozeliumz. ibhotile inomthamo weekomityi ezine	**Yintoni engumahluko kwibanga lesibni** • Qikelela uze uthathe umlinganiselo, uthelekise,ubhale phantsi umthamo wesikhongozeli usebenzisa umlinganiselo ongamiselekanga • Thelekisa uze uhlele umthamo woludwe lweebhotile nezinto zegrosari apho umthamo uxelwe kwipakethi • Sebenzisa ilitha enye yeebhotile okanye ilitha enye yeejagi ukuthelekelela nokuthatha umlinganiselo womthamo wezikhongozeli okanye umthamo wezikhongozeli ngokweelitha. Kwibanga lesi 3 Abafundi bafundiswa iimililitha. **Yintoni umthamo? Yintoni umyinge?** Ibhotile inokuba nomthamo oyilita, kodwa inokungcwaliswa kodwa ingagcwaliswa ifike kumthamo wayo,umzekelo Inako ukuba umyinge yekomityi enye yamanzi. Umthamo (capacity) -ithatha kangakanani umthamo (volume)-. Bubungakanani ngaphakathi umz.itenki yepetroli Ngamanye amaxesha baza kuthatha umlinganiselo wokuba isikhongozeli singathatha amanzi angakanani (okanye isanti).Oku kukuthatha umlinganiselo womthamo wento leyo ikwisikhongozeli. Ngelinye ixesha Abafundi bazakube bethatha umlinganiselo wokuba isikhongozeli singathatha umthamo ongakanani na ukuba sinokuthi sizaliswe. Abafundi kufuneka baqhubeke bethatha umlinganiselo besebenzisa iyunithi engamiselekanga yomthamo. **Umlinganiselo ongekho sesikweni wobude usebenzisa iyunithi engamiseleka yomthamo** Abafundi banokufunda eminye imigaqo nezinye iindlela zokuthatha imilinganiselo besebenzisa iyunithi engamiselekanga. Ukusebenzisa imilinganiselo ngeyunithi engamiselekanga makungathathwa ngokuba ingaphantsi kunaleyo isesikweni. Abafundi kufuneka benikwe ithuba lokuthatha umlinganiselo womthamo besebenzisa uludwe lwezinto njenge yuniti engamiselekanga umz. Iikomityi (oku akuthethi ukuba mabasebenzise iikomityi zokuthatha umlinganiselo) amacephe (oku akuthethi ukuba mabasebenzise amacetshana okuthatha umlinganiselo), iziciko zeebhotile zee 2 litha zobisi, iitoti ezincinci, iibhotile ezincinci njl-njl. Ukuthatha umlinganiselo womthamo usebenzisa iyunithi engamiselekanga kuquka ukubala ixesha olithathayo ukuzalisa nokugalela ngeyunithi ethathwe umlinganiselo womthamo.	Izifundo ezi-2

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.4 Umthamo	**Yazisa/fundisa ukuthatha umlinganiselo osesikweni** • Thelekelela, thatha umlinganiselo, thelekisa, hlela uze ubhale phantsi umthamo wezinto ngokuthatha umlinganiselo ngeelitha, iziqingatha zeelitha neekota zeelitha. • Thelekisa, hlela uze ubhale phantsi umthamo weepakethi zezinto ezithengwayo ezinomlinganiselo oxeliweyo ngokwemililitha umz. Iilitha ezi 2 zobisi, ilitha enye yesiselo esibandayo, iilitha ezi 5 zepeyinti okanye imililith, umz iimililitha ezingama 500 zobisi,iimililitha ezingama 340 zesiselo esibandayo, iimililitha ezi ngama750 e-oyile. • Yazi ukuba ikomityi ingama 250 emililitha • Yazi ukuba itispuni ziimililitha ez i5 Akukho kuguqulwa kufunekayo phakathi kweemililitha neelitha	**Yazisa/fundisa ukuthatha umlinganiselo osesikweni** • Thelekelela, thatha umlinganiselo, thelekisa, hlela and bhala phantsi umthamo wezinto ngokuthatha umlinganiselo ngeelitha, iziqingatha zelitha neekotta zelitha. - Ukusebenzisa iibhotile ezinomthamo oyilitha enye, okanye izikhongozeli ezinomthamo oxeliweyo ngokwemililitha umz. Itoti zesiselo ezibandayo. - Bonisa ilitha,isiqingatha selitha nekota yelitha	Abafundi kufuneka bafundiswe ukuxela rhoqo iyunithi abayisebenzisileyo umz. kukho amacetshana anga 48 amanzi ebhotileni okanye kukho amanzi angaphantsi kwekomityi ebhotileni. Xa Abafundi bethathe umlinganiselo besebenzisa iyunithi ethile amaxesha amaninzi, kufuneka bathelekelele icapacity/umyinge besebenzisa kwa loo yunithi. Ukuthelekelela phambi kokuba uthathe umlinganiselo kubalulekile, kodwa kunokwenziwa xa Abafundi sebethathe umlinganiselo besebenzisa loo yunithi. Abafundi kufuneka bafundiswe ukuba ukuze bathelekise i umyinge okanye capacity, kufuneka basebenzise iyunithi enyethe. Umzekelo, ukuba iglasi ithatha amacetshana amanzi anga 30, ikomityi ithatha amacetshana amanzi ali 10, asikwazi ukuthi iglasi ithatha amanzi amaninzi. Abafundi kufuneka bathathe umlinganiselo ngoludwe lweyunithi ezingamiselwanga ukuze bakwazi ukuqonda • ukuba iyunithi esetyenziswayo incinane,uya kunyanzelekile ukuba uthathe ixesha elininzi ukuyisebenzisa • umz. umthamo webhotile unokuba ngamacetshana angama 20,kwakhona unokuba yikomityi; • Baqalisa ukusebenzisa iyunithi ehambelana nalonto athatha umlinganiselo wayo umz.ukuthatha umlinganiselo webhotile ye litha ezi -2 ngamacetshana yincitha xesha. **Ukufundisa ukuthatha umlinganiselo osesikweni** • Thelekelela, uthathe umlinganiselo, hlela okanye ubhale phantsi umthamo usebenzisa iilitha. • Khumbuza Abafundi ukuba iilitha yiyunithi eqhelekileyo esesikweni yokuthatha umlinganiselo womthamo. Imo efinyeziweyo yeyunithi yokuthatha umlinganiselo womthamo ngu (l) kwaye isetyenziswa kuninzi lweejagi zokuthatha umlinganiselo nakuzo zonke izinto ezithengiswa ngemithamo. Qinisekisa ukuba Abafundi bayayikhumbula imo efinyeziweyo yeelitha. Abafundi bathatha umlinganiselo besebenzisa iilitha: • Izikhongozeli zelitha e-1 efana neebhotile zeziselo,iibhotile zobisi,iikhathuni zobisi,iikhathuni zesiselol kunye nee • Jagi zokuthatha umlinganiselo enemigca ebonisa amanani omlinganiselo.	Izifundo ezi-2

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
		- Kwiijagi zokwenza umlinganiso oziimililitha abafundi akulindelekangan ukba bafunde imilinganiselo ekungabhalwanga manani ngaezinayo la migca mincinci ezimililitha kwemilinganiselo ebhalwe ngamanani measuring jugs which have numbered calibration lines for millilitres. Abafundi are not balindeleke to read umyinges at unnumbered calibration okuyiphawula. - likomityi namacetshana okuthatha umlinganiselo ezibonisa umthamo wazo.	Bathelekelela ze bathathe umlinganiselo womthatho kuludwe lweezikhongozeli ezifana neetoti zeeyogathi, izitya ze ayisi khrim, iijagi ezinkulu, iibhotile ezinkulu, iitoti zepeyinti ezinkulu, iinkonxa njl -njl. Makukhethwe izinto ezinemithamo eyahlukileyo. Abafundi bacahaza umthamo ngolu hlobo: incinci kunelitha, iilitha ezi-2, phakathi kwelitha e-1 kunye neelitha ezi-2, iilitha ezi-5 njl-njl. Abafundi bathelekisa, bahlele baze babhale phantsi umthamo wezinto ezithengwayo ezinomthamo oxeliweyo ngokweelitha. Umz iilitha ezimbini zobisi, ilitha enye yesiselo esibandayo, iilitha ezintlanu zepeyinti. • Thelekelela, thatha umlinganiselo, thelekisa, hlela uze ubhale phantsi umthamo ngokwe mililitha. Thetha nAbafundi ngeemilitha njengeyunithi esesikweni yokuthatha umlinganiselo womthamo. Chaza ukuba imililitha yiyunithi encinane kunelitha.Kufuneka bafunde igama kunye nemo efinyeziweyo kuba kwiipakethi zezinto ezithengwayo nakwiijagi zokuthatha umlinganiselo imo efinyeziweyo yale yuniti isetyenzisiwe. Abafundi kufuneka bathelekise, bahlele ze babhale phantsi umthamo okwiipakethi zezinto ezithengwayo ezinomlinganiselo oxeliweyo ngokwemililitha,umz 500 ml zobisi, 750 ml zeviniga; 330 ml zesiselo esibandayo, 400 ml zepolishi yaphantsi, njl-njl. Abafundi kufuneka bathathe umlinganiselo rhoqo besebenzisa: • Ikomityi enomlinganiselo osesikweni ukuze bazi ukuba iimililitha ezingama 250 zingakananina • Icetshana lokuthatha umlinganiselo ukuze bazi ukuba iimililitha ezi 5 zingakananina • Ijagi yokuthatha umlinganiselo enemigca enamanani – apha kulindeleke ukuba Abafundi bafunde kuphela imigca enamanani –baya kugqalisela ekufundeni imigca engenamanani xa bekwibanga eliphakathi. Ezi resipi zilandelayo eziquka ezokubhaka yimeko engaluncedo apho Abafundi bangaziqhelanisa nokuthatha umlinganiselo. Abafundi abalindelekanga ukuba: • Bazi ukuba 1 000 ml = 1 l • Ukuguqula imililitha neelitha, • Ukufunda amanani angabhalwanga kwimigca ekwijagi yokuthatha umlinganiselo (oku kuza kwenziwa kwibanga le 4.)	

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.4 UMTHAMO		• Thelekisa, hlela uze ubhale phantsi umthamo weepakethi zezinto ezithengwayo ezinomlinganiselo oxeliweyo ngokwemililitha umz. lilitha ezi 2 zobisi, ilitha enye yesiselo esibandayo, iilitha ezi 5 zepeyinti okanye imililith, umz iimililitha ezingama 500 zobisi,iimililitha ezingama 340 zesiselo esibandayo, iimililitha ezi ngama750 e-oyile. • Yazi ukuba ikomityi ingama 250 emililitha • Yazi ukuba itispuni ziimililitha ezi 5 Akukho kugulwa kufunekayo phakathi kweemililitha neelittha	**Ukubhala phantsi umlinganiselo** Noxa umlinganiselo isisakhono apho kwenziwayo, Abafundi kufuneka babhale phantsi ngamaxesha onke xa bethatha umlinganiselo, oku kubandakanya yonke imilinganiselo-engamiselekanga naleyo isesikweni. **Ukuthatha umlinganiselo womthamo njengemeko yokusombulula iingxaki nezibalo** Ngexesha eleyibhelawe Amanani, Izibalo noLalwamano Abafundi banokusombulula iingxaki ezisebenzisa imeko ye: • milinganiselo engamiselekanga yomthamo umz.informal thatha umlinganiselo ongamiselekanga womthamo umz. UGogo usebenzisa iikomityi ezi-2 zobisi ukwenza ipudingi.Ukuba uyiphinda kabini iresipi yakhe ingaba uya kusebenzisa ubisi olungakanani? • ilitha • mililitha Thathela ingqalelo yoludwe lwamanani ezifanelekileyo kule kota,kunye noludwe lweentlobo zeengxaki.	Izifundo ezi-2

IBANGA LESI 3 IKOTA YOKU 1 5.INDLELA YOKUSEBENZA NGOLWAZI				
ISIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO ZEKOTA YOKU -1**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24in)
5.4 **Qokelela uzeulungise ulwazi**	**Qokelela uze lungise ulwazi** • Qokelela ulwazi malunga neklasi okanye isikolo ukuphendula imibuzo ebuzwe ngutitshala. • Lungisa ulwazi olunikwe ngutitshala okanye olufumane encwadini. • Lungisa ulwazi oluku: - luhlu - iithali - iitheyibhile	**Qokelela uze lungise ulwazi** • Qokelela ulwazi malunga neklasi okanye isikolo ukuphendula imibuzo ebuzwe ngutitshala. Sebenzisa iithali ukubhala phantsi/rekhodisha ulwazi ngokwamacandelo owanikiweyo. **Bonisa ulwazi kwi:** • Itheyibhile • I grafu yezitena **Calula uze utolike ulwazi** Phendula imibuzo ngolwazi uphendula kwigrafu yezitena	**Yintoni engumahluko kwibanga 2?** • Abafundi balungisa ulwazi balubhale kuluhlu,iithali, iitheyibhile • Abafundi bafundiswa igrafu zezitena • Abafundi baqhubeka besebenza ngeegrafu zemifanekiso - bakha iigrafu njengenye yendlela yokubhala ulwazi baze bacalule igrafu yemifanekiso abayinikiweyo. **Umjikelo wolwazi opheleleyo** Kumjikelo wendlela yokusebenza ngolwazi • Abafundi baqokelela ulwazi ukuphendula umbuzo.KwiMfundo eSisiseko nakwiMfundo ePhakathi lo mbuzo ubhalwa kwincwadi katitshala okanye kwincwadi yomfundi; • Abafundi balungisa ze babonise ulwazi ngeendlela ezizakuthi zibelula ukuba balucalule olo lwazi. Uhlobo lokubonisa ulwazi Abafundi kwibanga lesithathu abaza kusebenza ngalo luluhlu,iithali, itheyibhile, iigrafu zemifanekiso neegrafu zezitea • Abafundi bacalula ulwazi ngokuphendula imibuzo abayibuzwe ngutitshala. Igrafu yezitena yeklasi Kuyacetyiswa ukuba abafundi bebanga lesi 3 basebenze ngomjikelo wolwazi ubuncincinane kanye ngonyaka: Ukusebenza kunye njengeklasi kunceda ukuba Abafundi bathathe inxaxheba kumanqanaba onke enkqubo, banagabi namanqanaba apho bazakukhe balahleke.Ukwenza igrafu yezitena yeklasi kuvumela ukuba ubakhokelele Abafundi ekuqapheleni izinto eziphambili ezinxulumene neendlela zokusebenza ngolwazi.Ngalendlela Abafundi bafundiswa iimpawu eziphambili zegrafu yezitena: • Uyileyibhela phi,uyileyibhele njani igrafu (itayitile yegrafu) • Uzileyibhela phi,uzileyibhile njani ii-asi (iimigca ehamba embindini) (itayitile ye-asi) • Uzizoba njani izitena zegrafu - Zoba izitena zibe nobude obuchanekileyo ukubonisa ulwazi - izitena mazibe nobubanzi obulinganayo - shiya isithuba phakathi kwezitena - leyibhela isitena ngasinye ngokucacileyo • uyifunda njani igrafu	
5.5 **Bonisa ulwazi**	**Bonisa ulwazi** Bonisa ulwazi kwi • Igrafu yemifanekiso • igrafu yezitena			
5.6 **Calula uze utolike ulwazi**	**Calula uze utolike ulwazi** Phendula imibuzo oluboniswe kwi: • Igrafu yemifanekiso • igrafu yezitena			

ISIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
5.4 **Qokelela uzeulungise ulwazi**	**Qokelela uze lungise ulwazi** • Qokelela ulwazi malunga neklasi okanye isikolo ukuphendula imibuzo ebuzwe ngutitshala. • Lungisa ulwazi olunikwe ngutitshala okanye olufumane encwadini. • Lungisa ulwazi oluku: - luhlu - iithali - iitheyibhile	**Qokelela uze lungise ulwazi** • Qokelela ulwazi malunga neklasi okanye isikolo ukuphendula imibuzo ebuzwe ngutitshala. Sebenzisa iithali ukubhala phantsi/rekhodisha ulwazi ngokwamacandelo owanikiweyo. **Bonisa ulwazi kwi:** • Itheyibhile • I grafu yezitena **Calula uze utolike ulwazi** Phendula imibuzo ngolwazi uphendula kwigrafu yezitena	Abafundi kufuneka bazi ukuba kubalulekile ukufunda itayitile yegrafu kuqala, ukuze bazi ukuba ulwazi lungantoni.Kufuneka bafunde kwakhona iitaytile ze-asi ehorizontali nevethikhali. Abafundi akuyomfuneko ukuba bazi ubuchule bentetho nesigama esisetyenziswayo ukuchaza izahlulelo zegrafu.Kufuneka bazi kuphela ukuba kufuneka bafunde ukusukela ezantsi ukuya phezulu ukuze babone ukuba igrafu ingantoni. Xa sifunda siqhele ukuqala ekhohlo siye ekunene, kodwa xa Abafundi befunda igrafu kufuneka beyifunde ukusuka ekhohlo ukuya ekunene nokusuka ezantsi ukuya phezulu.Oku kufuneka kucacisiwe kubafundi. Kufuneka baziqhelanise nesi sakhono. Ukusebenza ngomjikelo wolwazi kungathatha izifundo ezi 3. **Qokelela and lungisa ulwazi** Kwibanga lesi 3 kufuneka ubuze umbuzo oza kuvumela ukuba Abafundi baqokelela ulwazi umz. “Ngowuphi owona mbala uthandwayo ngAbafundi eklasini? Ootitshala kwesi sigaba kufuneka baqinisekise ukuba bakhetha izihloko ezahlukileyo kwibanga ngalinye ukulungiselela ukusebenza ngolwazi nokucacula. Izihloko ezifanelekileyo ziquka ezi; eyona midlalo ithandwayo, ezona ziselo zithandwayo, eyona mibala ithandwayo, okona kutya kuthandwayo, eyona nkqubo kamabonakude ithandwayo njl-njl. Abafundi bangaqalisa ukubiza ezona zinto bazikhethayo.Xa bethe banalo uluvo loludwe lweempendulo, ungaqalisa ukubabekela iindindi abazakukhetha kuzo Abafundi. Bavumele Abafundi ukuba baziqhelanise nazo zonke iindlela zokubonisa ulwazi olungasebenzisi grafu, oko kukuthi: uluhlu, iithali neetheyibhile umz. • Bhala uluhlu lwamagama Abafundi phantsi kodidi abalukhethileyo njengeyonanto bayithandayo; • Bonisa Abafundi ukuba zenziwa njani itheyibhile yethali kuluhlu (ukufundisa Abafundi ukwenza ithali kungathatha isifundo sonke); • Yenza itheyibhile ngamanani usebenzisa itheyibhile yethali. Xa ulwazi lukwitheyibhile, bonisa Abafundi indlela yokuzoba igrafu yezitena (jonga kwisikhokelo esingasentla). **Calula uze utolike ulwazi** Abafundi baphendula imibuzo oyibuzileyo ngegrafu yemifanekiso Umzekelo: a) Ngowuphi owona mbala uthandwayo ngabafundi eklasini? “ b) “Ngowuphi owona mbala uthandandwa ngabafundi abambalwa? c) “Ingaba Abafundi bathanda ... … okanye.....?” d) “Bangaphi abanye Abafundi abathanda..... kuno.....?”	Izifundo ezi-3
5.5 **Bonisa ulwazi**	**Bonisa ulwazi** Bonisa ulwazi kwi • Igrafu yemifanekiso • igrafu yezitena			
5.6 **Calula uze utolike ulwazi**	**Calula uze utolike ulwazi** Phendula imibuzo oluboniswe kwi: • Igrafu yemifanekiso • igrafu yezitena			

IBANGA LESI-3 IKOTA YESI-2 1. AMANANI, UKUBALA NOLWALAMANO				
UMXHOLO	**IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24in)
1.1 **Bala izinto**	**Bala izinto eziphathekayo** **Qikelelela ubale ngokuthembakeleyo ukuya kuma ebuncincini kwi-1000 lezinto. Kukhuthazwa indlela yokubala ngokuhlanganisa**	Beka ngokuhlanganisa izinto zemihlangemihla zibe ngama-500 ukuze usebenzise ingqikelelo ukubala ngokuncamisayo. Nika ingqikelelo yezinto ezibalwayo ethembakeleyo enokukuqinisekiswa ngokubalwa	**Yahluke ngantoni le kota kweyoku-1?** Umda wamanani uuxananazela ku- 500. Oku kunyuswa kuthatha ngokuba bafundi sele bekwazi uku; • beka izinto ngokuzihlanganisa ngenjongo yokubala; • Babale ngamashumi ukuya kuma- 500, babize amagama amanani ngamagama ; baze • Batshatise isimboli yenani kunye nenani lezinto ezibalilweyo ngokubhala inani okanye ukulibonisa ngekhadi elibonisa ixabiso lenani . Jonga kumanqaku ekota yoku-1.	

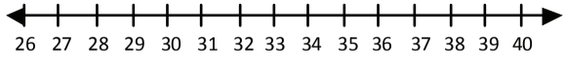
UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.2 **Ukubala usiya phambili nokubala ubuya umva**	Bala usiya phambili ubale ubuya umva: • Ngezi-1 ukusuka kulo naliphi na inani phakathi kwe -0 no-200. • Ngama-10 ukusuka kuso nakwisiphina isiphindaphindi phakathi kwe 0- nama-200. • Ngezi-5 ukusuka kulo naliphi inani kwiziphindaphindi zesi-5 phakathi kwe-0 noma-200 • Ngezi-3 ukusuka kuso nasiphi na isiphindaphindi sika-3 phakathi kwe-0 nama-200 • Ngezi-4 ukusuka kuso nasiphi na isiphindaphindi sika-4 phakathi kwe-0 nama-200 • Babale ngama- 20, 25, 50,100, ukuya ebuncincini kwi- 1 000	• Ngezi-1 ukusuka kulo naliphi na inani phakathi kwe -0 no-200. • Ngama-10 ukusuka kuso nakwisiphina isiphindaphindi phakathi kwe 0- nama-200. • Ngezi-5 ukusuka kulo naliphi inani kwiziphindaphindi zesi-5 phakathi kwe-0 noma-200 • Ngezi-3 ukusuka kuso nasiphi na isiphindaphindi sika-3 phakathi kwe-0 nama-200 • Ngezi-4 ukusuka kuso nasiphi na isiphindaphindi sika-4 phakathi kwe-0 nama-200 Babale ngama- 20, 25, 50,100, ukuya ebuncincini kwi- 1 000	**Yahluke ngantoni le kota kweyoku-1?** Kule kota bantwana baqala ukubala ngama-50.Uludwe lwamanani luyakhula ukuya kwi- 1 000. Kule kota abafundi baqhubekeka ngokubala ngokuqakatha baye besebenzisa iitheyibhile zokuphinda phinda ukuya kulandelelaniso lwamanani. Jonga kwikota yoku-1	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.3 **Iisimboli zamanani namagama amanani**	**Chonga, anakane, kwaye afunde amanani** • Chonga,nakana kwaye afunde iisimboli zamanani ukususka ku-0 ukuya kwi- 1 000 • Bhala iisimboli zamanani ukususka kwi-0 ukuya kwi-1 000 • Chonga, nakana kwaye ufunde amagama amanani ukususka kwi- 0 ukuya kwi-1 000 • Bhala amagama amanani ukususka kwi-0 kwi-1 000	**Chonga, anakane, kwaye afunde amanani** • Chonga,nakana kwaye afunde iisimboli zamanani ukususka ku 0 - 1 000 • Bhala amagama amanani ukususka ku 0 -1 000 • Chonga, nakana kwaye ufunde amagama amanani ukususka kwi 0-ukuya kuma-250 • Bhala amagama amanani ukususka kuwi 0-ukuya kuma-250	Ukufunda ubhale amanani kuyaqhubekeka xa; • Bebala izinto; • Bala usiya phambili ubale ubuya umva; • Gcwalisa amanani ngokulandelelana; kunye • Ukulandelelanisa uze uthelekise amanani. Jonga kwiKota yoku 1.	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.4 **Chaza, thelekisa ulandelelanise amananani**	**Chaza, thelekisa ulandelelanise amananani ukuya kuma- 999** • Chaza uthelekise amananani apheleleyo ukuya kuma- 999 usebenzisa u-ncinci kune, nkulu kune, ngaphezulu kune, mbalwa kune no-lingana ne- • Chaza uze ulandelelanise amananani ukuya kuma -999 ukusebenzisa u-ncinci kuno,khulu kuno,ngaphezulu kuno,ngaphantsi kuno,mbalwa kuno okanye lingana no. **Sebenzisa amananani olandelelwano ukubonisa ukulandelelana kwezinto ngokwendawo ezime kuzo nokulandelelana ngokwendawo-bume** • Sebenzisa, ufunde ubhale amananani alandelelanayo uquka imo efinyeziweyo ukuya kuma-31.	**Landelelanisa uthelekise manani ukuya kuma-500** • **Chaza uthelekise manani apheleleyo ukuya kuma ku-500** usebenzisa encinci kune,nkulu kune, ngaphezulu kune, mbalwa kune no-lingana ne • Chaza ulandelelanise amananani ukuya kuma -500 ukusuka kwelona lincinci ukuya kwelona likhulu nokusuka kwelona likhulu ukuya kwelona lincinci. **Sebenzisa amananani olandelelwano ukubonisa ukulandelelana kwezinto ngokwendawo ezime kuzo nokulandelelana ngokobume** • Sebenzisa, ufunde ubhale amananani alandelelanayo uquka imo efinyeziweyo ukuya kuma-31.	Kule kota uludwe lwamananani luyakhula ukusuka kuma-99 ukuya kuma-500. Abafundi ngoku balandelelanisa amananani aneedijithi ezintathu.Ukuze bakwazi ukulandelelanisa amananani anedijithi ezi-3 abafundi kufuneka: • Babize igama lenani; • Babhale inani; baze • Banakane ixabiso lamananani ngokwamakhulu, amashumi nemivo. Abafundi mabasebenzise umgca manani, umzila wamananani, igridi yamananani okanye ukwahlula amananani ngokwamakhulu, amashumi nemivo ukubonisa ukuqonda kwabo. Xa abafundi belandelelanisa amananani mababenako ukuthi kutheni inani lilikhulu kunelinye besebenzisa ixabiso ledijithi ukunika le ngcaciso Umzekelo: 239 mkhulu kuno- 339 kuba; Ndiyazi ama- 339 alingana nama = 300 kwangezwe amashumi -30 nemivo eli- 9 ngeli xa u 239 alingana nama = 200 namashumi angama-30 nemivo esi- 9. Mababe nako ukucacisa ukuba u-300 unagphezulu kuma-200 xa kusetyenziswe uhlanganiso lwezinto ezibonisa inani lamakhulu asetyenzisiweyo kwinani ngalinye.Abafundi bangabonisa indawo inani elikuyo kumgca manani ngokuthi ama-339 aza emva kwama-239, ngoko ke ndiyazi ukuba mkhulu.	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Banakane ixabiso lendawo kumanani angamakhulu ukuya kuma-999.** • Bazi ukuba idijithi ngamnye imele ntoni kwinani • Bohlula amanani anedijithi ezi-3 ukuya kuma-999 abe ziziphindaphindi ze -100, iziphindaphindi zamashumi nezemivo. • Bachonge baxele ixabiso ledijithi nganye.	**Banakane ixabiso lendawo kumanani angamakhulu ukuya kuma-500** • Bazi ukuba idijithi ngamnye imele ntoni kwinani • Bohlula amanani anedijithi ezi-3 ukuya kuma-500 abe ziziphindaphindi ze -100, iziphindaphindi zamashumi nezemivo. • Bachonge baxele ixabiso ledijithi nganye.	**Yahluke ngantoni le kota kweye- 1?** Kule kota yesibini abafundi bahlula amanani aneedijithi ezi-3 okokuqala. Ixabiso lendawo linwenwela ekuqukeni namakhulu . Ukuqondwa kwexabiso lendawo ngabafundi lingakhuliswa ngokubuza imibuzo efana nale, fumana ezilishumi ezingaphezu kwenani elithile okanye ezingaphantsi. Ngenxa yokuphuhliseni rhoqo kwengqiqo yexabiso lendawo abafundi banakho ngoku ukubala ngokuzithemba ngama-100, baze bafumanise iipateni ezinxulumene nexabiso lendawo baze bakhe,bahlule amanani aneedijithi ezimbini kunye nezintathu Abafundi mabanikwe amathuba awaneleyo okwakha amanani anedijithi ezintathu besebenzis iibloko zedienes okanye zeziseko zamashumi/iibheyisi zamashumi. Kubalulekile ukuba baqale bakhe ukwenza ikhulu baze benziwe njengento enye.. Bamele ukuba mangaphi amaqela amakhulu abanawo. Amakhadi abonisa ixabiso lamanani mawaqhube ukusetyenziswa ukubonisa amanani. Xa besebenzisa iibloko zedienes neziseko zamashumi le mibuzo ingabuzwa; Mangaphi amakhulu ku: 300, 400, 500 • Yakha la manani: 258, 378, 399 Kule kota abafundi bafunda uku biza babhale ixabiso ledijithi kwinani. Ku 452 ixabiso lika- 5 ngamashumi amahlanu-50 Ku-325 u -5 uxabisa /usebenze ukubonisa imivo emihlanu. Kubalulekile ukubonisa ukuqonda kwama -50 ngeenyanda ezintlanu ezenziwe ngamashumi okanye isihlanu sezinto ezahlukeneyo xa ubonakalisa inani u-5. Oku kuya kunceda xa abafundi belandelelanisa kwaye bethelekisa amanani Amakhadi axela ixabiso lenani asabaluleke kakhulu. Asetyenziselwa ukuhlula amanani ukubonisa ixabiso ledijithi nganye. 637 = 600 + 30 + 7	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Banakane ixabiso lendawo kumanani angamakhulu ukuya kuma-999.** • Bazi ukuba idijithi ngamnye imele ntoni kwinani • Bohlula amanani anedijithi ezi-3 ukuya kuma-999 abe ziziphindaphindi ze -100, iziphindaphindi zamashumi nezemivo. • Bachonge baxele ixabiso ledijithi nganye.	**Banakane ixabiso lendawo kumanani angamakhulu ukuya kuma-500** • Bazi ukuba idijithi ngamnye imele ntoni kwinani • Bohlula amanani anedijithi ezi-3 ukuya kuma-500 abe ziziphindaphindi ze -100, iziphindaphindi zamashumi nezemivo. • Bachonge baxele ixabiso ledijithi nganye.	Abafundi bangazenzela awabo amakhadi. Makuncanyathiselwe invulophu yoku kwiincwadana zabo  **Hlula amanani aneedijithi ezintathu bawenze abe ziziphinda phindi ze-100,10 kunye no-1** Abafundi bangacazulula amanani abe; • Ngamakhulu, amashumi, nemivo umz;. 273 = 200 + 70 + 3 (amakhadi abonisa ixabiso lenani ancedisa kakhulu ekwenzeni lo msebenzi) • Iziphinda phindi ze-10 nemivo umz. 273 = 2 hundreds, 7 amashumi + 3 imivo **Ukwakha amanani aneedijithi ezimbini ukusukela kwixabiso lendawo lalo.** Umzekelo Bhala eli nani: Ikhulu eli-1 namashumi ama-3 amakhulu ama-2 namashumi a-4 nemivo emi-5 amakhulu ama-3 + amashumi asi-9 + imivo emi-2 4 amakhulu + 5 amashumi + 7 imivo Umzekelo: Gcwalisa: a) 346 = 300 + ☐ +6 b) 400 + 20 + 8 = ☐	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
UKUSOMBULULA IINGXAKI KWIIMEKO NGEEMEKO				
1.6 Ubuchule bokusebenzisa iingxaki	Sebenzisa obu buchule ukusombulula iingxaki kwaye ucacise izisombululo zeengxaki: • Ukwakha nokwahlula manani • Ukuphinda-phinda kabini nokukwahlula kabini ngokulinganayo (ukwenza iziqingatha) • Imigca manani • Ukusondeza kumashumi	Sebenzisa obu buchule ukusombulula iingxaki kwaye ucacise izisombululo zeengxaki: • Ukwakha nokwahlula amanani • Ukuphinda-phinda kabini nokukwahlula kabini ngokulinganayo (ukwenza iziqingatha) • Imigca manani • Ukusondeza kumashumi	Abafundi bayaqhubekeka besombulula iingxaki besenzisa obu buchue: • Ukwakha nokwahlula amanani • Ukuphinda-phinda kabini nokukwahlula kabini ngokulinganayo • Imigca manani Jonga kwikota -1. **Yahuke ngani le kota kweyoku-1?** **Ukuwelisela okanye ukusondeza** Kule kota bafundi baqala ukusondeza amanani kwawona mashumi akufutshane. Ukusondeza yiyona ndlela iqhelekileyo yokuQikelela/thelekelela. Ukuba umntwana ulichule lokuqikelela uya kukwazi ukusondeza amanani kumashumi ngendlela elandelekayo kwiimeko ngeemeko.Phambi kokuba baqale ukusondeza njengobuchule xa bedibanisa okanye bethabatha kufuneka baqheliswe obu buchule kuqala. Oku kungenziwa kusetyenziswa umgca manani. Umzekelo:  • Ingaba ama-33 ukufutshane kuma 30 okanye kuma 40? • Ingaba ama- 37 ukufutshane kuma- 30 okanye kuma-40? Abafundi kufuneka baqonde ukuba: Ama-35 usembindini phakathi kwama- 30 no 40. Sithatha elona shumi liphezulu kunelinye kule meko xa inani lisembindini. Ngoko ke sithi elona shumi akufutshane kulo lelesine hayi elesithathu. Jonga kwikota yesi-2.	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.7 **Ukudibanisa okuthabatha.**	Sombulula iingxaki kwizibalo zamagama kwiimeko ngeemeko baze bacacise izisombululo abazinikileyo ezichaphazela ukudibanisa nokuthabatha ukuya kuma kuma-999..	Sombulula iingxaki kwizibalo zamagama kwiimeko ngeemeko baze bacacise izisombululo abazinikileyo ezichaphazela ukudibanisa nokuthabatha ukuya kuma kuma -400	**Imizekelo yeengxaki ezinokusonjululwa kule kota** Iingxaki ezimalunga nokudibanisa uthabathe • UPamela uqokelele iziciko zeebhotile ezingama-413. Ukuba uKen umnika iziciko zebhotile ezingama-29, uya kuba neziciko ezilingana nezikaPamela. - Zingaphi iziciko abaya kuba nazo zizonke? - Bezizingaphi iziciko zikaKen ukuqala kwakhe? • UNkosikazi Zibi unike u Nkosikazi Magadla imali engane R80,00. Unkosokazi zibi utsho washiyeka ne- R366,00 eerandi. Ubenamalini uNkosikazi Zibi ekuqaleni • NgoJanyuwari uNandi ufunde amaphepha nagama- 115. uNandi yena ufunde amaphepha angama- 126. Ingaba uNandi ufunde amangaphi ngaphezu kwawafunde ngoJanyuwari? • UBen unamabhastile angama-218. Amabhastile akhe angaphantsi kunaka-Anna ngama-97 amabhastile. Mangaphi ke amabhastile ka-Anna?	

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1.8 **Ukdibanisa okuphindiweyo** **okukhokelela kuphinda phindo**	Sombulula iingxaki kwiimeko ngeemeko ucacise indlela ofikelele ngayo kwizisombululo ezichaphazela ukuphindaphinda ezinempendulo ukuya kuma-99.	Sombulula iingxaki kwiimeko ngeemeko ucacise indlela ofikelele ngayo kwizisombululo ezichaphazela ukuphindaphinda ezinempendulo ukuya-75	**Imizekeloo yeengxaki ezinokusonjululwa kule kota** Jonga imizekelo kwikota yokuqala uze utshintshe kuphela uludwe lwamanani ngokufanelekileyo. • Umanejala kufuneka a-odole amavili eebhasi ezisibhozo. Ukuba ibhasi nganye isebenzisa amavili amathandathu nelinye elililalela angaodola amavili amngaphi ewonke? • Ibala lolubaleka lesikolo sethu lnobude obuziimitha ezilishumi.ULuvuyo wenze imijikelo emi-6 .Bala ukuba indawo ayibalekileyo iyonke ingakanani na. **Ucwangciso manani** • Igadi yemifuno inemiqolo eli-12 yezityalo. Umqolo ngamnye unezityalo ezi-7. Zingaphi ke ngoku izityalo zizonke egadini? • Igadi yemifuno inemiqolo eli-12 yezityalo . Imiqolo inezityalo ezilinganayo. Ukuba izityalo zizonke zingama- 48, zingaphi izityalo kumqolo ngamnye? • Igadi yezityalo inezityalo ezi-48 kwimiqolo yazo. Umqolo ngamnye unezityalo ezisixhenxe-7. Mingaphi ke yona imiqolo iyonke? **Ukuthelekisa /ireshiyo** • UZamile uneeswiti ezintandathu. Iiswiti zika Zamile zingaphezulu kwezika Monde ngokuphindwe kathathu. Uneeswiti ezingaphi uMonde? • UZiyanda uneelekese ezi-18. Lo myinge ungaphezulu kokaZamile ngokuphindwe kathathu. Zingaphi iiswiti azUkubaumananyo uZamile zizonke? Olu hlobo lwengxaki luyaqalwa kweli banga kule kota ngoko ke abafundi mabanikwe ithuba elaneleyo ukusombulula ezi ngxaki bade bakwazi..	
1.9 **Ukuhlanganisa ngokwamaqela nokwaba ngokulin ganayo okukhokelela kulwahlula-hlulo**	Sombulula ucacise izisombululo eziquka ukwaba ngokulinganayo kwanokuhlanganisa ngokwamaqela ukuya kwi-100 zibe neempendulo enentsalela	Sombulula ucacise izisombululo eziquka ukwabelana ngokulinganayo kwanokuhlanganisa ngokwamaqela ukuya kuma-75 zibe neempendulo enentsalela	**Umzekelo wemisetyenzana enokwenziwa kule kota** Ingaba kufuneka iimoto ezingaphi ukukhelisa abantwana abangama-24ukuba imto nganye inokukhwelisa abantwana aba-4. Kukho iikawusi ezingama-65 ekhabhathini. Zingaphi izibini zeekawusi ezilapha? **Ukwahlula ngokwamaqela** ULwazi uthengisa iingxowa eziqulatha ishumi leeorenji inye. Uneeorenji ezingama-40 zizonke. Angagcwalisa iingxowa ezingaphi? UToto uneeswiti ezingama-66. Utya iiswiti ezi-3 ngosuku. Zingaphi iintsuku aya kuba neeswiti ngazo?	

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1.10 **Ukwaba ngokulinganayo okukhokelela kukwahlula hlula**	Sombulula ucacise izisombululo eziquka ukwaba ngokulinganayo kwanokuhlanganisa ngokwamaqela okukhokelela kwizisombululo eziquka amaqhezu *a-unitary nangekho-unitary umz* $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{3}{4}, \frac{2}{5}$. njl-njl.	Sombulula ucacise izisombululo eziquka ukwaba ngokulinganayo kwanokuhlanganisa ngokwmaqela okukhokelela kwizisombululo eziquka amaqhezu *(unitary non-unitary) umz;* $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{3}{4}$, njl-njl.	Kwikota yokuqala abafundi bebeqalwe ngamaqhezu angekho-unitary umz. iikota ezintathu okanye isi-2 kwisithathu. Mabanikwe amathuba awaneleyo okusebenza ngezi ndidi zamaqhezu. **Imizekelo yemisebenzi enokunikwa kulo mxholo** a) Ukwaba ngokulinganayo okukhokelela ekusebenziseni amaqhezu b) Ukwabelana ngamaqhezu etshokholeyithi pakathi kwesithathu sabahlobo ngokulinganayo kungabikho ntsalela . c) Iqhezu lengqokelela d) Fumana ikota kwiiswiti ezingama-20. e) Iiswiti ezintandathu ziliqhezu elingakani kuma-24 eeswiti f) UMhakhulu unika uKiki i-12 leerandi. UKiki ufuna ukulondoloza isithathu eshumini kule mali.UKiki ulondoloze malini? Olu hlobo lwengxaki mabalunikwe abafundi emva kokuba sele bekhe banikwa ithuba lokusombulula ezine ukuya esihlanwini iingxaki zokwaba ngokulinganayo ezikhokelela kumaqhezu kwaye bayawazi amagama ala maqhezu. **Ukubhala** Akukho mfuneko yokuba babhale isimboli zamaqhezu.Abafundi bayaqhubeka ba bale ngolu hlobo ;isihlanu esinye, iikota ezi- 3 izithandathu ezithathu. **Ukubonisa izibalo zamazwi zamaqhezu** Abafundi mabenze imizobo ukubonakalisa ukuba bazilandele iingxaki zezibalo. Makulindelwe ukuba banye bafundi bangazoba ngaokufanelekileyo kodwa bangakwazi ukunika amagama amaqhezu achanekileyo.Mabancediswe ukunika amagama ngokuchanekileyo (Jonga amanqaku ngendlela yokuthiya magama kwizibalo ezingalawulwa meko) Abafundi mabathiye amaqhezu ekwabelwana ngawo ngokuwabhala njenge zibini esithathwini.	

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1.11 **Imali**	• Mabanakane imali engamaphepha kwaneziinkozo • Mabasombulule iingxaki eziquka ukubala imali iyonke kwanetshintshi ebalwa ngeerandi neesenti. • Guqulela iirandi kwiisenti neesenti ziguqulelwe kwiirandi	• Mabanakane bachonge imali engamaphepha neziinkozo • Mabasombulule iingxaki eziquka ukubala imali iyonke kwanetshintshi ebalwa ngeerandi neesenti	**Imizekelo yemisebenzi enokunikwa kule kota:** • Ixabiso lemali nokuvelisa iziphumo zemali umz.. - Bhala i- 525c ngeerandi neesenti. - Zingaphi iindlela ezahlukileyo onokuthi wenze okanye ubonise ngazo ama R400 usebenzisa imali engamaphepha. Wazi njani ukuba unazo zonke izisombuulo? - UZola uneenkozo zemali ezizezi: 50 c enye nama-20c amane. Iithofi zixabisa i- R1,20. Iya kuba yimalini ke itshintshi yakhe? • UMandla uhlawula R2, 50 kwinqwelo emsa esikolweni. - Kuxabisa malini ngemini ukuya esikolweni? - Itikiti likaloliwe lokuya nokubuya esikolweni lixabisa iirandi ezintandathu. Yiyiphi enexabiso eliphantsi phakathi kukaloliwe neteksi? • Iingxaki zokuthenga nokuthengisa - Umakhulu kaLihle umphe iR5. Ingaba zeziphi iilekese ezintathu anokuzithenga kwezi? itshokhaleyithi R2,70; iitshungama R1,80; iintshulube ezimuncu R1,40; ezepesika R1,60; iiminti R2,20; iithofi R1,20. - UZola uthenge iincwadi ezintathu nge R80 inye; Itshintshi yakhe iya kuba yimalini xa enama- R300? - Ipakethe yeminti ezi- 5 ixabisa 44c inye. UMnu Zinja ufuna ama-88 eeminti. Ziingaphi iipakethe ekufuneka ezithengile? Uza kuhlawula malini? • Iibhasi ezihamba ngendlela ehlawulelwayo zibizwa iR40 inye. Babhatala malini iyonke? (Kulindeleke ukuba abafundi baza kwenza ingxaki zokudibanisa okuphindiweyo apho kusetyenziswa iimali ezinkulu.)	

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UKUBALA				
1.12 **Ubuchule/ iindlela)**	Sebenzise ezi ndlela xa bebala: • Akha uze wohlule amanani • Phinda kabini uze wohlule kabini ngokulinganayo (ukwenza iziqingatha) • Imigca manani • Sondeza ngamashumi	Basebenzise ezi ndlela xa bebala: • Akha uze wohlule amanani • Phinda kabini uze wohlule kabini ngokulinganayo (ukwenza iziqingatha) • Imigca manani • Sondeza ngamashumi	Abafundi kulindeleke ukuba basebenzise ezi ndlela xa bebala: • Bakhe baze bohlule manani • Baphinde kabini baze bohlule kabini ngokulinganayo (ukwenza iziqingatha) • Imigca manani • Bazondeze ngamashumi Abafundi mabakhethiswe eyona ndlela bafuna ukuyisebenzisa .Kunjalo abafundi abasebenzisa iindlela ezingabancedisiyo mabancediswe ngokuboniswa ezinye iindlela ezingaluncedo. Jonga kwikota yoku -1 malunga; • Nokwakha baze bohlule manani • nokuphinda kabini baze bohlule kabini • nemigca manani Ukusondeza kumashumi Jonga inkcazelo yokusombulula ingxaki kwisiekshini yesibini 2.	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-999 • Thabatha ku- 999 • Sebenzisa iisimboli ngokufanelekileyo. (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuphela kuma- 30	• Dibanisa ukuya kuma kuma- 100-100 • Thabatha ukuya kuma ku- 100-100 • Sebenzisa isimboli ngokufanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamashumi ukuya kuma 30	**Yahluke ngantoni le kota kweyoku-1** Kule kota abafundi babala ngamanani aneedijithi ezintathu okokuqala.Ukuze bakwazi ukukwenza oku ngokuzithemba kufuneka babonakalise ukukwazi oku; • Ukufunda babhale isimboli zamanani ukuya ku- 400; • Balandlelanise bathelekise amanani ukuya ku- 400; • Babale ngamaqela ukuya kuma ku- 400; baze • Babale ngokweintavali zoo- 2, 3, 4, 5, 10 50 ne 100 ukuya kuma ku-400 Kule kota abafundi mabohlule amanani ukubonakalisa ubuchule bokubala. Ukwakha nokwahlula amanani yenye yeendlela abafundi abanokuzisebenzisa kule kota. Ezinye iindlela ezibonisa ukudibanisa nokuthabatha zezi. • Ukohlula inani libe ukuze kube lula ukubala Uninzi lweendlela ezisetyenziswa ngabafundi zisebenzisa ukohlula amanani. Bakwenza oko ngamanani aziidijithi ezintathu. • Dibanisa ngokwahlula inani Dibanisa amanani aneedijithi ezintathu kunye naneedijithi ezimbini Umzekelo 324 + 82 = ☐ 324 + 82 = (300 + 20 + 4) + (80 + 2) = 300 + (20 + 80)+ (4 + 2) = (300 + 100) + 6 = 400 + 6 = 406 umzekelo: Dibanisa amanani aneedijithi ezintathu kunye naneedijithi ezintathu	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-999 • Thabatha ku- 999 • Sebenzisa iisimboli ngokufanelekileyo. (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuphela kuma- 30	• Dibanisa ukuya kuma kuma- 100-100 • Thabatha ukuya kuma ku- 100-100 • Sebenzisa isimboli ngokufanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamashumi ukuya kuma 30	Yahlula omabini amanani ngokweedijithi zawo 323 + 136 =☐ 323 + 136 =(300 + 20 + 3) + (100 + 30 + 6) = (300 + 100) + (20 + 30) + (3 + 6) = 400 + 50 + 9 = 459 • Dibanisa (ngokwahlula la manani aza kudityaniswa) Abafundi mabohlule amanani ngendle la eyenza kube lula kubo ukubala.Lento ithetha ukuba baya kuyenza ngeendlela ezahlukileyo. Umzekelo: 324 + 82 = ☐ 324 + (40 + 40 + 2) 324 + 40→ 364 + 40→ 404 + 2 = 406 Umzekelo: Dibanisa amanani aneedijithi ezintathu kunye namanye aneedijithi ezikwantathu Adding 3 digit with 3-digits 323 + 136 = ☐ 323 + 136 = 323 + (100 + 30 + 6) = (323 + 100) + 30 + 6 = (423 + 30) + 6 = 453 + 6 = 459 Ukubala ngama-40 u- 324 kungenziwa lula ngamashumi -oo10. • Ukuthabatha • Ukwahlula amanani omabini Inani elineedijithi ezintathu uthabathe kulo elineedijithi ezimbini Umzekelo: 389 – 137 = ☐ 389 – 137 = (300 + 80 + 9) – (100 + 30 + 7) = (300 – 100) + (80 – 30) + (9 – 7) = 200 + 50 + 2 = 252	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-999 • Thabatha ku- 999 • Sebenzisa iisimboli ngokufanelekileyo. (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuphela kuma- 30	• Dibanisa ukuya kuma kuma- 100+100 • Thabatha ukuya kuma ku- 100+100 • Sebenzisa isimboli ngokufanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamashumi ukuya kuma 30	• Ukuthabatha ngokwahlula inani elinye Umzekelo: 389- 137 = ☐ 389 – (100 + 30 + 7) 389- 100 → 289- 30 → 259- 7 = 252 • Ukusebenzisa ukwahlula kabini ngokulinganayo (ukwenza iziqingatha) ukwahlula amanani Umzekelo 225 + 16 = 225 + 8 +8 = (225 + 8) + 8 = 233 + 8 = 241 • Bala ngokongeza nokubala ubuya umva 305 + 298 = ☐ Ukubala ngokongeza ngemivo ukusuka kuma-298 yiyona ndlela ifanelekileyo kuba amanani amelene. • Chonga ukusondeza kuphindo kabini Umzekelo: 145 + 146 = 191 Cacisa ukuba kuphindwe kabini i- 145 udibanise u -1 okanye kuphindwe kabini i-146 uthabathe u- 1. 145 + 145 + 1 (100 + 40 + 5) + (100 + 40 + 5) + 1 (100 + 100) + (40 + 40) + (5 + 5 + 1) 200 + 80 + 11 280 + 11 280 + 10 + 1 290 + 1 291	

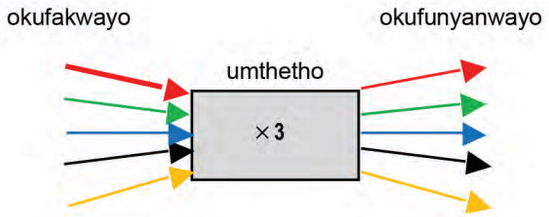
UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-999 • Thabatha ku- 999 • Sebenzisa iisimboli ngokufanelekileyo. (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuphela kuma- 30	• Dibanisa ukuya kuma kuma- 100-100 • Thabatha ukuya kuma ku- 100-100 • Sebenzisa isimboli ngokufanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamashumi ukuya kuma 30	• Tshintshela inani kwisiphinda phindi se-10 uze uthabathe okanye udibanise imivo. • Bala usiya phambili okanye ubuya mva usondeza kwishumi elikufutshane Umzekelo: 288 + 11 288 + 10 = 298 298 – 1 = 297 Umzekelo: 188 + 19 188 + 20 = 208 208 – 1 = 207 **Ukukhulisa nokuqhelisa ukusebenzisa izakhono zokudibanisa nokuthabatha.** Abafundi mabafundiswe ukusebenzisa izakhono ezithile zokubala. • Ukuziqhelanisa neebhondi uphele kuma-30 • Dibanisa uthabathe iziphinda phindi ze- 10 Abafundi mabanikwe ithuba lokubala ngolu hlobo besebenzisa manani ukuya kuma-400: Udibanise nokuthabatha izibini zeziphinda phindi ze-10 ade aqabele ngaphaya kwama-100. 40 + 70 70 + 80 120 – 30 150 – 60 Udibanise uthabathe u-10 kulo naliphi inani elineedijithi ezimbini okanye ezintathu kuquka kuqatyelwe ngaphaya kwamakhulu Umzekelo: 65 + 10 124 + 10 326 – 10 358 - 10	

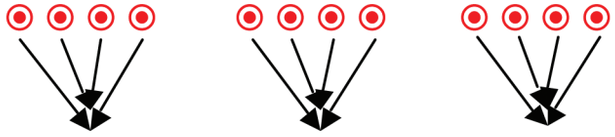
UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-999 • Thabatha ku- 999 • Sebenzisa iisimboli ngokufanelekileyo. (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuphela kuma- 30	• Dibanisa ukuya kuma kuma- 100-100 • Thabatha ukuya kuma ku- 100-100 • Sebenzisa isimboli ngokufanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamashumi ukuya kuma 30	Adibanise okanye athabathe inani elinedijithi enye lingaqabelanga kumashumi. Umzekelo: 234 +5 475 + ☐ = 479 768 – 4 Adibanise athabathe kwiziphinda phindi ze-100. Umzekelo: 200 + 4 300 + 3 300 - 6 400 - 5 Baqalisa ukudibansa bathabathe isibini sika- 100. 100 + 100 100 + 200 Abafundi mabanikwe amathuba okuziqhelanisa ukusebenza ngeepateni ezivela ekudibaniseni nasekuthabatheni…. Ukuba ndiyazi ukuba 1+ 1 = 2 Ngoko ke ngubani u: 10 + 10 100 + 100 **Ukuqinisekisa iziphumo zezibalo** Ukugweba ukufaneleka kwezisombululo Abafundi kufuneka bafundiswe ukugweba ukufaneleka kwezisombululo Enye indlela yokwenza oku kukuba bafundi baqikelele iziphumo zezibalo zabo phambi kokuba babale. Xa bedibanisa asondeleleneyo umzekelo u- 145 no 146,abafundi bangasebenzisa ukuphinda-phinda kabini njengendlela yokuqikelela iimpendulo zabo.	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa ukuya kuma-999 • Thabatha ku- 999 • Sebenzisa iisimboli ngokufanelekileyo. (+, –, =, ☐) • Ziqhelanise neebhondi zamanani ukuphela kuma- 30	• Dibanisa ukuya kuma kuma- 100 000 • Thabatha ukuya kuma ku- 100 000 • Sebenzisa isimboli ngokufanelekileyo (+, –, =, ☐) • Ziqhelanise neebhondi zamashumi ukuya kuma 30	**Ukuqinisekisa izisombululo** Abafundi kufuneka bazi ukuba bayakwazi ; • ukuqinisekisa izibalo zokudibanisa ngokuthabatha. • Umzekelo: Ukuba 236 + 18 = 254; ngoko ke 254 – 18 = 236; baze • ukuqinisekisa izibalo zokuthabatha ngokudibanisa. Umzekelo 384 – 48 = 336, ngoko ke336 + 48 = 384. Ukusebenzisa ukusebenza ngokuguqula (ukubala ngokuphendulela) ukuqinisekisa izisombululo yenye yezizathu zokufundisa ukudibanisa nokuthabatha kunye	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.14 **Ukudiba nisa ngokuphinda phindiweyo okukhokelela ekuphinda phindo.**	• Phinda-phinda amanani ukusuka ku-1 ukuya ku- 10 ngo 2, 3, 4, 5, 10 uphele ngo 99 • Sebenisa imiqondiso efanelekileyo (x, =, ☐)	• Phinda-phinda 2, 4, 5, 10, 3 to a total of 50 • Sebenzisa imiqondiso efanelekileyo (x, =, ☐)	Kule kota abafundi baqhubekeka: • Ukusebenzisa nokuqonda ulwimi lokuphinda-phinda; • ukubonisa ukuphinda phinda njengocwangciso oluthile; • ukusebenzisa imiqondiso efanelekileyo ukutolika izivakalisi zamanani; • ukuqonda ukuba uphindo kabini lungaboniswa kusetyenziswa isimboli y yophindaphindo; • ukuziqhelanisa nokuqonda ukuba uphinda-phindo lungenziwa nangeyiphi indlela (uphawu lolungelelwano-commutative property) • ukusebenzise umgca manani ukubonisa izibalo zokuphinda-phinda kwaye babe nakho ukuchaza indlela oluboniswe ngayo kumgca (umz. Ukuba imitsi kumgca manani ilubonisa njani uphinda phindo kabini). • ukucengceleza itheyibhile yophinda phindo. Abafundi bangaqhubekeka ukusebenzisa ucwangciso oluthile ukubhala bhala izivakalisi zamanani zokudibanisa okuphindiweyo kunye nophinda phindo zokuphinda phinda kunye nezivakalisi zamanani. Umzekelo: Bhala izivakalisi zamanani zokudibanisa ezibini nezophinda phindo ezibini zocwangciso oluthile.  Imifanekiso esetyenziswe ukuchaza ukuphinda-phinda ingandiswa Itheyibhile yokuphinda-phinda ingafundiswa. Umzekelo:	

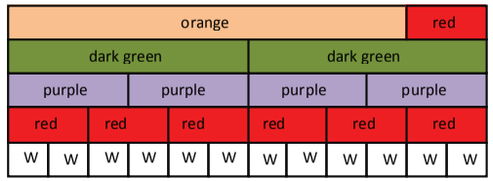
×	2	3	4	5	6	7	8	9	10
1									
2									
3									
4									
5									

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.14 **Ukudiba nisa ngokuphinda phindiweyo okukhokelela ekuphinda phindo.**	• Phinda-phinda amanani ukusuka ku-1 ukuya ku- 10 ngo 2, 3, 4, 5, 10 uphele ngo 99 • Sebenisa imiqondiso efanelekileyo (x, =, ☐)	• Phinda-phinda 2, 4, 5, 10, 3 to a total of 50 • Sebenzisa imiqondiso efanelekileyo (x, =, ☐)	Ukucengceleza itheyibhile kungenziwa. Akuyo mfuneko ukuba abafundi bayazi le theyibhile kwibanga lesi-3.Ugqaliselo lukulwimi oluvumela umfanekiso ngqondweni wokwahlula ngokwamaqela. **Umzekelo:** • Isibini esinye senza isibini • Izibini ezibini zenza isine • Izibini ezithathu zenza isithandathu • Izibini ezine zenza isibhozo Ukucengcengceleza ngolu hlobo kuxhasa okuphuhliswe kudibaniso oluphindiweyo. Ukucengceleza kufuneka kuxhaswe ngokwalatha kubalo olucwangcisiweyo okanye kumgca manani. Abafundi bangasebenzisa Learners can also use flow diagrams to record multiplication facts e.g. Example Ukuyibiza ngolu hlobo kubethelela ulwazi obelufunyenwe ngoku bekufundwa ukubala ngaokuphinda phinda. Ukuwacula la maculo makuncediswe ngokukhomba ezi ndawo lubhekisa kuzo kumgca manani kwanendlela ekulandelellaniswa ngayo. Abafundi bangasebenzisa umzobo weflow ukurekhodisha uphinda phindo. Umzekelo  	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.15 Ukwahlula	• Yahlula amanani ukuya ku- 99 ngo- 1, 2, 3, 4, 5, 10 • Sebenzisa imiqondiso efanelekileyo (÷, =, ☐)	• Yahlula amanani ukuya ku- 50 ngo 2, 4, 5, 10, 4 • Sebenzisa imiqondiso efanelekileyo (÷, =, ☐)	Kule kota yesibini abafundi kufuneka baqhubekeke ukuziqhelanisa kwaye baqinisekise ukusebenzisa uphawu lokwahlula. Kufuneka baqonde ukuba isivakalisi samanani sokwahlula singachaza imeko equka ukwahlula ngokwamaqela okanye ukwaba ngokulinganayo. **Yahluke ngantoni le kota kweyokuqala ?** Kule kota abafundi kufuneka babe nako ukubhala nokuchaza izivakalisi zokwahlulahlula ezihambelanayo: Abafundi kufuneka babe nako ukurekhodisha oku kulandelayo: 30 ÷ 6 = ☐ kwaye no 30 ÷ 5 = ☐ Abafundi kufuneka bakhulise iindlela zabo zokubhala izibalo zabo zokwahlula Izibalo zokwahlula. Umzekelo: **Ukuthabatha okuphindiweyo** Ukuze abafundi babale i- 12 – 4 =12 – 4 = ☐ ngokufezekileyo kufuneka basebenzise imifanekiso yabo ukubonisa ukwahlula ngokwamaqela okanye ukwaba ngokulinganayo.  Iqela elinye lesine 4 Elinye iqela lesine 4 Elinye iqela lesine Yaba iqela elinye loo- 4 emva koko elinye iqela lesibini loo- 4 kunye nelinye iqela lesithathu loo- 4 12- 4 → 8 – 4 → 4- 4 = 0 Njengoko elinye iqela loo-ne libekwe ecaleni elinye abafundi bangathabatha iqela lokuqala loo-4 baze babale ukuba bangaphi ababashiyileyo . Baqhubeka besenza oku bade babe bathabathe konke. Kweli banga lesithathu kugxininiswa ekwahluleni ngokwamaqela kunokwahlula ngokulinganayo. Ukwenza ukuthabatha okuphindiweyo ngolu ludwe lwenani lufanelekile. Abafundi kuyakufuneka banikwe izivakalisi zamanani zokwahlula hlula ezivumela ukuba benze ukuthabatha okuphindiweyo.Ukwenza ukuthabatha okuphindiweyo kwama 96 ÷ 3 ayiyo ndlela okanye ubuchule obufanelekileyo kuba uludwe lwenani liphezulu kakhulu. Ekuqaleni kunganzima kubafundi ukubona ukuba ziziphi izivakalisi zamanani (iloluphi uludwe lwamanani)ezilungele ukwenza ukuthabatha okuphindiweyo.	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.16 **Izibalo zentloko**	**Ikhonsepthi yamanani: uludwew-999** • Landelelanisa iseti yamanani akhethiweyo. Thelekisa amanani ukuya ku- 999 uze uxele ukuba liliphi elingaphantsi okanye elingaphezulu ngo 1,2,3,4,5 ukuya ku- 10. **Khumbula ngokukhawuleza:** • Ukudibanisa nokuthabatha ukuya kuma- 20 • Dibanisa okanye uthabathe iziphinda-phindi ze-10 ukusuka kwi- 0 ukuya kwi- 100 • Amanqaku okudibanisa nokuthabatha e: • etheyibhile yeziphinda phindi zika-2: • itheyibhile yokuphinda-phinda ka-2 ukuya ku - 2 x 10 • itheyibhile yokuphinda-phinda ze- 10 ukuya ku - 10 x 10	**Ingqiqo yamanani:** uludwe-**500** • Landelelanisa iseti yamanani akhethiweyo.Uludwe: ama -500 • Thelekisa amanani ukuya kuma-500 uze uxele ukuba liliphi elingaphezulu okanye elingaphantsi ngo 1,2,3,4,5 ukuya ku-10 **Khumbula ngokukhawuleza:** • Khumbula amanqaku okudibanisa nokuthabatha ukuya ku-20 • Dibanisa uthabathe iziphinda phindi ze- 10 ukususka kwi- 0 ukuya kw-i100	**Ingqiqo yamanani** Imizekelo yemibuzo enokubuzwa: **Amagama amanani nemiqondiso manani** Phakamisa ikhadi okanye ubhale phantsi igama lenani. Chonga umntwana omakabhale inani elifana negama lenani. **Ngaphezulu okanye mbalwa** Yiyiphi e • 1 mbalwa kunama- 500 • 1 ngaphezulu kunama -499 • 2 ngaphezulu kunama -502 • 2 mbalwa kunam- 405 • 3 ngaphezulu kunama- 477 • 3 mbalwa kunama 251 • 4 mbalwa kunama185 • 10 ngaphezulu kunama 490 • 10 mbalwa kunama 660 Ngubani unombumba wesihlanu kwi-alfabhethi? Yeyiphi inyanga yethoba yonyaka? **Ukulandelelanisa nokuthelekisa** Leliphi elingaphezu kwelinye: 621 okanye 671? Nika inani eliphakathi ko 154 no 159. Amanqaku okudibanisa nokuthabatha: Jonga kwikota yokuqala. Dibanisa okanye uthabathe iziphinda phindi ze-10 ukusuka- 100. Xelaukuba mangaphi amanqanaba amawathathwe kumgca manani ukusuka -30 ukuya kwi- 100 okanye ukusuka kwi- 100 ukuya kuma-50. Khethaizibini zamakhadi ukwenza i- 100.	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.16 **Izibalo zentloko**	**Ubuchule/iindlela zokubala** Sebenzisa la maqhinga okubala alandelayo: • Beka inani elikhulu ukuze ubale ngokongeza nokubuya umva. • Umgca manani • Ukuphinda-phinda kabini nokohlula kabini ngokulinganayo (ukwenza iziqingatha) • Ukwakha nokwahlula amanani • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha • Sebenzisa ulwalamano phakathi kokuphinda-phinda nokwahlula hlula	**Ubuchule/iindlela zokubala ngentloko** Sebenzisa obu buchule bokubala bulandelayo: • Beka eli nani likhulu ukuze ubale ngokongeza nokubuya umva • Umgca manani • Ukuphinda-phinda kabini nokwahlula kabini ngokulinganayo • Ukwakha nokwahlula • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha	Faka amanani awenza i- 100 kwibhokisi ☐ + 70 = 100 20 + ☐ = 100 100 – ☐ = 90 100 – 40 = ☐ **Ubuchule/iindlela zokubala:** Jonga kwiKota yoku-1	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.17 **Amaqhezu aqhelekileyo**	• Sebenzisa uze uxele amagama amaqhezu kwiimeko eziqhelekileyo. ezikuquka isiqingatha, ikota, izibhozo,izithathu, izithandathu izihlanu. • Ukunakana amaqhezu azotyiweyo • Ukuqala ukunakana ukuba iziqingatha ezi- 2 okanye izithathu ezintathu zenza into enye epheleleyo yaye isiqingatha neekota ezimbini ziyalingana. Bhala amaqhezu njenegesiqingatha, okanye isithathu ezibini		Kule kota abafundi baqhubekeke uku: • sunda ukubiza amaqhezu ngamagama; • Sebenzisa la magama kwiimeko ngeemeko; • chonga iqhezu; • qalisa ukuqonda ukuthelekisa ubungakanani bamaqhezu; • fumana amaqhezu ezinto; kwanoku • funda ngamaqhezu alinganayo. Kule kota abafundi bathelekisa amaqhezu. • besebenzisa izicwili zamaqhezu okanye iirod zeCuisenaire Umzekelo**:** Le modeli ilungele ngakumbi ukufundisa amagama amaqhezu kwanokuwathelekisa. Umzekelo:   Bonisa udonga lwamaqhezu olubonisa into epheleleyo, isiqingatha, isithathu eshumini, ikota, isihlanu eshumini, isithandathu eshumini, isibhozo eshumini, isinye eshumini. Eyona ndlela yeyokuba abafundi basebenze ngezixhobo eziphathekayo bangathelekisi amaqhezu besebenzisa udonga lwamaqhezu. Kufuneka banikwe ithuba lokusebenza ngezinto ngokumana bezilinganisa.	

UMXHOLO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
1.17 **Amaqhezu aqhelekileyo**	• Sebenzisa uze uxele amagama amaqhezu kwiimeko eziqhelekileyo. ezikuquka isiqingatha, ikota, izibhozo,izithathu, izithandathu izihlanu. • Ukunakana amaqhezu azotyiweyo • Ukuqala ukunakana ukuba iziqingatha ezi- 2 okanye izithathu ezintathu zenza into enye epheleleyo yaye isiqingatha neekota ezimbini ziyalingana. Bhala amaqhezu njenegesiqingatha, okanye isithathu ezibini		Ungababuza le mibuzo: • Zingaphi iziqingatha ezilingana nento epheleleyo? • Zingaphi iikota ezilingana nento epheleleyo? • Zingaphi iiikota kwisiqingatha? Nika abafundi ithuba lokubeka izicwili zamaqhezu esinye ecaleni kwesine ukufumana iimpendulo. • Zingaphi izithathu ezilingana nento epheleleyo? • Zingaphi izithandathu ezilingana nesinye kwisithathu? • Zingaphi izithatndathu ezilingana nezisiqingatha? • Yiyiphi enkulu kunenye isiqingatha okanye isithathu eshumini? • Yiyiphi enkulu kunenye izithathhu ezibini okanye iikota ezintathu?	

IBANGA 3 IKOTA 2 2. IIPATENI, ISIPHUMO SENTSEBENZISWANO YAMANANI NE -ALJIBRA				
ISIHLOKO	**IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA**	IXESHA
2.1 **Ilpateni zejiyometri**	**Kopa, eyandisa uze uchaze** Kopa, yandisa uze uchaze ngamagama • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula . **Wenza eyakhe ipateni** Yenza eyakhe ipateni yejiyometri • ngezinto eziphathekayo • ngokuzoba imigca, iimilo okanye izinto **Iipateni ezisingqongileyo** Chonga uchaze ngamagama uze ukope iipateni zejiyometri • kwindalo • kwizinto zale mihla • kwizinto zamagugu enkcubeko yethu	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze ngamagama. • Iipateni ezilula made with physical izinto • Iipateni ezilula ezenziwe ngemizobo yemigca, iimilo okanye izinto Uludwe lweepateni: Iipateni ezilula apho iimilo okanye iqela leemilo ziphinda phindwayo ngendlela efana twatse. Iipateni apho inani okanye ubungakanani bemilo kwinqanaba ngalinye butshintsha ngendlela enokuqikelelwa. Umzekelo ukunyusa ipateni rhoqo. **Yenza iipateni zakhe** Yenza ezakhe iipateni zejiyometri • Ngezinto eziphathekayo • Ngokuzoba imigca, iimilo okanye izinto.	Qhubekeka ukunika abafundi uludwe lweepateni ezifanayo nezo zeKota yoku-1, kodwa bandakanya nee milo zintsha nezinto kwiipateni njengoko zisenziwa kwisihloko seMilo neSithuba. Jonga amanqaku eepateni ekota yoku-1 kunye namanqaku eSithuba neMilo eKota yesi- 2. Vumela abafundi ukuba bakope kuqala, baze bandise ukuze bagqibele ngokuchaza iipateni. Xa kungoku bamele ukuba bakwazi ukuchaza iipateni bengancediswa ngamibuzo ikhokelayo. Qhubekeka ugqalisa ekukhuliseni ulwimi abaza kulisebenzisa ukuchaza iipateni.	ISIFUNDO ESINYE

ISIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA
2.2 **Iipateni zamanani**	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze ulandelelwano olulula lwamanani ukuya ubuncinane kwi- 1 000. **Benza ezabo iipatheni** Benza ezabo iipateni zamanani.	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze ulandelelwano olula lwamanani ukuya ubuncinane kwi- 150. Ukulandelelanisa kufuneka kubonakalise ukubala usiya phambili nokubala ubuya umva: • Ngoo-1 ukusuka kulo naliphi na inani phakathi kwe- 0 nama- 500 • Ngama-10 ukusukela kuso nasiphi na isiphindi se- 10 pahakathi kwe- 0 nama-500 • Ngezi-5 ukusukela kuso nasiphi na isiphindi sika- 5 phakathi kwe- 0 nama- 500 • Ngezi-2 ukusukela kuso nasiphi na isiphindi sika 2 phakathi kwe- 0 nama- 500 • ngezi-3 ukusukela kuso nasiphi na isiphindi sika- 3 phakathi kwe-0 nama- 500	Jonga kwikota yokuqala, Yandisa uludwe lwamanani kunye nokubala okulandelelanisiweyo ngolu hlobo; • ngoo-1 ukusuka kulo naliphi inani phakathi kwe- 0 nama- 500 • ngama-10 ukusukela kuso nasiphi na isiphinda phindi se- 10 phakathi kwe- 0 nama- 500 • ngoo-5 ukusukela kuso nasiphi na isiphindi sika 5 phakathi kwe- 0 nama- 500 • ngezi-2 ukusukela kuso nasiphi na isiphindi sika 2 phakathi kwe- 0 nama- 500 • Ngama-100 ukusukela kuso nasiphi na isiphindi se- 100 ukuya ebuncincini kwi- 1 000 • Ama-50 ukusukela kuso nasiphi na isiphinda phindi sama- 50 ukuya ebuncincini kwi- 1 000 • Ngoo-3 ukusukela kuso nasiphi na isiphindi sika- 3 phakathi kwe- 0 nama 500 • Ngoo-4 ukusukela kuso nasiphi na isiphindi sika- 4 phakathi kwe- 0 nama-500 Sebanzisa izinto, imifanekiso, itheyibhile nemizobo ebonisa ukulandelelana ukuncedisa ukuxhasa utshintsho lwabafundi ukusuka ekubaleni ngokuqakatha nokulandelelanisa ukuya kuphinda phindo ngama 10, 5, 2, 4. Ncedisa abafundi ukusebenzisa iipateni abasele bezazi njengesiseko sokuziqhelanisa nokufunda ezinye iipateni umzekelo. • ukulandelelanisa izibini ukwenza isiseko sokulandelelanisa oo 4; kunye • nokulandelelanisa izihlanu ukwenza isiseko sokulandelelanisa ama- 50.	3 lezifundo

ISIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 1	AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDA	IXESHA
2.2 **Iipateni zamanani**	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze ulandelelwano olulula lwamanani ukuya ubuncinane kwi- 1 000. **Benza ezabo iipatheni** Benza ezabo iipateni zamanani.	• nge-4 ukusukela kuso nasiphi na isiphindi-sika 4 phakathi kwe- 0 nama- 500 • ngama-50,ngama-100 ukuya kuma ebuncinaneni kwi-1000		3 lezifundo

GRADE 3 IKOTA 2 3. ISITHUBA NEMILO (IJIYOMETRII				
IZIHLOKO	**IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA:**	**IIKHONSEPTHI NEZAKHONO ZEKOTA YE- 2**	**AMANQAKU NGEENGCACISO OOKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (Kwizifundo ezithatha iyure nemizuzu engama-24)
3.1 **Indawo -bume, ukufumana indawo, imbonakalo**	**Indawo-bume nembonakalo** • Tshatisa imbonakalo yezinto esizibona imihla ngemihla . • Nika igama lento eboniswe ngendlela engaqhelekanga • Funda, utolike uzobe iimephu okanye indlela imiphezulu yengqokelela yezinto ebonakala ngayo. • Khangela izinto kwimephu. **Indawo bume nezalathiso** • Landela izalathiso ukujikeleza apha eklasini nasesikolweni • Nika iizalathiso yokujikeleza uvelele onke amacala eklasi okanye isikolo. • Landela izalathiso ukusuka kwindawo ethile ukuya kwenye uncediswa yimephu.	**Indawo-bume nembonkalao** • Tshatisa imbonakalo yezinto esizibona imihla ngemihla . • Nika igama lento eboniswe ngendlela engaqhelekanga **Indawo namacala oya ngakulo** • Landela izalathiso ukujikeleza apha eklasini nasesikolweni. Nika iizalathiso yokujikeleza uvelele onke amacala eklasi okanye isikolo.	**Yintoni eyahlukileyo kwibanga lesibini?** • Akukho mfuneko yakugqalisa ekuphuhliseni ulwimi lwendawo njengoko oku bekwenziwe kwibanga loku-1 nele-2. • Landela izalathiso ezicacileyo.njengokujikeleza apha esikolweni kunokujikeleza eklasini. • Nika imiyalelo yokuya kwiindawo ezithile eklasni nasesikolweni. • Iimephu nendlela imiphezulu yengqokelela yezinto ebonakala ngayo. Kulapho iKota yesi-3 igqalise khona. **Ugqaliso olucetyiswayo lweKota yesi- 2** Kwikota- 2,kucetyiswa ukuba kweli banga kuhlaziywe umsebenzi kuze kongezwe oku kulandelayo; • Ukuchonga izinto kwimifanekiso ebonakalisa imbonakalo engaqhelekanga yaloo nto .kwanoku; • Landela iizalathiso yokuya kwiindawo ezingaphandle kweklasi. Qala ngokuvavanya asele bekwazi abafundi ngendawo-bume nokufumana indawo apho into ikhoyo.. **Indawo-bume nezalathiso** • Ukulandela izalathiso Oku makwenziwe ngemisetyenzana eyenziwayo apho abafundi baza kuhamba ngokulandela imiyalelo. Kwibanga lesithathu abafundi banganikwa izalathiso ngomlomo okanye zibhalwe. - ukujikeleza eklasini umz. “Yiza ngaphambili eklasini”; “yima ngakwisitulo sakho”; “tsiba ngaphaya komgqomo”; noku - jikeleza apha eklasini okanye esikolweni okanye banikwe izalathiso ezidana, “yiya ngaphaya komnyango, ujike kwisandla sasekhohlo uhle ngepaseji, unqumle ibala, uphi ke ngoku?”	

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA:	IIKHONSEPTHI NEZAKHONO ZEKOTA YE- 2	AMANQAKU NGEENGCACISO OOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (Kwizifundo ezithatha iyure nemizuzu engama-24)
3.1 **Indawo -bume, ukufumana indawo, imbonakalo**	**Indawo-bume nembonakalo** • Tshatisa imbonakalo yezinto esizibona imihla ngemihla . • Nika igama lento eboniswe ngendlela engaqhelekanga • Funda, utolike uzobe iimephu okanye indlela imiphezulu yengqokelela yezinto ebonakala ngayo. • Khangela izinto kwimephu. **Indawo bume nezalathiso** • Landela izalathiso ukujikeleza apha eklasini nasesikolweni • Nika iizalathiso yokujikeleza uvelele onke amacala eklasi okanye isikolo. • Landela izalathiso ukusuka kwindawo ethile ukuya kwenye uncediswa yimephu.	**Indawo-bume nembonkalao** • Tshatisa imbonakalo yezinto esizibona imihla ngemihla . • Nika igama lento eboniswe ngendlela engaqhelekanga **Indawo namacala oya ngakulo** • Landela izalathiso ukujikeleza apha eklasini nasesikolweni. Nika iizalathiso yokujikeleza uvelele onke amacala eklasi okanye isikolo.	• Nika imiyalelo. Abanye abafundi baya kufumana kulula ukunika izalathiso ngokulinganisa oko bakutshoyo kwizalathiso obanike yona. Kwabanye abafundi kuyanceda ukunika isikhokelo ngezona mpawu eziphambili zezalathiso. - Xela ukuba uyaqhubeka okanye uya kwicala ojonge ngakulo okanye uyajika. - Xela ukuba ingaba uhamba ngqo, ujika ngasekhohlo okanye ujika ekunene. - Nika iindawo oza kufuneka ujike kuzo umz. Xa ufika ngakwi-ofisi kamabhalana jika ngasekhohlo.; uze - uxele ukuba uhambe kangakanani .Zininzi iindlela zokuxela ukuba kuseza kuhanjwa kangakanani na. umz. • Hamba iinyawo ezi- 30 okanye hamba iimitha ezili- 10; • hamba ugqithe iiklasi ezi-3, okanye uhambe ude ugqithe iklasi ka Mnu.Radebe; okanye • hamba umzuzu omnye. **Indawo-bume nembonakalo** Kwibanga- 3 abafundi mabanikwe imisetyenzana eza kubenza batshatise iiimbonakalo ezahlukeneyo malunga nabakubonayo ngokwecala abavele ngakulo. (imbonakalo yangaphezulu, emacaleni, ngaphambili) kwizinto zemihla ngemihla. Oku kuyakubanceda abafundi ukutolika imizobo yezinto zejiyometri eyenziwe kumacala ohlukileyo. Abafundi mabanikwe imisebenzi eyenza ukuba bachonge izinto kwimifanekiso ezotyiweyo okanye iifoto ezithathwe kwimbonakalo eqhelekileyo.umz. umphezulu wenkomo okanye umphambili lwebrashi yokuhlamba amazinyo.	2 lizifundo

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA:	IIKHONSEPTHI NEZAKHONO ZEKOTA YE- 2	AMANQAKU NGEENGCACISO OOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (Kwizifundo ezithatha iyure nemizuzu engama-24)
3.2 **Izinto ezinokwakheka okungu- 3-D**	**Uludwe lwezinto** Ukunakana athiye izinto ezinokwakheka kuka-3-D eklasini nakwimifanekiso. • Iimilo zebhola, (izinto engqukuva) • Imilo zebhokisi (iprizimu) • iisilinda • Iiphiramidi • Iikhowuni **Iimpawu zeemilo** Chaza, hlela uthelekise izinto ezinokwakheka kuka-3-D malunga ne; • Iimila ezinokwakheka kuka2-D ezenza ubuso bezinto ezinokwakheka kuka-3-D • Ezithe tyaba nezingamagophe.	**Uludwe lwezinto** Ukunakana athiye izinto ezinokwakheka kuka-3-D eklasini nakwimifanekiso. • Imilo zebhola, (izinto ezingqukuva) • Imilo zebhokisi (iprizimu) • iisilinda **Iimpawu zeemilo** Chaza, hlela uthelekise izinto ezinokwakheka kuka-3-D malunga ne; • Iimila ezinokwakheka kuka2-D ezenza ubuso bezinto ezinokwakheka kuka 3-D • Ezithe tyaba nezingamagophe.	**Yintoni eyahlukileyo kwibanga lesibini?** • Abafundi abasajongi kuphela ekubeni izinto ziyaqengqeleka okanye; ziyatshebeleza, baqwalasela ukuba imiphezulu ithe tyaba okanye inamagophe. • Apho imiphezulu imthebelele abafundi mabajonge ukuba loo miphezulu izizikwere, ingamaxande, oonxantathu okanye izangqa. • Iikhowuni neephiramidi ziyaqala ukufundiswa (ezi zinganikwa ingqwalasela kwikota yesi-3 neye- 4). **Okucetyiswayo kwikota- 2** Abafundi mabasebenze kwangeziya zinto bebezisebenzisa kwibanga lesi-2 • Iibhola nezinto ezikumila kunjengayo; • Isilinda nezinye izinto ezikumila kunjengayo; kunye nee • bhokisi nezinye izinto ezimile okwebhokisi ezifana nebhokisi esikwere Abafundi mabagqale kwizinto ezintsha ezifana nee (iphiramidi neekhowuni) kwikota 3 neye- 4. **Ukunakana nokuthiya amagama iibhola(izinto ezingqukuva) iibhokisi (iprizimu) neesilinda** Abafundi baqhubeka ukuxela amagama, hlela nokwahlula izinto ngokwamaqela. Abafundi mabanikwe uludwe lwezinto amabasebenze ngazo. • Izinto ezimile njengebhola (ezingqukuva), umz. Iibhola, amabhastile, iiorenji anobungakanani obahlukileyo njalo njalo; • Izinto ezimile njengeprizimu, umz. iibloko, izitena, iibhokisi ezinobungakanani obahlukileyo umz. eyematshisi, ezesiriyeli, ezeti, ezentlama yokuxukuxa; • Izinto ezimile njengesilinda, kuquka iisilinda ezinde nezibhityileyo umz. Imibhobho emile njengesilinda, imibhobho eyimiphakathi yamaphepha okusula neesilinda ezimfutshane ezibanzi umz. Itoti yepolishi netoti yesnuff njalo njalo. Abafundi bangafumana izinto ezimile njengebhola (izinto engqukuva), okanye ezimile njengebhokisi (iprizimu) okanye ezimile njengesilinda xa benikwe ingqokelela yezinto. Abafundi mabafune okanye babonise izinto ezimile njengebhokisi (iprizimu) eklasini. umz. “itoti yeetumata ezimile njengesilinda”.	3 izifundo

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA:	IIKHONSEPTHI NEZAKHONO ZEKOTA YE- 2	AMANQAKU NGEENGCACISO OOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (Kwizifundo ezithatha iyure nemizuzu engama-24)
3.2 **Izinto ezinokwakheka okungu- 3-D**	**Imisebenzi emakugqalwe kuyo** Mabaqwalasele baze bakhe izinto ezinokwakheka kuka 3-D besebenzisa izinto eziphathekayo ezinjengo kusika iimilo ezokwakheka kuka 2-D, udongwe, iimicinga yokuvungula, imibhojana yokusela iziselo nezinye izinto zejiyometri ezinokwakheka kuka-3-D	**Imisebenzi emakugqalwe kuyo** Mabaqwalasele baze bakhe izinto ezinokwakheka kuka 3-D besebenzisa izinto eziphathekayo ezinjengo kusika iimilo ezokwakheka kuka 2-D, udongwe, iimicinga yokuvungula, imibhojana yokusela iziselo nezinye izinto zejiyometri ezinokwakheka kuka-3-D **Uludwe lweemilo** • izangqa • oonxantathu • izikwere • amaxande **Iimpawu zemilo** Chaza, hlela uze uthelekisa iimilo ezinokwakheka kuka-2-D malunga ne: • milo • amacala athe tse • amacala angqukuva	Ngexesha lokuzisebenzela bodwa abafundi bangaqhubekeka besenza iibhola neesilinda kunye nezinto ezikwimilo yebhokisi ezifana ne (iprizimu) ezenziwe ngomdongwe. **Ukugqalisela kwiimpawu zezinto ezinokwakheka kuka-3-D: ezithe tyaba okanye ezinamagophe, iimilo zemiphezulu ethe tyaba** • Ukwakha izinto ezinokwakheka kuka- 3-D obunye. Abafundi basebenzisa amaqweqwe asikwe azizikwere okanye amaxande ukwenza ibhokisi. Oku kugqalisa abafundi kwimilo ethe tyaba yebhokisi. Abafundi bathi bajonge kwimiphezulu ethe tyaba kwiprizimu nakwisilinda baze bayichaze ukuba ingaba ingqukuva, isikwere okanye ilixande. • Imiphezulu ethe tyaba okanye enamagophe Ukwakha ibhokisi (iprizimu) inceda abafundi ukuba bagqalise kwizinto ezithe tye. Abafundi bangajonga ukuba ingaba zonke izinto zejiyometri zinemiphezulu ethe tyaba. Kumabanga 1 no 2, abafundi bahlule izinto zejiyometri ngokokuba ingaba ziyaqengqeleka na okanye ziyatshebeleza. Oku kulungisa abafundi ukuba bagqale ekubeni ingaba imiphezulu yezinto ithe tyaba (izinto ezitshebelezayo) okanye inamagophe (izinto eziqengqelekayo). Iisilinda zinemiphezulu ethe tyaba ize eminye ibenamagophe. **Imisebenzi ebhalwayo** Nangona owona msebenzi wezinto ezinokwakheka kuka-3-D usenziwa ngokwenza,umsebenzi mawubethelelwe ngemisebenzi ebhalwayo. Kwibanga lesi-3 makugqalwe ekuxeleni nasekuthetheni ngemiphezulu yezinto. Akulindelekanga ukuba abafundi babale inani lezikwere, amaxande okanye oonxantathu okanye imiphezulu engqukuva into enayo. **Ulwimi** Ulwimi olululuncedo ekukwazini ukuthetha ngezinto ezinokwakheka kuka 3-D: umphezulu, tyaba, inamagophe, iibhokisi, iibhola, iisilinda	3 izifundo

IZIHLOKO	IINGQIQO NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA:	IIKHONSEPTHI NEZAKHONO ZEKOTA YE- 2	AMANQAKU NGEENGCACISO OOKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (Kwizifundo ezithatha iyure nemizuzu engama-24)
3.3 **Ezino kwakhekha kuka-2-D**	**Uludwe lweemilo** • izangqa • oonxantathu • izikwere • amaxande **limpawu zemilo** Chaza, hlela uze uthelekise iimilo ezinokwakheka kuka-2-D malunga ne: • milo • Amacala athe tyaba • Amacala angqukuva **Zoba iimilo** • izangqa • oonxantathu • izikwere • amaxande	Akukho kugqala kuthile kwizinto ezinokwakheka kuka 2-D kucetyiswayo kule kota yesi-2. Kodwa kunjalo abafundi bangabethelela oko bebekufundile malunga nokunana noxela imilo ezinokwakheka kuka-2-D ngokwenza imisebenzi ebhalwayo ngexesha lokuzifundela bebodwa.		
3.4 **Isimetri/ ulingano-macala**	**Ulingano -macala** • Ukunakana uzobe imigca ebonisa ukulingana-macala kwi milo zejiyometri nezingezo zejiyometri ezinokwakheka kuka-2-D. • Fumanisa umgca wolingano-macala kwiphepha elisongiweyo	**Ulingano-macala** Fumanisa umgca wolingano-macala kwiphepha elisongiweyo	**Yintoni entsha kwibanga lesi- 3?** Ukufumana umgca obonisa ulingano macala ngokusonga iphepha Imisetyenzana yokusonga amaphepha ephuhlisa ukuqonda ulingano-macala iquka: • imisetyenzana apho ipeyinti emanzi ibekwa ephepheni phambi kokulisonga; kunye • nemisebenzi apho iphepha lisikwa okanye likrazulwa kumgca ebeligotywe kuwo. Le misetyenzana ingenziwa kwisifundo seziBalo nakwiZifundo zezakhono zoBomi. Yalela abafundi ukuba baqikelele yeyiphi imilo abaza kuyifumana xa bethe bavula iphepha elikrazuliweyo. Loo nto inceda ekuqeqesheni abafundi ekukwazini ukuzakhela umbono weemilo ezilingana macala.	2 izifundo

IBANGA 3 IKOTA 2 4. UMLINGANISELO				
IMIXHOLO	**IIKHONSEPTHI NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO** **UGQALISELO LWEKOTA YESI- 2**	**AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo zezithatha iyure nemizuzu engama-24)
4.1 **Ixesha**	**Ukuxela ixesha** • Funda imihla kwikhalenda. • Faka imihla yokuzalwa, imibhiyozo yenkolo,iiholide zikawonke wonke, iziganeko ezingembali, iziganeko zesikolo kwikhalenda. • Xela ixesha ngokweeyure ezili-12 - ngeeyure - ngamacala eeyure - ngeziqingatha okanye imikhono yeeyure - ngemizuzu kwiiwotshi zosiba neewotshi zamanani kwakunye nezinye izixhobo zedijithali ezikhoyo umz. oonomyayi **Bala ubude bexesha namaxesha adlulayo** Sebenzisa ikhalenda ukubala uze uchaze ubude bexesha ngeeveki neentsuku neenyanga • Guqula iintsuku uzise ezivekini • Guqula iiveki uzise ezinyangeni Sebenzisa iwotshi ukubala ubude bexesha ngeeyure namacala eeyure.	**Ukuxela ixesha** Funda imihla kwikhalenda Faka imihla yokuzalwa, imibhiyozo yenkolo,iiholide zikawonke wonke, iziganeko ezingembali, iziganeko zesikolo kwikhalenda • Xela ixesha ngokweeyure ze-12 - ngeeyure - ngamacala eeyure - ngeziqingatha okanye imikhono zeyure - ngemizuzu kwiiwotshi zosiba neewotshi zamanani kwakunye nezinye izixhobo zedijithali ezikhoyo umz. Oonomyayi/iiselula **Bala ubude bexesha namaxesha adlulayo** Sebenzisa ikhalenda ukubala uze uchaze ubude bexesha ngeeveki neentsuku neenyanga • ukusebenzisa iwotshi ukubala ubude bexesha ngeeyure namacala eeyure	Abafundi baqhubekeke ukuziqhelisa ukuthetha ngobude bexesha nokulandelelanisa amaxesha. Ngexesha lokufundisa uwonke wonke nangexesha lokunika ingqwalasela kumaqela athile, Abafundi baqhubekeka ukuthetha malunga neentsuku zeveki, iinyanga zonyaka kunye nomhla wemini kanye kanye le imiyo kanti nezinye ezisezayo. Abafundi baqhubekeke ukufaka oku kulandelayo kwikhalenda njengoko iziganeko zifika ngokufika. • Imihla yokuzalwa • Imibhiyozo yenkolo • Iziganeko ezingembali • Iziganeko zesikolo • Iiholide zikawonke wonke Qhubeka ukubuza abafundi ukuba baxele ixesha ngeeyure, amacala eeyure, iziqingatha zeeyure esebenzisa iiwotshi zosiba kunye neeyure nemizuzu kwiiwotshi zamanani mihla le . Jonga kwikota yokuqala. **Ixesha eliboniswa ngamanani** Chiitha ixesha elingangezifundo ezibini uhlaziya ukufundwa kwexesha kwiiwotshi zamanani. **Jonga kwikota yokuqala.** Ngexesha lokuba abafundi bezifundele mabaqhube besenza imisetyenzana emalunga nokuxela ixesha • ngeeyure, amacala eeyure kunye neziqingatha zeeyure kwiiwotshi zosiba; kunye • ngeeyure nemizuzu kwiiwotshi zamanani. Abafundi mabenze izibalo ngeeveki okanye ngeentsuku xa benikwe ikhalenda okanye indawo ezithile kwikhalenda, umzekelo ukukhangela imihla/iintsuku nokubala umahluko wexesha phakathi kwazo.	2 izifundo

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.2 **Ubude**	**Ukulinganisa okungekho seSikweni** • Qikelela/thelekelela, linganisa /kala, thelekisa, landelelanisa urekhode /bhala phantsi ubude esebenzisa iindlela ezingekho seSikweni kokukala umz.usebenzisa izandla, amanyathelo ubude beepensile, izinto zokubala njl-njl. • Chaza ubude bezinto ngokubala uze uxele ubude ngeeyunithi ezingekho seSikweni. • Sebenzisa ulwimi lokuthelekisa umz. ende kune, emfutshane, omde kuno, nebanzana/ebanzi kunenye. **Ukuqalisa ukulinganisa/kala okusesikweni** • Qikelela/thelekelela, linganisa/kala, thelekisa, landelelanisa urekhode ubude esebenzisa iimitha (ngezinti ezizimitha okanye imitya ebude buyimitha) njengeyunithi emiselekileyo yobude. • Qikelela/thelekelela ulinganise ubude ngeesentimitha esebenzisa irula.	**Ukuthatha umlinganiselo ongekho seSikweni** • Qikelela, thatha umlinganiselo thelekisa, landelelanisa urekhode usebenzisa iindlela ezingamiselekanga umz.usebenzisa izandla, amanyathelo, ubude beepensile, izinto zokubala njl-njl • Chaza ubude bezinto ngokubala uze uxele ubude ngeeyunithi ezingekho seSikweni. • Sebenzisa ulwimi lokuthelekisa umz. ende kune, emfutshane, omde kuno, nebanzana/ ebanzi kunenye. **Ukuqalisa ukulinganisa/ kala okusesikweni** ▪ Qikelela/thelekelela, linganisa/ kala, thelekisa, landelelanisa urekhode ubude esebenzisa iimitha (ngezinti ezizimitha okanye imitya ebude buyimitha) njengemilinganiselo esesikweni yobude.	**Yintoni eyahlukileyo kwibanga lesibini?** Kwibanga- 2 abafundi • Bebegqale kwiindlela ezingekho seSikweni zokulinganisela. • Baze baqaliswa ekulinganiseni ngeemitha. Kwikota - 2 kwibanga- 3 abafundi bangaqhubekeka besebenzisa iindlela ezingekho seSikweni zokulinganisela kwakunye nokusebenzisa iimitha. Kwikota - 3 bangaqala ukusebenzisa iirula ngenjongo yokubala imilinganiselo ngeesentimitha. **UkuQikelela/thelekelela, ukulinganisa, ukuthelekisa urekhode ubude, ukuphakama nobubanzi esebenzisa iiyunithi zokulinganisa ezingekho seSikweni.** Abafundi bangafunda imithetho esetyenziswayo yomilinganiselo baze baziqhelanise nokuthatha umlinganiselo besebenzisa iiyunithi ezingamiselekanga Ukuthatha umlinganiselo usebenzisa iiyunithi ezingamiselekanga makungajongelwa phantsi xa zithelekiswa nokuthatha umlinganiselo usebenzisa iiyunithi ezimiselekileyo. Ukuthatha umlinganiselo wobude usebenzisa iyunithi ezingamiselekanga kubandakanya ukubala ukubaingaba zingaphi ezo yunithi zikhethiweyo ezinobude obulingana naloo nto ithathwa umlinganiselo. Umzekelo, ubude bedesika zizandla ezisibhozo 8. Abafundi mabathathe imilinganiselo yezinto ezizintlobo ngeentlobo besebenzisa uludwe lwezinto njengeeyunithi ezingekho sikweni. Zintathu iindlela zokusebenzisa iiyunthi ezingekho seSikweni: • Beka kumqolo izinto ezininzi ezinobude obulingana nalonto ithathwa umlinganiselo zinqamleze into leyo, umzekelo.amaqokobhe ematshisi, iziciko zeebhotile okanye izinto zokubala, iipensile ezintsha njl. Umzekelo, Xa befuna ukwazi ubude bedesika bangasebenzisa iipensile ezininzi Eyona nto ibalulekileyo kule ndlela yile; - Zonke ezi zinto zinobude obulinganayo. Awunakuthi incwadi yakho ilingana ngobubanzi neziciko zeebhotile ezili-12 ukuba ezo ziciko zinobungakanani obahlukileyo.Umz. iziciko zebhotile zobisi ezizilitha ezi-2,iziciko zebhotile zeplastiki zesiselo esibandayo, iziciko ezenziwe ngenkcenkce njl; - Makungabikho zithuba phakathi kwezinto: Kufuneka enye ihlale kwincam yenye ngokulandelelana ukuze ukwazi ukubala kakuhle.	2 izifundo

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.2 **Ubude**	Akukho mfuneko yakuguqulela ukusuka kwiimitha ukuya kwiisentimitha.	**Ukuthatha umlinganiselo ongekho seSikweni** • Qikelela, thatha umlinganiselo thelekisa, landelelanisa urekhode usebenzisa iindlela ezingamiselekanga umz.usebenzisa izandla, amanyathelo, ubude beepensile, izinto zokubala njl-njl • Chaza ubude bezinto ngokubala uze uxele ubude ngeeyunithi ezingekho seSikweni. • Sebenzisa ulwimi lokuthelekisa umz. ende kune, emfutshane, omde kuno, nebanzana/ ebanzi kunenye. **Ukuqalisa ukulinganisa/ kala okusesikweni** ▪ Qikelela/thelekelela, linganisa/ kala, thelekisa, landelelanisa urekhode ubude esebenzisa iimitha (ngezinti ezizimitha okanye imitya ebude buyimitha) njengemilinganiselo esesikweni yobude.	• Sebenzisa izinto ezimbini ezifanayo njengeeyunithi engamiselekanga.Beka enye ecaleni kwenye uze umana ukususa eyokuqala uyise kwicala laleyo yesibini,Oku kwenziwa xa ubala ngezandla okanye ubude beenyawo okanye amanyathelo. • Usebenzisa into enye njengeyunithi engamiselekanga nokuba kungokuyigqwetha okanye uphawule isiphelo sayo phambi kokuba uyitshebelezise. Abafundi mabafundiswe ukuxela iiyunithi, umz. Le ncwadi ingangeziciko zebhotile ezi-12, Le klasi iziinyawo ezi- 38 ubude. Bakube bethathe umlinganiselo nokuba kungeyiphina iyunithi amaxesha amaninzi kufuneka baqikelele ukuba ingaba zingaphi iiyunithi ezizakuba nobunzima obulingana nalonto ithathwa umlinganiselo. Ukuqikelela phambi kokuba kuthathwe umlinganiselo kubalulekile kodwa kunokwenziwa xa abafundi bekhe bathatha umlinganiselo ngaloo yunithi. Abafundi kufuneka bafundiswe ukuba ukuze bathelekise ubude, ukuphakama okanye ububanzi kufuneka kusetyenziswe iyunithi enye.Umzekelo, Ukuba ububanzi bomnyango buzizandla ezi-20 buze ububanzi bedesikabuziipensile ezi-8, akunakuthi umnyango ubanzi kunedesika. Abafundi kufuneka basebenzise uludwe lweyunithi ezingekho seSikweni, ukuze ba: • Qalise ukuqonda ukuba okukona iba ncinci iyunithi yomlinganiselo kokukhona aza kuba maninzi amathuba okuyisebenzisa.umzekelo ububanzi beklasi obuyimitsi eyi-20 bungaziinyawo ezi-48 ubude.; baze • Baqalise ukusebenzisa iiyunithi ezifanelene naloo nto bayilinganisayo, umz. Ukulinganisa ububanzi beklasi ngeziciko zeebhotile kuyinkcitha-xesha nje. **Ukuqikelela, ukuthatha umlinganiselo,ukuthelekisa nokurekhoda ubude, ukuphakama nobubanzi esebenzisa iimitha.** Abafundi kufuneka babethelele ukuqonda kwaboubude obungangemitha, kwaye nokusebenzisa ubude obuyimitha xa bethatha umlinganiselo. Oku kungenziwa ngcono ukuba abafundi bathatha umlinganiselo “ngesixhobo’ esibude buyimitha (ezifana nerula ebude buyimitha,uluthi olusikwe lwayimitha okanye umtya okwanobude obuyimitha). Ukubona ubude obuyimitha kunceda abafundi ukuba babenomfanekiso ngqondweni wokuba imitha inde kangakani.Ungakwazi ukuthatha umlinganiselo ngeemitha usebenzisa ivili le trundle kodwa akulula ukubona ubude obuyimitha.	2 izifundo

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.2 **Ubude**			Abafundi banokufumana izinto ezinobude obuyimitha.Kuluncedo ukuba nezinto ezinokuthathwa njengemizekelo xa kuthelekiswa umz.ububanzi bocango kunye nobude befestile busoloko buyimitha.Oku kunceda abafundi ukusebenzisa obu bude okanye ububanzi abakwaziyo ukububona ukuze bathelekise ubude bezinye izinto abathatha umlinganiselo wazo. Abafundi mabathelekelele phambi kokuthatha umilinganiselo ngamnye. Abafundi banokufuna izinto ezinde okanye ezimfutshane kunemitha enye. Abafundi banokuthatha umilinganiselo weentlobo ntlobo zobude ngeemitha. Ubude obahlukileyo mabuthelekiswe. **Ukurekhoda imilinganiselo** Nangona ukuthatha umlinganiselo kusisakhono esenziwa ngezandla, abafundi mabarekhode imilinganiselo (ngeeyunithi ezingekho seSikweni kwakunye neemitha) ngamaxesha onke. **Ukulinganisa ubude njengomxholo wlokusombulula ingxaki nezibalo** Ngexesha ekufundiswa ngalo Amanani, lifankshini Nolwalamano abafundi bangasombulula iingxaki ezisebenzisa imeko yoku kulandelayo ; • ukuthatha umlinganiselo wobude ongekho seSikweni; no • kuthatha umlinganiselo wobude ngeemitha. Thathela ingqalelo uludwe lwamanani afanele le kota, kwanoluhlu lweengxaki ezifanele le kota.	2 izifundo

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.3 **Umthamo**	**Ukubala umlinganisello ngokungekho seSikweni** • Qikelela, linganisa, thelekisa, landelelanisa uze urekhode ubunzima usebenzisa iindlela ezingekho seSikweni zokubala umlinganiselo wesikali umz. iibloko nezitena njl. • Sebenzisa ulwimi ukuthetha ngokuthelekisa umz. khaphukhaphu, nzima, khaphukhaphana, nzinyana.	**Ukubala umlinganisello ngokungekho seSikweni** • Qikelela/thelekelela, linganisa, thelekisa, landelelanisa uze urekhode ubunzima esebenzisa iindlela ezingekho seSikweni zokubala umlinganiselo wesikali umz. iibloko nezitena njl. Sebenzisa ulwimi ukuthetha ngokuthelekisa umz. khaphukkhaphu, nzima, khaphukhaphana, nzinyana	**Yintoni eyahlukileyo kwibanga lesibini?** Kwibanga lesibini abafundi bebegqale ekusebenziseni umlinganiselo ongekho seSikweni besebenzisa iiyunithi ezingamiselekanga zobunzima. Abafundi basebenzisa isikali ukwenza oku. Baqalisa ukusebenzisa iikilogram. Balandelelanisa izinto ezithengwayo esizisebenzisa mihla le ezinobunzima obuxelwe ngokwe kilogram. Bafunda ubunzima babo kwizikali zasegumbini lokuhlamba. **Indlela ezingekho seSikweni zokuthatha umlinganiselo wobunzima ezisebenzisa isikali neeyunithi ezingamiselekanga** Abafundi bangafunda imithetho neendlela zokuthatha umlinganiselo besebenzisa iiyunithi ezingamiselekanga.Ukuthatha umlinganiselo usebenzisa iiyunithi ezingamiselekanga mawungajongelwa phantsi kunokuthatha umlinganiselo ngeeyunithi ezimiselekile. Abafundi kufuneka babethelele izakhono zabo zokuthatha umlinganiselo ngokuthatha umlinganiselo ongekho sesikweni wobunzima besebenzisa iiyunithi ezingamiselekanga. Kunokusetyenziswa izikali ezisetyenziswa ezivenkileni.Ukuba akunalo olu hlobo lwesikali, ungasenza ngokuthi ubophelele izibini zezi zinto zilandelayo kwihengari: ikomityi yeyogathi , imizantsi yeebhotile yeelitha ezi-2 zeplastiki ezisikiweyo, umzantsi webhokisi yelitha yobisi okanye ibhokisi yesiselo esibandayo (ezi zikhongozeli zibotshelelwe emacaleni ehengari mazifane) Ukuthatha umlinganiselo wobunzima ngeeyunithi ezingamiselekanga kubandakanya ukubala ukuba zingaphi kwezi zikhethiweyo iiyunithi ezilinganayo ngobunzima nalo nto ithathwa umlinganiselo.Umzekelo, irula inobunzima obufanayo neebloko ezilithoba. Abafundi mabathathe umlinganiselo weentlobo zezinto besebenzisa uluhlu lwezinto njengeyunithi ezingekho sesikweni. Abafundi mabafundiswe ngamaxesha onke ukuba baxele iyunithi xa benika ubunzima, umz. Le ncwadi inobunzima obulingana nobamabhastile angama- 34. Bakube bethathe umlinganiselo nokuba kungeyiphina iyunithi amaxesha amaninzi kufuneka baqikelele ukuba ingaba zingaphi iiyunithi ezizakuba nobunzima obulingana nalonto ithathwa umlinganiselo. Ukuqikelela phambi kokuba kuthathwe umlinganiselo kubalulekile kodwa kunokwenziwa xa abafundi bekhe bathatha umlinganiselo ngaloo yunithi.	3 izifundo

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.3 **Umthamo**	**Ukufundisa iindlela ezisekweni zokuthatha umlinganiselo** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa uze urekhode ubunzima bezinto ezithengiswayo ezinomlinganiselo wobunzima obuxelwe ngokweekilogram umzekelo iigram ezimbini zerayisi nekhilogram yomgubo umz. Iigram ezingama-500 zetyiwa. • Bathathe umlinganiselo wabo wobunzima ngeekhilogram besebenzisa isikali sasegumbini lokuhlambela Akukho mfuneko yakuguqulela iigram uzise kwikilogram.	**Ukufundisa iindlela ezisesikweni zokuthatha umlinganiselo** • Qikelela, thatha umlinganiselo, thelekisa, landelelanisa uze urekhode ubunzima bezinto ezithengiswayo ezinomlinganiselo wobunzima obuxelwe ngokweekilogram umzekelo iigram ezimbini zerayisi nekhilogram yomgubo umz. Iigram ezingama-500 zetyiwa. • Apho zifumanekayo izikali zasegumbini lokuhlambela, abafundi mabaziveyishe besebenzisa iikhilogrem. Kulindeleke ukuba umntwana angachaza ubunzima bakhe ngokufunda inani elifutshane nomgca obonisa iqondo lobunzima kuphela.Bayichaza njengephantse, njengekufutshane kwi ngaphezulu kancinci, ngaphantsi kancinci nelingana nenani lekilogram abazifunda kwimitha yobunzima.	Abafundi kufuneka bafundiswe ukuba ukuze bathelekise ubunzima kufuneka kusetyenziswe iyunithi enye. Umzekelo Ukuba irula inobunzima obuziibloko ezingama-20 kwaye isikere sinobunzima obungangobamabhastile angama- 20. Awunakukwazi ukuthi zinobunzima obulinganayo na okanye yiyiphi enobunzima obungaphezu kwenye **Ukurekhoda imilinganiselo** Nangona ukuthatha umlinganiselo kusisakhono esenziwa ngezandla, abafundi mabarekhode imilinganiselo ngamaxesha onke. **Ukusebenza ngeekhilogram** • Ukulandelelanisa imveliso ngokobunzima. Abafundi bangasebenzisa igrosari ezithengiswa ngeekilogram, apho inani leekilogram lixeliweyo ngaphandle epakethini. Abafundi bangathelekisa ubunzima beepakethe zezinto ezahlukileyo (ezifana nerayisi, iswekile, umilimili, umgubo(iflawa) okanye umgubo wokuhlamba iimpahla) ezithengiswa ngokweekhilogram. Bangabeka ezi zinto esikalini ukubonisa aukuba noxa ubungakanani bepakethi bohlukile, zinobunzima obubulingana. Abafundi banganikwa uludwe lweepakethe zezinto ezahlukileyo ukuzicwangcisa ukusuka kweyona inzima ukuya kweyona ikhaphukhaphu, apho bazilandelelanisa ngokobunzima obuxelwe epakethini umz. Irayisi ezikhilogram ezi-2, iswekile eyikilogram e-1, umilimili ozikhilogram ezi-5, umgqusho ozikilograma ezili- 10 kg. Abafundi kufuneka basazi isifinyezi esingu “kg” esimele ikhilogram **Ukusebenza ngeegram** • ukulandelelanisa imveliso ngokobunzima Abafundi bangasebenza ngegrosari ezithengiswa ngeegram apho inani leegram lixeliwe kwipakethi. Abafundi bangathelekisa ubunzima beepakethe zezinto eazahlukileyo ezifana (neesiriyeli, iti, ikofu, ityiwa,iimbotyi, iipakethi ezincinci zeswekile, iipakethe ezincinci zobisi olungumgubo, iipakethe zejeli, iipakethe ezincinci zerayisi njl-njl. ezithengiswa ngeegram. Abafundi banganikwa uludwe lweepakethe zezinto ezahlukileyo ukuzicwangcisa ukusuka kweyona inzima ukuya kweyona ikhaphukhaphu, apho bazilandelelanisa ngokobunzima obuxelwe epakethini umz. Irayisi ezikhilogram ezi-2, iswekile eyikilogram e-1, umilimili ozikhilogram ezi-5, umgqusho ozikilograma ezili- 10 kg.	3 izifundo

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.3 **Umthamo**		• Xa kukho isikali esinobunzima obuboniswe ngomgca obonisa iqondo lobunzima ngeegram, abafundi bangathatha umlinganiselo wobunzima wezinto ezahlukileyo. Akukho mfuneko yakuguqulela iigram kwiikhilogram.	Kubaluleke ukuba bafundi banikwe ithuba lokusebenza ngeepakethe ezinkulu nezincinci ezifana nezetyiwa neepakethi ezinkulu ze rice crispies kunye *neecorn flakes.* Oku kwenzelwa ukuba baqonde ukuba iipakethe ezinkulu azisoloko zinzima kunezinto ezincinane ngaphandle kokuba kuthelekiswa imveliso enye. Ungaqiniseka ukuba ipakethe enkulu inobunzima obukhulu kuphela xa; • kuthelekiswa imveliso enye; • naxa uqinisekisa ubunzima bazo esikalini (Kodwa ke oku akufuneki nganto kwibakala elisisiseko). Abafundi kufuneka basazi isifinyezi esingu “g” esimele igram Akukho mfuneko yokuba abafundi bakwazi ukufunda izikali zasekhitshini ngokwemilinganiselo yegram . Oko kuyakwenziwa kwisigaba esiphakathi. **Ukufunda izikali ezisetyenziswa kwindlu yokuhlambela** Xa kuthe kanti olu hlobo lwesikali luyafumaneka abafundi mabanikwe ithuba lokufunda ubunzima babo. Ziindidi mbini iindlela ezifundwa ngazo ezi zikali. Esamanani kunye nesisebenzisa usiba Ezamanani zifundeka lula kuba ubunzima sele bubhalwe ngamanani. Ukuba unesikali sasendlwini yokuhlambela esisebenzisa amanani, qinisekisa ukubasixela ubunzima ngokweekilogram ezipheleleyo kuphela. Ungasilungisa ngokwakho ukuze sibonise iikhilogram ezipheleleyo. Ukuba awukwazi ukusilungisa xelela abafundi bangawahoyi amaqhezu eekhilogram ngokwangoku. Uninzi lweezikali zendlu yokuhlambela ezisebenzisa amanani i- 10 kg nganye iboniswe ngenombolo, uze umgca omde ubonise indawo yeekilogram ezi-5. Imigca ye-1 kg isoloko ingenanombolo. Kuyafana oku nendlela imigca namanani asebenza ngayo kwirula. Abafundi baqale ukubala ukuze babone ukuba kukho izithuba ezili-10 phambi kokuba bafike kuphawu olubonisa iikilogram ezili-10 k, ukuze isithuba ngasinye simele ikilogram e-1 uze umgca omdana umele iikilogram ezi- 5. Abafundi bangafunda imilinganiselo kwizikali zokwenyani zasendlwini yokuhlambela kunye nemifanekiso yezi zikali. Kulula ukufunda ubunzima emfanekisweni kunokufunda kwisikali sokwenyani.	3 izifundo

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.3 **Umthamo**			**Ukurekhoda imilinganiselo** Nangona ukuthatha umlinganiselo kusisakhona esenziwa ngezandla kuyimfuneko ukuba abafundi barekhode le milinagiselo kwiincwadi zabo ngalo lonke ixesha. **Ukuthatha umlinganiselo wobunzima njengomxholo yokusombulula iingxaki nokwenza izibalo** Ngexesha elabelwe isifundo samAmanani, Ukubala noLwalamano abafundi bangasombulula iingxaki ngokusebenzisa imeko yo; • ukuthatha umlinganiselo wobunzima ngemilinganiselo engekho seSikweni • kusebenzisa iikhilogram ukuthatha umlinganiselo wobunzima Thathela ingqalelo iindlela ezilungele ikota kwaneemeko ekufuneka abafundi bazisebenzise ukusombulula iingxaki zokubala ezilungele le kota. Abafundi akulindelekanaga ukuba • bazi ukuba u- 1 000 g = 1 kg; okanye • baguqulele phakathi kwee- gram neekilogram. Izibalo ezibandakanya iigram zingenziwa kodwa zingadluli kwi- 1 000 g.	3 izifundo

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.4 **Umthamo/ Ivolumu/ Umyinge**	**Imilinganiselo engekho seSikweni** • Qikelela ulinganise, uthelekisa ulandelelanisa umthamo wesikhongozeli ezinomlinganiselo ozilitha, iziqingatha zelitha neekota zeelitha (isikhongozeli singathwala umthamo ongakanani xa sinokugcwaliswa) ukukuthwala xa sigcwele) ngokusebenzisa iiyunithi ezingamiselekanga umz. amacephe neekomityi. • Chaza umthamo wesikhongozeli ngokubala uxele ukuba zingaphi iiyunithi ezingekho seSikweni ezinokugcwalisa isikhongozeli. umz. Ibhotile igcwaliswa ziikomityi ezine.	Ngexesha abafundi bezisebenzela abalisebenzisela ukuzifu mabaqhubekeke uku Qikelela, uthathe umlinganiselo, uthelekise, ulandelelanise uze urekhode umthamo wesikhongozeli usebenzisa iindlela ezingekho seSikweni zokulinganisa. Ukulandela iiresipi eziquka ukubhaka, yimeko eluncedo apho abafundi bangaziqhelanisa nokuthatha umlinganiselo. Khetha iiresipi apho izithako zinikwe ngeekomityi, iitispuni okanye iiyunithi ezingekho seSikweni zokulinganisa. • Thelekisa ulandelelanise umthamo woludwe lweeebhotile nezinto zegrosari apho umthamo uxelwe ngaphandle kwipakethi. • Sebenzisa iibhotile okanye iijagi ezilitha e-1 ukuqikelelanokuthatha umlinganiselo.Thelekisa, landelelanisa urekhode imithamo yezikhongozeli ngokweelitha. **Jonga amanqaku wekota esi-3.** Abafundi mabanikwe imisebenzi ebhalwayo ukuze baqikelele oku kulandelayo okuquka ukufunda imifanekiso ye: • izinto ezithengwayo ezibonisa umthamo obhalwe ngaphandle ukuze bazilandelelanise ngokomthamo. • Imifanekiso yeejagi apho umthamo ukufutshane nenombolo ebonisa ilitha e-1 okanye kumgcaobonisa ilitha ezi-2. Kulindeleke ukuba abafundi bafunde kuphela inani elisondele kumgca onenombolo elibonisa inqanaba elithile. Bachaza umthamo wabo njengo iphantse, ikufutshane, ngaphezulu kancinci kwe/ ngaphezulu /ngaphantsi/ ilingana nenani (leelitha) abazifunda kwijagi. **Ukuthatha umlinganiselo njengemeko yokusombulula iingxaki nezibalo** Ngexesha elabelwe isifundo sAmanani**,** Ukubala noLwalamano abafundi bangasombulula iingxaki ngokusebenzisa imeko yo; • kubala umilinganiselo womthamo ngeendlela ezingekho seSikweni • umz. UMakhulu usebenzisa iikomityi ezimbini ukwenza ipudingi ukuba angayiphinda kabini iresipi angasebenzisa ubisi olungakanani? • IIlitha Thathela ingqalelo uluhlu lwamanani alungele le Kota kwakunye noluhlu lweendidi zeengxaki.	

IMIXHOLO	IIKHONSEPTHI NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGQALISELO LWEKOTA YESI- 2	AMANQAKU NENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithatha iyure nemizuzu engama-24)
4.4 **Umthamo/ Ivolumu/ Umyinge**	**Ukufundisa ukuthatha umlinganiselo n osesikweni** • Qikelela, linganisa, thelekisa, landelelanisa urekhode umthamo wezinto ngokuthatha umlinganiselo ngeelitha, iziqingatha zeelitha, iikota zeelitha. • Thelekisa, landelelanisa urekhode umthamo wezinto ezithengwayo ezinomthamo oxelwe ngokweelitha umz. iilitha ezi-2 zobisi, ilitha e-1 yesiselo esibandayo, iilitha ezi- zepeyinti okanye ngokweemililitha umz. iimililitha ezingama-500 zobisi, 340 iimillilitha ezingama 750 zesiselo esibandayo, iimililitha ezingama -750 zeoyile • Bazi ukuba ikomityi emiselekileyo inomthamo oz i millilitha ezingama-25 • Bazi ukuba itispuni limthamo oziimililitha ezi-5. Akukho mfuneko yakuguqulela zilitha kiwiimililitha okanye zimililitha kwilitha.			

IBANGA 3 IKOTA 2 5. UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IMIXHOLO	**IINGQIQO NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO** **UGQALISELO LWEKOTA YOKU- 2**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (Kwisifundo seyure e-1 nemizuzu angama- 24)
5.4 **Qokelela** **Ucwangcise ulwazi**	**Qokelela ucwangcise ulwazi** • Qokelela ulwazi ngeklasi okanye isikolo ukuze uphendule imibuzo ebuzwe ngutitshala • Cwangcisa ulwazi olunikwe ngutitshala okanye incwadi. Cwancgisa ulwazi - kwizintlu - kwiithali - kwiitheyibhile			
5.5 **Ukusebenzisa ukubonisa kulwazi**	**Ukubonisa ulwazi** Bonisa ulwazi kwi: • grafu yemifanekiso • grafu yezitena			
5.6 **Cazulula uze utolike ulwazi**	**Cazulula uze utolike ulwazi** Phendula imibuzo ngolwazi oluboniswe kwii: • igrafu zemifanekiso • grafu zezitena	Cazulula ulwazi ngokwemo yegrafu oyinikiweyo.	Ukuba abafundi basebenze ngomjikelo wonke wolwazi obelucetyiswe kwikota yoku-1, ukucazulula iimo zolwazi olubonisiweyo lunokuba nentsingiselo ngakumbi. Kuyacetyiswa ukuba kwiKota yesi-2 unike ulwazi ukuze balucazulule ubuncinane . • kwigrafu enye yemifanekiso • itheyibhile Abafundi kufuneka baphendule imibuzo oyibuzileyo ngegrafu kunye neetheybhile; jonga kwiKota yoku-1 malunga nemibuzo efanelekileyo	1 Isifundo

IBANGA 3 IKOTA 3 1. AMANANI, UKUBALA NOKUZALANA				
IZIHLOKO	**IINGQIQO NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO** **UGQALISELO LWEKOTA YOKU 3**	**AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA**
1.1 **Bala izinto**	**Ukubala izinto ezibonwayo izinto** Qikelela ubale izinto ubuncinane i 1 000 kwizinto zemihla ngemihla . Ubuchule ngokubala izinto ngokwamaqela kuyakhuthazwa.	Benza amaqela ubuncinane ama700 beqikela bebala ngokuthembeka Nika inani abanakho ukulibala beqikelela bebala izinto ngokuqinisekileyo	**Yahluke ngantoni le kota kweyokuqala?** Uluhlu lwamanani lwandile kwaye abafundi banikwa ithuba lokuzibamba izinto, bahamba-hambe bebala zinto ezingama- 700 zenziwe amaqela ahlukeneyo. **Jonga amanqaku kwikota 1 no 2**	
1.2 **Bala ukusuka phambili uphinde ubuye umva**	Bala ukuya phambili uphinde ubuye umva ko: • 1 ukusuka kuso naliphina inani phakathi kwe- 0 ne 1000 • 10 ukusuka kuso nasiphi isiphindaphindi phakathi kwe- 0 ne -1000 • 5 ukusuka kuso nasiphi isiphindaphindi sezi -5 phakathi kwe- 0 ne- 1000 • 2 ukusuka kuso nasiphi isiphindaphindi sezi2 phakathi kwe-0 nama- 200 • 3 ukusuka kuso nasiphi isiphindaphindi sezi3 phakathi kwe- 0 nama- 200 • 4 ukusuka kuso nasiphi isiphindaphindi sezi 4 phakathi kwe-0 ukuya kuma-200 • 20, 25, 50,100 ubuncinci 1 000	Bala ukuya phambili uphinde Bala ukuya phambili uphinde ubuye umva ko: • 1 ukusuka kuso naliphina inaniphakathi kwe-0 nama -700 • 10 ukusuka kuso nasiphi isiphindaphindi phakathi kwe- 0 nama- 700 • 5 ukusuka kuso nasiphi isiphindaphindi sezi 5 phakathi kwe -0 nama- 700 • 2 ukusuka kuso nasiphi isiphindaphindi sezi2 phakathi kwe- 0 nama- 700 • 3 ukusuka kuso nasiphi isiphindaphindi sezi3 phakathi kwi-0 nama- 700 • 4 ukusuka kuso nasiphi isiphindaphindi sezi 4 phakathi kwe- 0 ukuya kuma- 700 • 20, 25, 50,100 ubuncinci 1 000	**Yahluke ngantoni le kota kweye 2** **Uluhlu** lwamanani luyanda ukuya kuma -700. **Jonga amanqaku kwikota 1 no 2**	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.3 **Isimboli yamanani kunye namagama**	**Akwazi ukufunda amanani** • Chonga, nakana, ufunde isimboli yamanani ukusuka kwi-0 ukuya kwi-1 000 • Bhala isimboli yamanani ukusuka kwi-0 ukuya kwi-1000 • Chonga, nakana ufunde amagama amanani ukusuka kwi-0-1 000 • Bhala amagama amanani 0 -1000	**Akwazi ukufunda amanani** • Chonga, nakana ufunde isimbo li yamanani ukusuka kwi-0 ukuya kwi-1 000 • Bhala isimboli yamanani kwi ukuya kwi-1000 • Chonga, nakana ufunde amagama amanani 0-1 000 • Bhala amagama amanani 0 -1000	**Yahluke ngantoni le kota kweye 2** Abafundi chonga, ukufunda nokubhala: • iisimboli zamanani ukuya kw-i1 000; kunye • namagama amanani ukuya kuma -500. **Jonga amanqaku kwikota 2**	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.4 **Chaza, uthelekise ulandelelanise amanani**	**Landelelanisa uthelekise amanani ukuya kuma-999** • Landelelanisa amanani apheleleyo kuma- 999 uqale kwelincinci ukuya kwelikhulu,uphinde uqale kwelikhulu uye kwelincinci elikhulu • Thelekisa amanani apheleleyo uye kutsho kuma- 999 usebenzisa uncinci kuno,inkulu kuno, ininzi kune,imbalwa Thelekisa amanani apheleleyo kune kunye noziyalingana. **Sebenzis amanani olandelelwano ukubonisa ulandelelwano,,indawo okanye indawo-bume** • Usebenzisa ukufunda nokubhala amanani olandelelwano, uquka nemo efinyeziweyo ukuya kuma 31.	**Landelelanisa uthelekise amanani ukuya kuma-500** • Landelelanisa amanani apheleleyo kuma- 700 uqale kwelincinci ukuya kwelikhulu,uphinde uqale kwelikhulu uye kwelincinci elikhulu • Thelekisa amanani apheleleyo uye kutsho kuma- 700 usebenzisa uncinci kuno,inkulu kuno, ininzi kune,imbalwa Thelekisa amanani apheleleyo kune kunye noziyalingana **Sebenzis amanani olandelelwano ukubonisa ulandelelwano,,indawo okanye indawo-bume** • Usebenzisa ukufunda nokubhala amanani olandelelwano, uquka nemo efinyeziweyo ukuya kuma 31.	**Yahluke ngantoni le kota kweye 2** Abafundi balandelelanisa bathelekise amanani ukuya kuma 500 baqhubekeke besebenzisa imo efinyeziweyo **Jonga amanqaku kwikota 2**	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo idijithi ezintathu zamanani uye kuma999** • Yazi ukuba idijithi nganye imele ntoni • Bala –idijithi ezintathu zamanani ukuya kuma 999 isiphindaphindis ze100, isiphindaphindi zamaashumi nesinyei/ mivo. • Chonga uxele ixabiso ledijithi nganye	**Nakana ixabiso lendawo yamanani uye ku 750** • Yazi ukuba idijithi nganye imele ntoni • Bala –idijithi ezintathu zamanani ukuya kuma 750 isiphindaphindis zama100, isiphindaphindi zamakhulu, zamashumi ,nesinyei/ mivo. • Chonga uxele ixabiso ledijithi nganye	**Yahluke ngantoni le kota kweye 3** Imibuzo nemiyalelo efana ncam yile inikwe kwikota yesi-3. umda wamanani wongeziwe kodwa abafundi basasebenza ngamanani aneedidjithi ezintathu. Ugqaliso kule kota maluqhubekeke lukwi: • Ixabiso lenani; • Yahlula amamani ngama-100, amashumi nemivo esebenzisa amakhadi abonisa ixabiso lendawo kunye neebloko ezinesiseko esingu-10 *(base ten blocks)*;baze • Bhala imo exandileyo yamanani. **Jonga amanqaku kwikota 2**	
IINGXAKI ZAMANANI				
1.6 **Ubuchule boku sombulula iingxaki zezibalo**	Sebenzisa ezi ndlela zilandelayo xa usombulula ingxaki uze uchaze izisombululo zeengxaki: • ukwakha nokwahlula amanani • ukuphinda phinda nokuhlula kubini • imigca manani • ukusondeza kumashumi	Sebenzisa ezi ndlela zilandelayo xa usombulula ingxaki • ukwakha nokwahlula amanani • ukuphinda phinda nokuhlula kubini • imigca manani • ukusondeza kumashumi	Abafundi balindeleke basombulula izibalo zamagama besebenzisa ezi zilandelayo techniques: • ukwakha nokwahlula amanani • ukuphinda phinda nokuhlula kubini • imigca manani • ukusondeza kumashumi **Jonga amanqaku kwikota 2**	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.7 **Ukudibanisa nokutha batha**	Sombulula izibalo zamagama kwimeko ethile uze uchaze isisombululo sakho kwiingxaki zokudibanisa nokuthabatha ikhokhelela kwisiphumo ukuya kuma 999.	Sombulula izibalo zamagama kwimeko ethile uze uchaze isisombululo sakho kwiingxaki zokudibanisa nokuthabatha ikhokhelela kwisiphumo ukuya kuma -800	**Imizekelo enokwenziwa kule kota** • Iingxaki zokudibanisa nokuthabatha • UPamela uqokelele iziciko zeebhotile ezingama 413. Ukuba uKen umnike ezingama- 29 iziciko zebhotile, uza kuba nenani elilinganayo noPamela. - Zingaphi iziciko zizonke iziciko zeebhotile abazakubanazo xa bebobabini ? - Zingaphi iziciko zebhotile abenazo uKen kuqala ? • Abafundi bebanga lesi -2 baqokelele ama- 500 amabhastile. Abafundi bebanga lesi 3 banamabhastile amancinci nge-170 kunebanga lesi 2. Mangaphi amabhastile abanawo abafundi bebanga lesi3? • UMongezi noMartha baqokelele ama 250 ezinto zokuncamathisela. UMongezi ufumene amabhastile angama 160. Zingaphi izinto zokuncamathisela ezifunyenwe nguMartha ?	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.8 **Ukudibanisa ngokwale keneyo kukhokelela kuphinda phindo**	Sombulula izibalo zamagama kwimeko ethile uze uchaze isisombululo sakho kwiingxaki zokudibanisa nokuthabatha ezikhokhelela kwisiphumo ukuya kuma 99.	Sombulula izibalo zamagama kwimeko ethile uze uchaze isisombululo sakho kwiingxaki zokudibanisa nokuthabatha ezikhokhelela kwisiphumo ukuya kuma 75.	**Imizekelo yemisebenzi enokwenziwa kule kota** **Uhlobo lwengxaki 9: Ucwangciso-manani** • Isitiya semifuno sinemiqolo eli12 sezityalo. Umqolo ngamnye unezityalo ezisi 7 . Zingaphi izityalo ezikhoyo esitiyeni? • Isitiya semifuno sinemiqolo eli-12 sezityalo . Umqolo ngamnye unezityalo ezilinganayo. Ukuba izityalo zingama 48, zingaphi izityalo kumqolo ngamnye? • Isitiya semifuno sinama- 48 ezityalo ezityalwe kwimiqolo. Kukho izityalo ezisi -7 kumqolo ngamnye . Mingaphi imiqolo efumaneka apho? **Uthelekiso/ unxulumano** USamuel uneelekese ezi 6 . Iilekese zikaSamuel ziphindwe kathathu kunezika Moeketsi.Zingaphi iilekese zika Moeketsi ? UAndiswa uneelekese ezili18 . Ziphindwe kathathu kunezika Samuel. Zingaphi iileekese anazo uSamuel ? Thelekisa Iipesika zixabisa iR8 ikilogram .Ukuba ndithenge is-i4 sekilogram ziza kuxabisa malini? Iipesika zixabisa iirandi ezisi-R8 ikilogram. Ukuba ndineerandi ezingama R32, zingaphi iikilogram endinokuzithenga? Ndithenge iikilogram ezi 4 zeepeska ndaza ndahlawula iirandi ezingama R32. Yimalini ixabiso lekilogram enye? **Ukusebenzisa ukusondeza** Iteksii ilayisha abakhweli abali -15.Ingaba bangonela abantu abangama -73 kwiteksi ezi- 5	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.9 **Ukwahlula ngokwa maqela nokwaba ngokulin ganayo okukhokelela kulwahlulo-hlulo**	Sombulula uze uchaze izisombululo zeengxaki ezenziwayo ezibandakanya ukwaba ngokulinganayo nokohlula ngokwamaqela ukuya kw i-100 ezineempendulo ezinokuba nentsalela.	Sombulula uze uchaze izisombululo zeengxaki ezenziwayo ezibandakanya ukwaba ngokulinganayo nokohlula ngokwamaqela ukuya kuma-75 ezineempendulo ezinokuba nentsalela.	**Imizekelo yeengxaki ezinokwenziwa kule kota** • UNkosk. Tshongwe upakishe iimuffins ezingama- 66 kwipakethi ezi -6.Zingaphi iipakethi anazo zizonke? • URemi ufumene ama R72 eerandi ngokuthengisa itikiti lerafule (iqashisso lethamsanqa) nge R9,00 leerandi itikiti ngalinye . Mangaphi amatikiti awathengisileyo? • Abahlali bancede iintsapho ezili- 9 ezilahlekelweyo zizinto zabo kuqhambuko – mlilo Yahlulela ezo ntsapho ngokulinganayo kwingubo ezingama.-75. a) Usapho ngalunye lufumene zangaphi? b) Zingaphi ezishiyeklileyo? Thelekisa • Iipesika zixabisa iirandi ezisiR8 ikilogram. Ukuba ndineerandi ezingama R32, zingaphi iikilogram endinokuzithenga? • Ndithenge iikilogram ezi 4 zeepeska ndaza ndahlawula iirandi ezingama R32. Yimalini ixabiso lekilogram enye? Hlela uhlobo lweengxaki ezikhoyo ezintsha kwikota 3. Abafundi banokufuna ixesha elininzi xa besombulula ezi ngxaki **Jonga amanqaku kwikota 2**	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.10 **Ukwabelana okukhokelela kumaqhezu**	Sombulula uze uchaze izisombululo eziquka ukwaba ngokulinganayo kukhokelela kumaqhezu a- unitary nangekho unitary umz. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{2}{5}$ njl-njl.	Sombulula uze uchaze izisombululo eziquka ukwabelana ngokulinganayo ngokulinganayo kukhokelela kumaqhezu aunitary nangekho unitary7. umz. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$,njl-njl.	**Imizekelo yeengxaki ezinokwenziwa kule kota** Ukwaba ngokulinganayo okukhokelela kumaqhezu • Hlula iitshokolethu ezisi 7 usahlulela abahlobo aba 3 ngokulinganayo kungabikho ntsalela. • Hlula iitshokoliodi ezili13 ngokulinganayo kubantwana aba 4 .Umntwana omnye ufumana zibe ngaphi ? Ingqokelela yamaqhezu • Umakhulu unike u Kiki iR12 leerandi. UKiki ufuna ukulondoloza isinye kwisithathu. Yimalini ekufuneka eyilondolozile? • Zili -12 iibhiskiti epleyitini . UNomonde uthathe isinye sesine.Zingaphi ezishiyekileyo **Ukubhala** Abafundi abavumelekanga ukubhala isimboli kumaqhezua . Abafundi bafunda iindlela zokuleyibhelisha yamaqhezu anjenge sinye 1 kwisihlanu I, isi 3 okanye isi 3 kwisithandathu. Oku kunceda ukuba baqonde amagama amaqhezu bachaze ukuba mangaphi amaqhekeza awenza into epheleleyo, Umzekelo, iziqingatha, izithathu eshumini, iikota, njl-njl. kwaye okwesibini zingaphi iinxenye mazithathelwe ingqalelo, umz.. isi 2 kwisithathu. **Ukubonisa amaqhezu kwizibalo zamazwi** Abafundi mabazizobe iimpendulo zabo ukubonakalisa ukuba bayaziqonda ezi ngxaki. Lindela ukuba abanye abafundi bangazoba ngokuchanekileyo kodwa bangakwazi ukuwabiza kakuhle amanye amaqhezu. Abafundi mabawabize amaqhezu ebebebala ngawo ngokuwabhala njenge 2 kwizithathu.	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.11 **Imali**	• Nakana uze uchongae imali ezinkozo nengamaphepha yaseMzantsi Afrika • Sombulula iingxaki zemali eziquka imali iphelele/yonke kwiisenti neerandi • Guqula iirandi zibe ziisenti	• Nakana uze uchongae imali ezinkozo nengamaphepha yaseMzantsi Afrika • Sombulula iingxaki zemali eziquka imali iphelele/yonke kwiisenti neerandi • Guqula iirandi zibe ziisenti	**Imizekelo yeengxaki ezinokwenziwa kule kota** Ixabiso lemali nokwenza iitotali umz.. Bhala iisenti ezingama 325 zibe ziirandi neesenti. Ndlela zini onokuzisebenzisa ezahlukeneyo apho unokwenza ama- R400 usebenzisa imali engamaphepha ? Ungaqiniseka njani ukuba ufikelele kuzo zonke izisombululo? UMnu Lebethe ungumakhi ufumene ibhonasi ngenxa yokuba umsebenzi wakhe uwugqibe ngexesha elifanelekileyo. Wagqiba kwelokuba ayabe ngokulinganayo phakathi kwakhe nomchweli. Umntu ngamnye wafumana ama-R400. Yimalini ixabiso lale mali lebhonasi ? UNina nabahlobo bakhe abathathu bohlulelene ngama R20,60 eerandi. Yimalini ayifumeneyo umntu emnye	
IZIBALO EZINGALAWULWA MEKO				
1.12 **Ubuchule (iindlela)**	Sebenzisa obu ubuchule bokubala xa ubalayo : • Ukwakha nokwahlula amanani • Ukuphinda-phinda kabini nokwahlula kabini ngokulinganayo (ukwenza iziqingatha) • Imigca manani • Ukusondeza kumashumi	Sebenzisa obu ubuchule bokubala xa ubalayo : • Ukwakha nokwahlula amanani • Ukuphinda-phinda kabini nokwahlula kabini ngokulinganayo (ukwenza iziqingatha) • Imigca manani • Ukusondeza kumashumi	Abafundi balindeleke benze izibalo zamagama besebenzisa ezi ndlela zilandelayo: • Ukwakha nokwahlula amanani • Ukuphinda-phinda kabini nokwahlula kabini ngokulinganayo (ukwenza iziqingatha) • Imigca manani • Ukusondeza kumashumi **Jonga amanqaku kwikota 1**	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.13 **Ukudibanisa okanye ukuthabatha**	• Dibanisa ukuya kuma ku- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- ukuya kuma- ukuya kuma- 30	• Dibanisa ukuya kuma ku- 800 • Thabatha kuma-800 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani 30	Kule kota bafundi bayaqhubekeka ekubaleni ngeedijithi ezintathu zamanani ukuya ku ma-800. Ukuze sikwazi ukubalala amanani ngeedijithi zezithathu Abafundi kufuneka bakwazi oku: • ukufunda nokubhala ngokuzithemba isimboli yamanani ukuya kuma- 800; • ukufunda ngokulandelelana uthelekisa ngokuzithemba ubuncincinane ukuya kuma- 800; • ukubala ngokuzithemba ngokwamaqela ukuya ku ma-800; uphinde • ubale ngokuzithemba ngo- 2, 3, 4, 5, 10, 50 nama100 ukuya ku ma-800. **lindlela ezilindelekileyo zokubonisa ukudibanisa nokuthabatha xa ubala.** • Ukudibanisa ngokwahlula amanani omabini Ukudibanisa izithathu zeedijithi nezibini zeedijithi 524 + 82 = ☐ = (500 + 20 + 4) + (80 + 2) = 500 + (20 + 80+ (4 + 2) = (500 + 100) + 6 = 600 + 6 = 606 Ukudibanisa iidijithi ezintathu needijithi ezintathu 323 + 436 = ☐ 323 + 436 = = (300 + 20 + 3) + (400 + 30 + 6) = (300 + 400) + (20 + 30) + (3 + 6) = 700 + 50 + 9 = 759 ▯ Ukudibanisa (ngokwahlula amanani) Abafundi baza kwahlula amanani ngeendlela ezilula kubo. Oku kuthetha ukuba baya kubala ngeendlela ngeendlela. 524 + 82 = ☐ 524 + (40 + 40 + 2) 524 + 40 → 564 + 40 → 604 + 2 = 606	

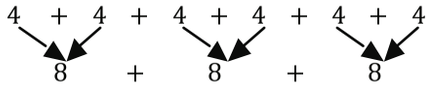
IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.13 **Ukudibanisa okanye ukuthabatha**	• Dibanisa ukuya kuma ku- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- ukuya kuma- ukuya kuma- 30	• Dibanisa ukuya kuma ku- 800 • Thabatha kuma-800 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani 30	Bala ngama 40 ukuqala ku 524 ingenziwa nangokubala ngama10. Ukudibanisa iidijithi ezintathu needijithi ezintathu 323 + 436 = ☐ = 323 + (400 + 20 + 6) = (323 + 400) + 20 + 6 = (723 + 20) + 6 = 743 + 6 = 749 • Ukuthabatha ngokwahlula amanani omabini Ukuthabatha iidijithi ezimbini kwiidijithi ezintathu 889 – 137 = ☐ 889 – 137 = (800 + 80 + 9) – (100 + 30 + 7) = (800 – 100) + (80 – 30) + (9 – 7) = 700 + 50 + 2 = 752 • Ukuthabatha ngokwahlula inani elinye 889 – 137 = ☐ 889 – (100 + 30 + 7) 889 – 100 → 789 – 30 → 759 – 7 = 752 • Sebenzisa ukwahlula kabini ngokulinganayo ukwahlula (ukwenza iziqingatha) inani 525 + 16 = 525 + 8 + 8 = (525 + 8) + 8 = 533 + 8 = 541 • Bala ngokongeza ubale ubuya umva 805 = 798 = ☐ Bala ngo nonye uqale kuma 79-8 ngokufanelekileyo usebenzisa ubuchule bamanani asondeleyo elinye kwelinye.	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.13 **Ukudibanisa okanye ukuthabatha**	• Dibanisa ukuya kuma ku- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- ukuya kuma- ukuya kuma- 30	• Dibanisa ukuya kuma ku- 800 • Thabatha kuma-800 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani 30	• Chonga oosinga uphinda phinda kabini 245 + 246 Umntu angasifunda esi sibalo singentla ngolu hlobo: kukuphinda-phinda kabini 245 + 1 ukuphinda-phinda kabini 246 – 1 245 + 245 + 1 = (200 + 40 + 5) + (200 + 40 + 5) + 1 = (200 + 200) + (40 + 40) + (5 + 5) + 1 = 400 + 80 + 10 + 1 = 400 + (80 + 10) + 1 = 400 + 90 + 1 = 491 • Tshintsha inani inani libe sisiphinda-phindi sika 10 uze uthabathe okanye udibanise imivo Bala ngokongezaokanye ubale ubuya umva usondeza kuma-10 588 + 9 588 + 10 = 598 598 - 1 = 597 588 + 19 588 + 20 = 608 608 – 1 = 607 **Yakha wenze usebenzise izakhono zokudidibanisa nokuthabatha** Abafundi kufuneka baqhelaniswe neendidi ezithile zezakhono zokudibanisa nokuthabatha Abafundi bafumana amathuba okubala amanani athile ukuya kuma- 800: Dibanisa okanye uthabathe ngamaqela ngo 10,udlule kuma- 100 40 + 70 70 + 80 120 – 30 150 – 60	

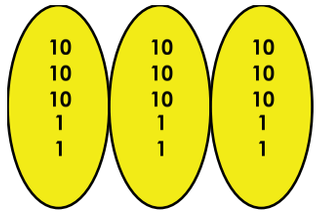
IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.13 **Ukudibanisa okanye ukuthabatha**	• Dibanisa ukuya kuma ku- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- ukuya kuma- ukuya kuma- 30	• Dibanisa ukuya kuma ku- 800 • Thabatha kuma-800 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani 30	Dibanisa okanye uthabathe i 10 ukusuka kuso nasiphi isibini okanye isithathu sedijithi zamanani-iquka ukudlulela kwi 100 Umzekelo: 65 + 10 124 + 10 326 – 10 358 - 10 Dibanisa okanye uthabathe inani elinedijithi enye isinye ngaphandle kokudlulaamashumi Umzekelo: 634 +5 775 + ☐ = 779 768 – 4 Dibanisa uthabathe inani elinedijithi enye kwiziphinda-phindi ze 100 Umzekelo: 600 + 4 500 + 3 700 - 6 800 - 5 Qala udibanise uthabathe iziphinda-phindi ze -100 100 + 100 100 + 200 200 + 200 300 + 400 Abafundi kufanelwe banikwe amathuba okuziqhelanisa nokwenza iipateni bedibanisa bethabatha Ukuba ndiyakwazi oku 1+ 1 = 2	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.13 **Ukudibanisa okanye ukuthabatha**	• Dibanisa ukuya kuma ku- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani ukuya kuma- ukuya kuma- ukuya kuma- 30	• Dibanisa ukuya kuma ku- 800 • Thabatha kuma-800 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ukuziqhelanisa neebhondi zamanani 30	Ngoko ke ngubani: 10 + 10 100 + 100 Qala udibanise okanye uthabathe izibini zeziphinda-phindi kulo naliphi inani elineedijithi ezintathu Umzekelo: 675 + 100 762 – 100 **Ukuqinisekisa iziphumo zezibalo** Ukugweba ukufaneleka kwezisombululo Abafundi kufuneka bafundiswe ukugweba ukufaneleka kwezisombululo Enye indlela yokwenza oku kukuba bafundi baqikelele iziphumo zezibalo zabo phambi kokuba babale. Xa bedibanisa asondeleleneyo umzekelo u- 145 no 146,abafundi bangasebenzisa ukuphinda-phinda kabini njengendlela yokuqikelela iimpendulo zabo. **Ukuqinisekisa izisombululo** Abafundi kufuneka bazi ukuba bayakwazi ; • ukuqinisekisa izibalo zokudibanisa ngokuthabatha. • Umzekelo**:** Ukuba 436+ 118 = 454; ngoko ke 454 – 118 = 436; • ukuqinisekisa izibalo zokuthabatha ngokudibanisa. Umzekelo 684 – 248 = 436, ngoko ke436 +2 48 = 684. Ukusebenzisa ukusebenza ngokuguqula (ukubala ngokuphendulela) ukuqinisekisa izisombululo yenye yezizathu zokufundisa ukudibanisa nokuthabatha kunye **Ukuqinisekisa iziphumo zokubala** Abafundi kufuneka bazi ukuba bangakwazi uku: • Qinisekisa ukudibanisa ngokuthabatha Umzekelo: Ukuba ama 436 + 118 = 454; wona ama 454 – 118 = 436 • Qinisekisa izibalo zokuthabatha ngokudibanisa. Umzekelo 684 – 248 = 436, then 436 + 248 = 684	

<table>
<tr><th>IZIHLOKO</th><th>IINGQIQO NEZAKHONO
OKULINDELEKILEYO EKUPHELENI KONYAKA</th><th>IINGQIQO NEZAKHONO
UGQALISELO LWEKOTA YOKU 3</th><th>AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA</th><th>IXESHA</th></tr>
<tr>
<td>1.14
Ukudibanisa okwalekeneyo kukhokelela kuphinda-phindo</td>
<td>• Phinda-phinda amanani 2, 3, 4, 5, 10 ufike kwitotali enguama 99
• Sebenzisa iisimboli ezifanelekileyo (x, =, ☐)</td>
<td>• Phinda-phinda amanani 2, 3, 4, 5, 10 ufike kwitotali enguama 99
• Sebenzisa iisimboli ezifanelekileyo (x, =, ☐)</td>
<td>Kule kota abafundi bayaqhubekeka ngoku:
• Sebenzisa baqonde ulwimi lophinda-phindo;
• Ubonisa uphinda phindo kucwangciso-manani;
• Sebenzisa isimboli ezifanelekileyo ukuthelekisa izivakalisi zamazwi
• Qonda ukuba ukudibanisa okuphindindiweyo kungenziwakusebetyenziswa isimboli yokuphinda phinda;
• ukuziqhelanisa nokuqonda ukuba uphinda-phindo lungenziwa nangeyiphi indlela (uphawu lolungelelwano-commutative property)
• ukusebenzisa umgca manani ukubonisa izibalo zokuphinda-phinda kwaye babe nakho ukuchaza indlela oluboniswe ngayo kumgca (umz. Ukuba imitsi kumgca manani ilubonisa njani uphindo kabini).
• Ukuqalisa ukuqonda (idistributive property) yophinda phindo.
Abafundi bayaqhubekeka besebenzisa iindidi zemifanekiso ukuqonda uphinda phindo.
Jonga amanqaku kwikota 2
Ubuchule/iindlela zokusebenzisa uphinda- phindo
• Ukusebenzisa ukuphinda phinda
Umzekelo:
Fakela iimpendulo kwimiqolo ye- 5 neye -10 uphinda-phinda. Zeziphi iipateni ozibonayo?
<table>
<tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr>
<tr><td>× 5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>× 10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
Phinda-phinda amanani kwimiqolo ye-5 ukufumana amanani akumqolo we10. Zeziphi iipateni ozibonayo?
Fakela iimpendulo kwimiqolo yeziphinda-phindi ngezibini.
<table>
<tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr>
<tr><td>× 2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>× 4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
Phinda-phinda amanani kwimiqolo yezibini ukufumana amanani akumqolo wesine. Zeziphi iipateni ozibonayo?</td>
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IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.14 **Ukudibanisa okwalekeneyo kukhokelela kuphinda-phindo**	• Phinda-phinda amanani 2, 3, 4, 5, 10 ufike kwitotali enguama 99 • Sebenzisa iisimboli ezifanelekileyo (x, =, ☐)	• Phinda-phinda amanani 2, 3, 4, 5, 10 ufike kwitotali enguama 99 • Sebenzisa iisimboli ezifanelekileyo (x, =, ☐)	• Ukusebenzisa ukwenza iziqingatha (ukohlula kabini ngokulinganayo) Amaqela amathathu esi-8 enza ama 24 Amaqela amathandathu e-4 enza ama 24  Ngokoke: amaqela ama-6 ezi 4 ayalingana namaqela ama -3 ezi -8.	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.15 **Ukwahlula hlula**	• Ukwahlula-hlula amanani ukuya ku 99 ngo 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)	• Ukwahlula-hlula amanani ukuya ku 99 ngo 2, 4, 5, 10, 3, • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)	**Yahluke ngantoni kwikota ye 2?** Kule kota uluhlu lwamanani abafundi baza kusebenza luyanda luye kuma -99. Ukusebenza ngoluhlu lwaamanani olwandileyo luthetha ukuba abafundi bafuneka baqale ukusebenza ngeendlela ezifanelekileyo zokubala nezorekhodisha ukufikelela kwiziphumo zabo. **Ubuchule bokurekhodisha** Kule kota yesi- 3 neye- 4 abafundi baza kuziqhelanisa nokurekhodisha ukwahlula hlula besebenzisa amanani ukuze baqalise ukuyeka ukuxhomekeka kwimizobo. Asingabo bonke abantwana abazakukwazi ukusebenzisa ubuchule bokurekhodisha ukuba abakayiqondi.Ukuzama ukusebenzisa le ndlela yokubala kungakhokelela kwiimpazamo ezininzi ekungelula ukuba umfundi akwazi ukuziqonda. Kubalulekile ukuba abafundi bakwazi ukuchonga unxibelelwano phakathi kophinda- phindo nokwahlulahlula Injongo yokurekhodisha umsebenzi kukunceda abafundi bakwazi ukuphuhlisa ukuqonda kwabo ukuzalana kwamanani . **Ukusebenzisa uphinda -phindo** Abafundi basebenzisa ulwazi lwabo bephinda- phinda. Kufuneka baqale ngokuthi: “Ndazi ntoni ngophinda- phindo ukuze ndifumane isiphumo?” 96 ÷ 3 = ☐ Ndiyazi ukuba: 10 x 3 = 30 Ngoko ke: 96 – 30 = 66 Ndiyazi ukuba 10 x 3 = 30 Ngoko ke 66 – 30 = 36 Ndiyazi ukuba 10 x 3 = 30 Ngoko ke 36 – 30 = 6 6 ÷ 3 = 2 Kule ndlela ingentla, abafundi basebenzisa uphinda -phindo kunye nokuthabatha okuphindiweyo ukusuka kuma- 96. Baze ke ngoko badibanise ukuba bathabathe amaxesha amangaphi: 2 + 10 + 10 + 10 = 32 **Ukwahlula amanani** Abafundi bangenza ama-96 iziqhukuvana (chunks) abe ngamanani anxulumane nesi 3.Kwakhona abafundi basebenzisa ulwazi lwabo lokuphinda –phinda ukuze benze izibalo zokwahlula hlula .	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.15 **Ukwahlula hlula**	• Ukwahlula-hlula amanani ukuya ku 99 ngo 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)	• Ukwahlula-hlula amanani ukuya ku 99 ngo 2, 4, 5, 10, 3, • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)	96 ÷ 3 = ☐ 96 = 30 + 30 + 30 + 6 10 amaqela ezi 3 — 10 amaqela ezi 3 — 10 amaqela ezi 3 — 2 amaqela ezi 3 Okwenziwa ngabafundi kuyo yomibini imizekelo kukusebenzisa ukuthabatha okuphindiweyo ngokweziqhukuvana. Njengokuba uphinda phinda lusakha amanani,ukwahlula hlula kwahlula amanani. .Ngale ndlela umqondo wokuba ukwahlula hlula ngumguqulelwa wophinda phindo uyabethelelwa . Abafundi bangasebenzisa ukuthabatha okuphindindiweyo njengezi qhukuvana,barekhodishe ngolu hlobo lufana nolu lungezantsi . 96 ÷ 3 = ☐  10 10 10 1 1 — 10 10 10 1 1 — 10 10 10 1 1 **Ukusebenza ngeentsalela** Abafundi baza kusebenza ngeentsalela xa besenza ukwahlula ngokwamaqela nokwaba ngokulinganayo kwizibalo zamazwi. Kubalulekile ukuba banikwe izibalo zamazwi ezahlula hlulayo (ezingalawulwa meko) ezinentsalela.. Umzekelo: Cacisela abafundi: Ukuba bayayazi na ukuba u 28 ÷ 7 = 4. Aya kuba ngubani am-**29** ÷ 7 = 4 ? Abafundi balindeleke ukuba barekhodishe iziphumo zabo ngolu hlobo lulandelayo: 29 ÷ 7 = 4 intsalela -1.Sifuna abafundi babe nokwazi ukuxela amnqaku abawaziyo Okwahlula hlula; umz.. Ndiwazi ama 25 ÷ 5 = 5 ngoko ke 26 ÷ 5 = 5 intsalela 1	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.16 **Ukubala ngengqondo**	Ikhonsepthi yamanani uluhlu ukuya kuma-**999** • Landelelanisaa amanani owanikiweyo • Thelekisa amanani ukuya kuma 999 uze uxele elingaphezulu okanye elingaphantsi kunelinye • Xela leliphi inani elingaphezulu ngesi 1okanye elingaphantsi kwesi 1 • Xela leliphi inani elingaphezulu ngesi 2okanye elingaphantsi kwesi 2 • Xela leliphi inani elingaphezulu ngesi 3okanye elingaphantsi kwesi 3 • Xela leliphi inani elingaphezulu ngesi 4okanye elingaphantsi kwesi 4 • Xela leliphi inani elingaphezulu ngesi 5okanye elingaphantsi kwesi 5 • Xela leliphi inani elingaphezulu ngesi 10okanye elingaphantsi kwesi 10	uluhlu ukuya kuma-**750** • Landelelanisaa amanani owanikiweyo • Thelekisa amanani ukuya ku999 uze uxele elingaphezulu okanye elingaphaintsi kunelinye • Xela leliphi inani elingaphezulu ngesi 1okanye elingaphantsi kwesi 1 • Xela leliphi inani elingaphezulu ngesi 2okanye elingaphantsi kwesi 2 • Xela leliphi inani elingaphezulu ngesi 3okanye elingaphantsi kwesi 3 • Xela leliphi inani elingaphezulu ngesi 4okanye elingaphantsi kwesi 4 • Xela leliphi inani elingaphezulu ngesi 5okanye elingaphantsi kwesi 5 • Xela leliphi inani elingaphezulu ngesi 10okanye elingaphantsi kwesi 10	**Izibalo zengqondo** **Jonga amanqaku kwikota 2** *Kodwa sebenzisa **uludwe** olongezelelweyo oluxeliweyo kwikota 3*	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.16 **Ukubala ngengqondo**	**Khumbula ngokukhawuleza:** • Ukudibanisa nokuthabatha amanqaku 20 • Dibanisa okanye uthabathe iziphindwa zika 10 ukusuka 0 ukuya ku 100 • Uphinda phindo nokwahlula hlula amanqaku we: • Itheyibhile yokuphinda-phinda kwisibini ukuya kuma ngo 2 x 10 • Itheyibhile yokuphinda-phinda kweshumi ukuya kuma ngo 10 x 10 **Amaqhinga okubala** • Sebenzisa la maqhinga okubala alandelayo ezi zilandelayo • Bala eli nani likhulu ukuze ubale ukuya phambili nokubuya umva • Umgca manani • Ukuphinda phinda kabini nokwahlula kabini ngokulinganayo • Ukwakha nokwahlula amanani	Ikhonsepthi yamanani **Khumbula ngokukhawuleza:** • Ukudibanisa nokuthabatha amanqaku 20 • Dibanisa okanye uthabathe iziphindwa zika 10 ukusuka 0 ukuya ku 100 **Ubuchule bokubala ngengqondo** Sebenzisa obu buchule bokubala alandelayo ezi zilandelayo: • Bala eli nani likhulu ukuze ubale ukuya phambili nokubuya umva • Umgca manani • Ukuphinda phinda kabini nokwahlula kabini • Ukwakha nokwahlula amanani • Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha • Sebenzisat ulwalamano phakathi ko- uphinda phindo nokwahlula hlula		

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA YOKU 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
1.16 **Ukubala ngengqondo**	• Sebenzisa ulwalamano phakathi kokudibanisa nokuthabatha • Sebenzisat ulwalamano phakathi ko- uphinda phindo nokwahlula hlula			
1.17 **Amaqhezu aqhelekileyo**	• Sebenzisa uthiye amaqhezu amagama kwiimeko eziqhelekileyo.Oku kuquka isiqingatha, ikota; isibhozo eshumini isithathu eshumini, isihlanu eshumini • Nakana amaqhezu azotyiweyo • Mabaqale ukunakana ukuba iziqingatha ezi-2 okanye izizathu ezithathu zenza into enye epheleleyo yaye isiqingatha, neekota ezimbini ziyalingana • Bhala amaqhezu • Njengesiqingatha, okanye izithathu ezibini		Kule kota abafundi baqhubekeke uku: • Funda ukubiza amaqhezu ngamagama ; • Sebenzisa la magama kwiimeko ngeemeko; • Chonga uxele igama leqhezu ; • Qalisa ukuchonga imilinganiso yamaqhezu awahlukileyo; • Fumana amaqhezu ezinto; • Funda ngamaqhezu alinganayo. • Thelekisa amaqhezu Kule kota abafundi bathelekisa amaqhezu. **Bala amaqhezu namagama amaqhezu amatsha.** Ukubala amaqhezu kunika abafundi ithuba lokuba babone inxenye yamanani amaninzi kwaye kubanika ithuba lokusebenzisa ulwimi olusetyenziswa xa sisebenza ngamaqhezu umz. iikota ezine,isiqingatha esinye ..... Ungayalela abafundi ukuba benze inani elipheleleyo besebenzisa iikota uze ubuze: “Ukuba sineekota ezintlanu, ingaba zinkulu kunento epheleleyo okanye zincinci okanye ziyalingana nento epheleleyo enye?” Kwakhona thatha le nxaxheba ukulungiselela ukufundisa amanye amaqhezu (mixed fractions) ngokubuza: “thatha izixhenxe zezithathu.Zingaphi izinto eziphele leyo ozenzileyo? Mangaphi amaqhezu ashiyekileyo?” Sifuna Abafundi bathi kukho: “Izinto ezimbini (iwhole ezi-2)kunye nesinye kwisithathu eshiyekileyo Olu hlobo lomsebenzi malikhuthazwe: • Ukuqonda amanani eziqingatha kwinto epheleleyo (whole) • Iindlela ezahlukeneyo zokuthetha ngamanani elininzi leziqingatha	

IBANGA3 IKOTA 3 2. IIPATENI, ISIPHUMO SENTSEBENZISWANO YAMANANI NE -ALJIBRA				
IZIHLOKO	**IINGQIQO NEZAKHONO** **OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO** **UGXININISO KWIKOTA 3**	**AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA**
2.1 **Ipateni zejiyometri**	**Kopa, yandisa uze uchaze** Kopa yandisa uze uchaze ngamagama, • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwe nje ngokukrwela imigca ezibonisa ubume bezinto **Yenza eyakho ipateni** Yenza eyakho ipateni yejiyometri • Ngezinto eziphathekayo • Iipateni ezilula ezenziwe njengokukrwela imigca ezibonisa ubume bezinto **Iipateni ezisingqongileyo** Chonga, uchaze ngamagama uze ukope iipateni zejyometri • kwindalo • kwizinto zentlalo zemihla ngemihla • kwizinto zethu zamasiko nenkcubeko	**Kopa, yandisa uze uchaza** Kopa yandisa uze uchaze ngamagama • Iipateni ezilula ezenziwe ngezinto eziphathekayo • Iipateni ezilula ezenziwe nje ngokukrwela imigca ezibonisa ubume bezinto Iipateni apho amanani okanye ubukhulu butshintsha kwinqanaba ngalinye ngendlela enokuxelwa kwangaphambili oko kukuthi ukukhula rhoqo koluhlu lweepateni. **Yenza eyakho ipateni** Yenza eyakho ipateni yejiyometri • Ngezinto eziphathekayo • Iipateni ezilula ezenziwe njengokukrwela imigca ezibonisa ubume bezinto	Qhubekeka ukunika Abafundi iipateni eziphela kumda ochazwe kwikota yoku-1;kodwa makuqukwe zonke izinto zobume ezintsha kwipateni njengoko besenza kwimilo nesithuba.Jonga amanqaku eepateni ekota yoku-1kunye namanqaku esithuba neemilo zekota yesi-2. Nika abafundi ithuba lokukopa kuqala,baze bandise bagqibele ngokuchaza iipateni. Xa kungoku bamele ukuba bakwazi ukuchaza iipateni bengakhokelwa ngamibuzo. Ngoku bamele ukuba sele benakho ukuchaza iipateni. Qhubekeka ukukhulisa ulwimi olufunekayo oluza kwenza kube lula kubo ukuchaza iipateni.	Isifundo 1

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
2.2 **Ipateni yamanani**	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze amanani aqhelekileyo ukulandelelanisa ubuncinci ukuphela ku 200 **Yenza eyakho ipateni** Yenza ezakho iipateni zamanani	**Kopa, yandisa uze uchaze** Kopa,yandisa uze uchaze amanani aqhelekileyo ukulandelelanisa ubuncinci ukuphela kuma- 180 Ukulandelelanisa kufuneka kubonakalise ukuba usiya phambil nokubalai ubuye umva ku: • Ngo-1 ukusuka kulo naliphina inani phakathi kwe 0 nama-750 • Ngamashumi ukusukela kuso nasiphina isiphinda phindi se- 10 phakathi kwe 0 nama- 750 • Ngezihlanu ukusukela kuso nasiphina isiphinda phindi sesi- 5 phakathi kwe- 0 nama-750 • Ngezibini ukusukela kuso nasiphina isiphinda phindi sika 2 phakathi ko 0 no 750 • Ngezithathu ukusukela kuso nasiphina isiphinda phindi sika 3 phakathi ko 0 no 750 • 3s ukusuka kuso nasiphi Ngezine ukusukela kuso nasiphina isiphinda phindi sika 4 phakathi ko 0 no 750	Jonga amanqaku kwikota yoku 1 Yandisa umda wakho wamanani kunye nokubala ulandelelanisa ngolu hlobo ; • 1 ukusuka kuso nasiphi inani phakathi kwe- 0 nama 750 • 10 ukusuka kuso nasiphi isiphindaphindi se- 10 phakathi ko- 0 and 750 • 5 ukusuka kuso nasiphi isiphindaphindi sesi-5 phakathi ko- 0 and 750 • 2s ukusuka kuso nasiphi isiphindaphindi sesi- 2 phakathi ko- 0 and 750 • 100 ukusuka kuso nasiphi isiphindaphindi se-100 to ubuncinci 1 000 • 50 ukusuka kuso nasiphi isiphindaphindi sama-50 to ubuncinci 1 000 • 25 ukusuka kuso nasiphi isiphindaphindi sama-25 to ubuncinci 1 000 • 20 ukusuka kuso nasiphi isiphindaphindi sama-20 to ubuncinci 1 000 • 3 ukusuka kuso nasiphi isiphindaphindi sesi- 3 phakathi ko- 0 & 750 • 4s ukusuka kuso nasiphi isiphindaphindi sika-4 phakathi ko- 0 and 750 Sebenzisa izinto, imifanekiso, itheybhile kunye ne flow dayagram ukuxhasa abafundi kutshintsho ukusuka ekubaleni ngokuqakatha naselandelelaniseni amanani ukuya kuphinda -phindo ngama- 10, 5, 2, 4, 3. Ukunceda abafundi bakwazi ukusebenzisa iipateni abazaziyo njengesiseko sokuziqhelanisa nokufunda ezinye iipateni umz. • Ukulandelelana kwezi -2 njengesiseko sokulandelelanisa ama-20.	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGXININISO KWIKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA
2.2 **Ipateni yamanani**	**Kopa, yandisa uze uchaze** Kopa, yandisa uze uchaze amanani aqhelekileyo ukulandelelanisa ubuncinci ukuphela ku 200 **Yenza eyakho ipateni** Yenza ezakho iipateni zamanani	• isiphindaphindi sika- 3 phakathi kwe- 0 nama-750 • 20s,25s, 50s,100 ubuncinci ukuya kwi-1000 **Chonga uchaze ezakho iipateni** Chonga uchaze iipateni zakho zamanani.		3 izifundo

IBANGA 3 IKOTA 3 3. ISITHUBA NEMILO(ijiyometri)				
IZIHLOKO	**IINGQIQO NEZAKHONO: OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO: UGXININISO KWIKOTA 3**	**AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ezithatha nemizu zuengama 24)
3.1 **Indawo- bume, ukufumana indawo imbonakalo**	**Indawo necala ovela ngakulo** • Tshatisa amacala ento enye ngokuyivela macalana onke • Nika igama lento evezwe kuwe ngecala elingaqhelekanga • Funda,utolike uzobe iimephu zemiphezulu okanye izintoovele ngentla kuzo • Khangela izinto kwiimephu **Indawo-bume nezalathiso** • Landela izalathiso apha eklasini nasesikolweni • Nika izalathiso apha eklasini nasesikkolweni • Landela izalathiso ukusuka kwindawo ethile ukuya kwenye uncedwa yimephu	**Indawo necala ovela ngakulo** • Funda,utolike uzobe iimephu zemiphezulu okanye izintoovele ngentla kuzo • Khangela izinto kwiimephu **Indawo-bume nezalathiso** • Landela izalathiso ukusuka kwindawo ethile ukuya kwenye uncedwa yimephu	**Yintoni entsha kwiBanga lesi 3** • Iimephu, ukuyila, nengqokelela yezinto ezibonwayo - Fumana izinto kwimephu - Landela izalathiso kwiimephu - Ukuzoba iimephu, uyilo okanye ingqokekelela yezinto ezingamiselekanga **Ukufunda, ukutolika iimephu** Iimephu yimbonakalo yommandla eyenziwe ngendlela ethile. Abafundi bebanga lesi -3 basebenza ngeemephu ezingekho sesikweni kuquka neemephu zendlela ezimiselekileyo okanye iimephu zesifundo zejiyografi. Iya kunceda abafundi ngezicwangciso zeendawo ezincinci okanye imbonakalo yeendawo ezincinci umz. itreyi yezinto okanye uplani yegumbi lokufundela. Phambi kokuba sijonge izinto ezinkulu Kwikota yesi 2 bekutshatiswa imbonakalo (views) yangaphezulu,ecaleni,nagap hambili. Imbonakalo ebukekela yimbonakalo engagqibelelanga yangaphambili kwakunye nasemacaleni.Abantwana abancinci babona imbonakalo eebukekela ngaphezu kokuba bebona imbonakala yangaphezulu Oku kuya kubanceda batshatise imbonakalo ezibukekela nemephu zendawo enye. Qala uncedise abafundi ekuqondeni iimephu neeplani uze ubayalele ukuba bakhangele izinto kwiplani okanye kwiindawo ezisemephini. umz. “Fumana ikliniki; yintoni efumaneka ecaleni kwayo? Xa Abafundi bezifumene iindawo kwiimephi ngokulula ngababnye ngabanye, Qalisa ukubanika izikhokelo ukusuka kue ndawo ukuya kwenye indawo. **Ukuzoba uqokelele izinto neemephu ezingekho sesisikweni** Kuba lula kubafundi ukuzoba izinto abazibonileyo ngokwecala abavela ngakulo ngaphezulu, emacaleni, ngaphambili kunokuzoba izinto ezikufananekiso-ngqondweni, Makuqalwe ngokuzoba izinto ezibonakala ngaphezulu umz. izinto eziphezu kwetafile katitshala, okanye izinto ezisetreyini uzibeke phantsi uze uxelele abafundi ukuba mazizobe kwinkangeleko yangaphezulu. Abafundi mabaqhubekeke bezoba iimephu neeplani ezingekho seSikweni umz..igumbi lokufundela, amabala esikolo.	Izifundo 3

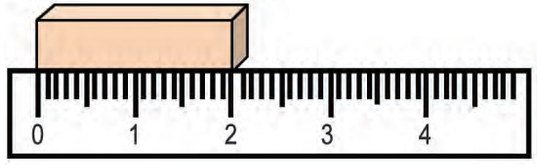
IZIHLOKO	IINGQIQO NEZAKHONO: OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO: UGXININISO KWIKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ezithatha nemizu zuengama 24)
3.2 **Izinto ezinokwakheka okungu3-D**	**Imimmandla yezinto** Ukunakana athiye izinto ezinokwakheka okungu 3-D eklasini nakwimifanekiso • Imilo zebhola, (into engqukuva eqinileyo) • Imilo zebhokisi(iprizmu) • Isilinda • Iihiramidi • Iikhowuni **Iimpaw u zezinto** Chaza, hlela /hlela uthelekise izinto ezinokwakheka okungu 3-D malunga ne: • 2-D imilo ezenza ubuso bezinto ezinokwakheka okungu 3-D • Ezimthebelele nezingamagophe	**Imimmandla yezinto** Ukunakana athiye izinto ezinokwakheka okungu 3-D eklasini nakwimifanekiso • Imilo zebhola, (into engqukuva eqinileyo) • Imilo zebhokisi(iprizmu) • Isilinda • Iihiramidi • Iikhowuni **Iimpaw u zezinto** Chaza, hlela /hlela uthelekise izinto ezinokwakheka okungu 3-D malunga ne: • 2-D imilo ezenza ubuso bezinto ezinokwakheka okungu 3-D • Ezimthebelele nezingamagophe	**Okucetyiswayo kwikota 3** • Abafundi mabagxininise kwizinto ezintsha zakwa 3, njenge.phiramidi neembumbulu(cones). • Abafundi bakha imibhojana yokusela / nemicinga yokuvungula neetyhubh. Yaziza Abafundi ngee khowunzi neephiramidi . **Iimpawu emakugxininiswe kuzo kwizinto ezinokwakheka kwe 3-D:ezimthebelele nezinamagophe** • Ezimthebelele okanye ezinamagophe Kwikota 2 • Abafundi mabagxinise kwizinto ezimthebelele nezinamagophe . • Abafundi bachonga imilo ezimthebelele bazixele ukuba zizangqa, oonxantathu, sizikwere okanye iinxande. Abafundi bayaqhubekeka ngalo msebenzi kule kota yesi 3, kodwa ngoku bajonga iiphiramidi neekhowuni • Ukwakha izinto ezinokwakheka kwe3 -D • Abafundi sebenzisa imibhojana yokusela / nemicinga yokuvungula neetyhubhu ukwenza iphiramidi. Yenza ukuba Abafundi bagxininse ekugqibezeleni iiphiramidi. /iikona zabo. Abafundi abalindelekanga ukubabazibale iikona zephiramidi (lo msebenzi wenziwa kwibakala lesi 6). **Ukuqaphela nokubiza amagama ezinto**	Iziundo 5

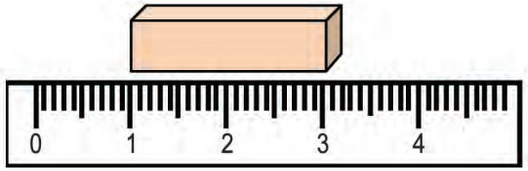
IZIHLOKO	IINGQIQO NEZAKHONO: OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO: UGXININISO KWIKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ezithatha nemizu zuengama 24)
3.2 **Izinto ezinokwakheka okungu3-D**	**Imisebenzi ebalulekileyo** Mabaqwalasele baze bakhe izinto ezinokwakheka kwe 3-D abayalelwe ukuba bazenze besebenzisa izinto eziphathekayo ezinjengo kusika izinto ezokwakhela ezinokwakheka kuka 2-D udongwe, iintolo zokuvungula, imibhojana yokusela nezinye izinto zejiyometri ezinokwakheka kuka3-D.	**Imisebenzi ebalulekileyo** Mabaqwalasele baze bakhe izinto ezinokwakheka kuka-3-D abayallelwe ukuba bazenze besebenzisa izinto eziphathekayo ezinjengo kusika izinto ezokwakhela ezokwakheka kuka 2-D udongwe, iintolo zokuvungula, imibhojana yokusela nezinye izinto zejiyometri ezinokwakheka kuka 3-D	Abafundi mabanikwe,imimandlauluhlu lwezinto okunokusetyenzwa: • Iimilo ezinjengento engqukuva, umz.. iibhola ezibukhulu bohlukileyo. Amagungu, iiorenji, njl.; • Iimilod ezinjenge prizimu, umz..iibloko s, izitena, iibhokisi zesayizi ezahlukileyo umz. eyematshisiezesiriyeli,ezeti, ezentlama yokuxukuxa • Iimilodezinjenge silindaumz.itoti yepolishi;eyesinif njl. • Iimilo ezinjenge isilindas, kuquka ezinde nezibhityileyo, umz.. imibhobho ezisilinda imibhobho eyimiphakathi ezisilinda • Iimilo, zekhadibhodi itaweli eziyi roli imibhobho yamaphepha okusula izandla and short, wide isilindas, umz.. itoti yepolisi yezihlangu, netoti zesnif njl.; • Iimilod ezinjenge khowuni ; ne • milod l ezinjenge phiramidi. Abafundi bangafumana izinto ezimile njenge bhola(engqukuva eqinileyo)okanye ezimile njenge (prizimu) okanye ezimile njengesilinda xa benikwe ingqokelela yezinto Abafundi mabafune babonise izinto ezimile njengebhokisi(iprizimu)eklasini umz; iti yeembotyi ezimile njengesilinda • Xa unikwe ingqokelela yezinto; okanye • Egumbini lokufundela umz. Esi sitena sifana nebhokisi okanye Le orenji ifana ne bhola. Ngexesha lokuzimela Abafundi benza ibhola nesilinda (iprizimu),iiphiramidi neekhowunzi ngodongwe nentlama . **Imisebenzi ebhalwayo** Ukwakha izinto ezinokwakheka kuka -3 D, abafundi basebenzisa amaqweqwe asikwe amila azizikwere okanye iingxande ukwenza ibhokiksi .Le nto ikhulisa ukuqonda kwabafundi iimilo zezinto ezimthebelele okanye imiphezulu yebhokisi emthebelele . Abafundi emva koku mabaqwalasele eminye imiphezulu emthelbelele ebonakala kwiprizimu neesilinda baze bachaze ukuba zingqukuva,okanye ziskwere okanye ziluxande. **Ulwimi** Ukwazi ukusebenzisa ulwimi olusemgangathweni lokuthetha ngezinto ezinokwakheka kuka 3-D: emthebelele, amagophe, iibhokisi, iibhola, isilinda;neephiramidi neemilo	Iziundo 5

IZIHLOKO	IINGQIQO NEZAKHONO: OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO: UGXININISO KWIKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ezithatha nemizu zuengama 24)
3.3 **2-D limilo**	**Uluhlu lweemilo** • izangqa • oonxantathu • izikwere • amaxande **Impawu zeemilo** Chaza, hlela /hlela uthelekise izinto ezinokwakheka okungu 2-D malunga ne: • imilo • amacala athe tse • amacala angqukuva **Zoba iimilo** • izangqa • oonxantathu • izikwere • amaxande	**Uluhlu lweemilo** • izangqa • oonxantathu • izikwere • amaxande **Impawu zeemilo** Chaza, hlela /hlela uthelekise izinto ezinokwakheka okungu 2-D malunga ne: • imilo • amacala athe tse • amacala angqukuva **Zoba iimilo** • izangqa • oonxantathu • izikwere • amaxande	Jonga amanqaku kwikota 1. Abafundi mabagqalasele, kodwa benze imisebenzi eyahlukeneyo. Abafundi basebenza ngezangqa nezikwere ezinobukhulu obahlukileyo noonxantathu neenxande ngokwemilo ezahlukileyo Bayazihlela iimilo ngokwamacala ezimthebelele nezingqukuva. . Abafundi bahlela iimilo ngokwamaqela azo bajonge ukuba ingaba ngoonxantathu;zizikwere;ngamaxande okanye izangqa. Umsebenzi ubethelelwa ngokwenza imisebebzi ebhalwayo iquke imizobo neemilo ezifunekayo.	Izifundo 2

IBANGA3 IKOTA 3 UMLINGANISELO				
IZIHLOKO	**IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA**	**IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3**	**AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo zezithathu iyure nemizuzu engama 24)
4.1 **Ixesha**	**Ukuxela ixesha** • Funda imihla kwikhalenda • Faka imihla yokuzalwa, imibhiyozo yenkolo,iiholide zika wonke-wonke,iziganeko ezingembali, iziganeko zesikolo kwikhalenda • Xela ixesha ngokweeyure ezili- 12 - ngeeyure - ngamacala eeyure - ngeziqingatha okanye imikhono zeyure kwiiwotshi zosiba neewotshi zamanani kwakunye nezinyo izibonisi maxesha ezikhoy umz. oonomyayi	**Ukuxela ixesha** • Funda imihla kwikhalenda • Faka imihla yokuzalwa, imibhiyozo yenkolo,iiholide zika wonke-wonke public,iziganeko ezingembali, iziganeko zesikolo kwikhalenda • Xela ixesha ngokweeyure ezili- 12 - ngeeyure - ngamacala eeyure - ngeziqingatha okanye imikhono zeyure kwiiwotshi zosiba neewootshi zamanani kwakunye nezinyo izibonisi maxesha ezikhoyo umz. oonomyayi	amaxesha. Ngexesha lokufundisa uwonke-wonke nangexesha lokunika ingqwalasela kumaqela athile,Abafundi baqhubekeke malunga neentsuku zeveki,iinyanga zonyaka kunye nomhla wemini kanye le imiyo kanti nezinye ezisezayo.Abafundi baqhubekeke ukufaka oku kulandelayo kwikhalenda njengoko iziganeko zifika ngokufika; • Imihla yokuzalwa; • Imibhiyozo yeenkolo; • Iziganeko ezingembali; • Iziganeko zesikolo; ne • Iholide zikawonke-wonke. Makuqhubekeke ukwenza Abafundi baxele ixesha ngeyure, amacala eeyure, iziqingatha zeeyure besebenzisa iiwotshi zosiba kunye neeyure nemizuzu kwiiwotshi zamanani mihle le • Ngeeyure amacala eeyure nemizuzu ngeeyure nemizuzu kwiwotshi yamanani; kunye • Neeyure, iziqingatha zeeyure neekota zeeyure (umkhono) besebenzisa iiwotshi zosiba. Umzekelo, Abafundi bangacelwa ukuba baxele ixesha esingena ngalo isikolo, ixesha lekhefu (lebreyikhi) kunye nexesha lokuphuma kwesikolo, okanye lokutshintsha kwezifundo. Khetah amaxesha apho iwotshi ibonisa iyure ngqo okanye icala emva kweyure kungenjalo umkhono emva okanye phambi kweyure. Kuluncedo ukuba newotshi enkulu exhonyiweyo apha eklasini ukwenzela ukuba Abafundi bamana ukujonga kuyo. Abafundi bangazenzela nezabo iiwotshi. Usenokubacela ukuba bakubonise amaxesha ngamaxesha baquke ukubala okuthile, umzekelo. “Khanindibonise intsimbi ye-10 entloko. Ibingubani ixesha kwimizulu ngekota yeyure phambi kwentsimbi ye-10?” Jonga amanqaku eKota yoku-1.	Izifundo 6

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithathu iyure nemizuzu engama 24)
4.1 **Ixesha**	**Bala ubude bexesha namaxesha adlulayo** Sebenzisa ikhalenda ukubala uze uchaze ubude bexesha ngeeveki ngeentsuku neenyanga uquka • Guqula iintsuku uzise kwiiveki • Guqula iiveki uzise kwiinyanga Sebenzisa iwotshi ukubala ubude bexesha ngeeyure namacala eeyure	**Bala ubude bexesha namaxesha adlulayo** Sebenzisa ikhalenda ukubala uze uchaze ubude bexesha ngeeveki ngeentsuku neenyanga uquka • Guqula iintsuku uzise kwiiveki • Guqula iiveki uzise kwiinyanga Sebenzisa iwotshi ukubala ubude bexesha ngeeyure namacala eeyure	Abafundi baqhubekeke ukuziqhelisa ukuthetha ngobude bexesha nokulandelelanisa Ngexesha lokuzifundela Abafundi bayaqhuba nokwenza imisebenzi enxulumene nokuxela ixesha • Ngeeyure amacala eeyure nemizuzu ngeeyure nemizuzu kwiwotshi yamanani; kunye • Neeyure, iziqingatha zeeyure neekota zeeyure (umkhono) besebenzisa iiwotshi zosiba. Abafundi bangabala ngeeveki okanye iintsuku ukuba banikwe ikhalenda okanye inxalenye yekhalenda, umz. Ukukhangela iintsuku nokubala umahluko wexesha phakathi kwazo. **Ukufunda ixesha lewotshi yosiba ngemizuzu** Yenza malunga nezifundo ezi-3 apho Abafundi bagxininisa kwisakhono esifunekayo ukufunda ixesha ngemizuzu. ▪ Khumbuza abafundi malunga nentsingiselo ka-(*a.m.*) no(*p.m.*) ▪ Khumbuza abafundi ukuba iyure yenziwa yimizuzu engama-60; ngoko ke isiqingatha seyure senziwa yimizuzu engama-30, uze umkhono (ikota) weyure wenziwe yimizuz eli-15. Babalise ngezi-5 njengoko ukhomba amanani kwiwotshi yosiba. ▪ Bacacisele ukuba u“emva” no“phambi” bathetha ntoni. ▪ Nika Abafundi imisebenzi eyaneleyo yokuba baziqhelise ixesha lewotshi yosiba ngemizuzu. Abafundi mabanikwe ithuba lokuziqhelisa amaxesha amaninzi apha ekuhambeni kwemini kunyaka wonke. Abafundi bangajonga kwiwotshi yamanani ukuba banike ixesha elifanelekileyo na xa befunda ixesha lewotshi yosiba. Abafundi banike ithuba lokuzenzela iiwotshi zabo abanokuzisebenzisa ukuxela ixesha nokubala umahluko exesheni.	Izifundo 6

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithathu iyure nemizuzu engama 24)
4.2 Ubude	**Ukulinganisa okungekho seSikweni** • Thekelela/qikelela, linganisa landelelanisa, rekhodisha ubhale phantsi ubude usebenzisa iindlela ezingekho seSikweni njl umz. izandla, izantya, ubude beepensil, iikhawunti njl • Chaza ubude bezinto ngokubala uxele ubude ngeeyunithi ezingekho seSikweni. • Sebenzisa ulwimi lokuthelekisa umz.. ende kune, emfutshane kun, ephakamileyo kune, kunye nebuvuleka kune-.	**Ukulinganisa okungekho seSikweni** • Thekelela/qikelela, linganisa landelelanisa, rekhodisha ubhale phantsi ubude usebenzisa iindlela ezingekho seSikweni njl umz. izandla, izantya, ubude beepensil, iikhawunti njl • Thekelela/qikelela, ulinganise uze urekhodishe ubude besentimitha usebenzisa irula.	**Yintoni eyahlukileyo kwibanga lesibini?** Kwibanga- 2 Abafundi • Bebegqale kwiindlela ezingekho seSikweni zokulinganisela. • Baze baqaliswa ekulinganiseni ngeemitha. Kwikota - 2 kwibanga- 3 Abafundi bangaqhubekeka besebenzisa iinldela ezingekho seSikweni zokulinganisela kwakunye nokusebenzisa iimitha. Kwikota - 3 bangaqala ukusebenzisa iirula ngenjongo yokubala imilinganiselo ngeesentimitha. **Ukuthekelela,ukulinganisa,ukuthelekisa,urekhodishe ubude nodubanzi usebenzisa iisentimithazi** • Abafundi babethelela abakufundileyo bebonakalisa ulwazi kubude 1 (mitha) ukubala mithaLearner • Jonga amanqaku kwikota 2 • Ukusebenzisa irula Bonisa abafundi indlela yokulinganisa ukusuka kwiqanda (0). Xa abafundi besebenzisa iimilo ezingekho sesikweni badwelisa izinto abzakuzisebenzisa ukulinganisa . Xa belinganisa iisentimithazi awudwelisi rirula njengaxa uesebenzisa izinto Udwelisa kuphela izinto xa uza kulinganisa usebenzisa irula uqala kwiqanda (0) .  Irabha iyi 2 sentimitha ubude . Kuyenzeka okokuba ukwazi ukulungelelanisa isiqalo sento leyo ilungiswayo nelinye enani elikwirula uze emva koko uthabatheb inani elisekuqaleni kwento leyokwelo lisekugqibeleni.	Izifundo

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithathu iyure nemizuzu engama 24)
4.2 **Ubude**	**IUkuqalisa ukulinganisa /kala okusesiskweni** • Thelekisa/qikelela linganisa, landelelanisa ubude esebenzisa iimitha (ngeentonga ezimitha okanye okanye iintanjana ezibude buyimitha) njengemilinganiselo esesikweni yobude • Thelekisa/qikelela linganisa, landelelanisa ubude esebenzisa iirula. Akukho mfuneko yakuguqulela ukusuka kwimitha ukuya kwisentimitha.		 Irabha iyi (3 cm - 1 cm)= 2 iisentimitha ubude Ngaphandle kokuba abafundi bakubuzile, okanye bazifumanele ,inokwenziwa kwiBanga, 4. • Ukuthekelela/qikelela iisentimitha Abafundi mabazame ukufumana ngqo izinto ezinokulingana nesentimitha enye ubude. Mhlawumbi umnwe womnye wabo ungayi 1 sentimitha ububanziOku kungasetyenziswa njenge riferensi ukuqikelela. ubude, ububanzi ukuphakama kweesentimitha . Xa abafundi sele benamava ekulinganiseni ngeesentimith Bangaqikelela qho phambi kokuba balinganise • Imigca,imizobo, nezinto Abafundi mabaqale ngkulinganisa imigca . Kulula ukuthatha umlimlinganiselo wobude xa ulinganisa imigca, okanye ububanzi bemizo usebenzisa irula . Kunzima ukusebenzisa ubude,nokuphakama kwizinto ezibonwayo usebenzisa irula. KwiBanga lesi 4 abafundi baza kulinganisa iisentimitha neemimlimitha . KwiBanga lesi 3 abafundi abalindelekanga kuba basebenzisa imilimithazi. • Thelekisa imilinganiselo usebenzisa iisentimithazi Abafundi should bathelekisa ubude compare, ububanzi nokuphakama kwezinto ekulinganiswa ngayo iisentimitha • Ukurekhodisha imilinganiselo Nangona ukwenza umlinganiselo usisakhono esenziwayo, Abafundi mabarekhodishe imilinganiselo abayenzileyo (zombini ezingekho sesikweni imilo neemithazi) ngalo lonke ixesha. **Ukuthatha umlinganiselo wobude njengemeko yokusombulula iingxaki nokwenza izibalo**	Izifundo

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithathu iyure nemizuzu engama 24)
4.2 Ubude			Ngexesha elabelwe amanani, Ukubala,nokuzalana Abafundi bangasombulula iingxaki besebbenzisa umxholo we • Umlinganiselo wobude ongekho sesikweni; • Umlinganiselo wobude kwimithazi ; no • mlinganiselo weesentimithazi. Thathela ingqalelo uludwe lwamanani, kunye noludwe lweengxaki ngokufanelekileyo kule kota Abafundi abablindelekanga ukuba • Bazi ukuba 100 cm = 1 m; • Baguqule iisentimithazi neemithazi • Funfunda ubude ngeemilimithazi (oku makwenziwe ukusuka kwiBanga 4); • Bazi ukuba 10 mm = 1 cm; okanye • Baze baguqule phakathi kwee sentimithazi neemithazi Ukubala ngeesentimithazi makukhethwe ukuze Abafundi bangadluli ngaphaya 100 sentimithazi	Izifundo

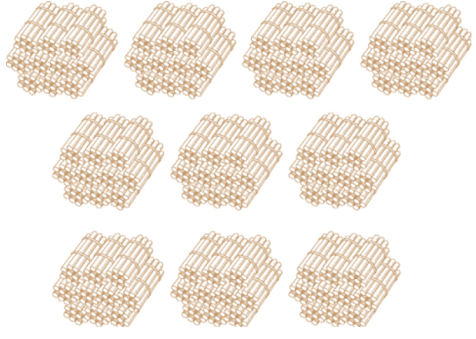
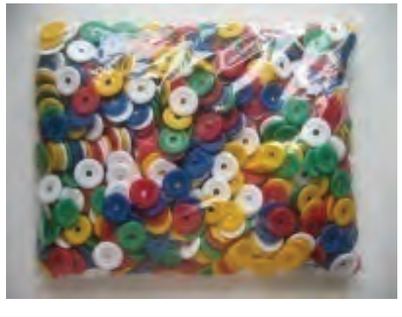
IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithathu iyure nemizuzu engama 24)
4.3 **Ubunzima**	**Ukubala umlinganiselo ngokungekho seSikweni** • Thelekelela, linganisa, thelekisa, landelelanisa uze urekhode ubunzima esebenzisa iindlela ezingekho seSikweni zokubala umlinganiselo wesikali umz. iibloko,nezitena njl. • Sebenzisa ulwimi ukuthetha ngokuthelekisa umz. khaphukhaphu, nzima, khaphukhaphana, nzinyana. **Ukuqala iindlela ezisekweni zokuveyisha** • Thelekelela, linganisa, thelekisa, landelelanisa uze urekhode ubunzima bezinto ezipakishelwe ukuthengiswa umzekelo iigram ezimbini zerayisi nekhilogram yengqolowa umz. Iigram ezingama-500 zetyiwa. • Babale umlinganiselo wabo ngeekhilogrem besebenzisa isikali sokuveyisha Akukho mfuneko yakuguqulela iigram kwiikilogram.		Ngexesha lokuzifundela ngabanye Abafundi bangaqhubekeka be: • Qikelela, ulinganisele ulandelelanise uthelekise ze urekhodishe ubunzima bezinto usebenzisa isikali sokulinganisa izinto ezingekho seSikweni. • thelekisa, ulandelelaniseze urekhodishe abakufumeneyo - igrosari uze unike nobunzima bayo ngeekhilogramu - igrosari uze unike nobunzima bayo ngeegremu Jonga amanqaku kwikota 2. **Umlinganiselo wobunzima njengesihloko sokusombulula iingxaki zokubala** Ngexesha ellabelwe amanani nokuzalana Abafundi bangasombulula iingxaki basebbenzise umxholo wo • mlinganiselo wobunzima ongekho sesikweni; • mlinganiselo wobunzima weekkilogramu; no • Mlinganiselo wobunzima weegremu. Thathela ingqalelo ngokufanelekileyo umda wamanani noluhlu lweengxaki kule kota.	

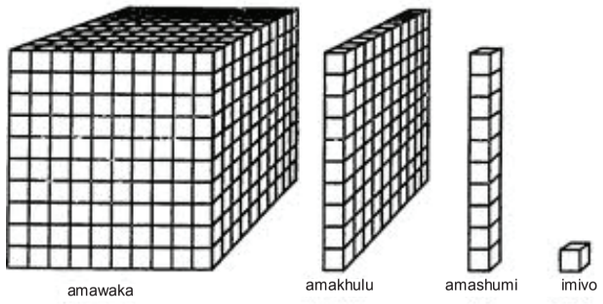
IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithathu iyure nemizuzu engama 24)
4.4 **Umthamo/ Ivolumu**	**Umlinganiselo ongekho sesikweni** • Thelekelela uze uthathe umlinganiselo,thelekisa uze ulandelelanise umthamo wezikhongozeli (isikhongozeli sinokuthwala umthamo ongakanani) ngokusebenzisa umlinganiselo ongekho sesikweni,umz. icephe,ikomityi. • Chaza umthamo wesikhongozeli ngokubala nokuxela ukuba kuthathatha iiyunithi ezingekho sesikweni ukuzalisa isikhongozeli.umz. ibhotile inomthamo weekomityi ezine.		Ngexesha lokuzisebenzela bebodwa msebenzi abafundi bangaqhubekeka ngoku Qikelela enze umlinganiselo, bathelekise balandelelanise, ze barekhodishe umthamo kwizikhongozeli okanye umyinge wesikhongozeli besebenzisa imilinganiselo engekho seSikweni.Landela iiresipi, uquka ukubhaka, ingumxholo obalulekileyo onokuwusebenzisa xa usenza umlinganisel. Khetha iiresipi apho izithako zazo kuza kusetyenziswa iikopi,amatispuni okanye imilinganiselo engekho seSikweni. • Thelekisa ze ulandelelanise uludwe ngokobunzima lweebhotile negrosari apho ubunzima buxeliweyo ngaphandle kwiipakethi. • Sebenzisa ilitha 1yebhotile okanye ijoko uqikelela ubunzima nomlinganiselo,uthe lekisa,ulandelelanise ze urekhodishe umthamo okanye umyinge kwizikhongozeli zeelitha. . • Sebenzisac izikhongozeli eziphawuliweyo ngokwe mililitha umz.. 200 ml, 330 ml, 500 ml, 750 ml, or 250 ml imilinganiselo yeekopi okanye, 5 ml okanye amatispuni omlinganiselo oziimililitha ezili-10,,okanye iijoko eziphawulwe ii ngomthamo nomyinge silinganise kwizikhongozeli ezingaphawulwanga. Jonga amanqaku kwikota 2. Abafundi mabanikwe imisebenzi ebhalwayo ukubethelela imisebenzi ebebeyenzile, kuquka ukufunda imifanekiso ye: • Iziphumo zabo zomthamo mazibhalwe ngeelithazi bezilandelelanisa ngokufanelekileyo • Imifanekiso yeejoko apho umthamo ungaaneno kwenani nge 1 ilitha okanye 2 iilitha lemgceni. • Kulindeleke ukuba abafundi bafunde inani elikufuphi nomgca Bachaza umthamo ukuba ungakanani mninzi/ unganeno/ usondele kulo / ugqithe kancinci /ugqithe kakhulu/ kakhulu kancinci ngqo inani(leelithazi) bayazifunda kwijoko.. • Iziphumo zabo zomthamo mazibhalwe ngemililithazi bezilandelelanisa ngokufanelekileyo • Imifanekiso yeejoko apho umthamo ungaaneno kwenani lemilithazi ngasemgceni. Kulindeleke ukuba Abafundi bafunde inani elikufuphi nomgca.	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithathu iyure nemizuzu engama 24)
4.4 **Umthamo/ Ivolumu**	**Ukuqala iindlela ezisesikweni zokuthatha umlinganiselo** • Thelekelela, linganisa, thelekisa, landelelanisa urekhode umthamo wezinto ngokulinganisa ngeelitha, isingatha selitha ikota yelitha. • Thelekisa, landelelanisa urekhode umthamo wemveliso ethengwayo ngokwendlela izikhongozelo ezibhalwe ngayo ngaphandle. umz. 2 litha zobisi, 1 litha yesiselo esibandayo, 5 litres yepeyinti or ngokweemililitha umz. 500 ml of yobisi, 340 millilitha yesiselo esibandayo, 750 lemililitha yeoyile • Bazi ukuba ikomityi esesikweni inomthamo ongu- 250 millilitha • Bazi ukuba itispuni limthamo uziimililitha ezi-5. Akukho mfuneko yakuguqulela zilitha kiwiimililitha okanye zimililitha kwilitha.		**Umlinganiselo womthamo njengemeko sokusombulula iingxaki zokubala** Ngexesha elabelwe amanani, Ukubala,nokuzalana Abafundi bangasombulula iingxaki besebbenzisa umxholo wo • mlinganiselo womthamo / umyinge ongekho sesikweni; umz.UGogo usebenzisa iikopi ezimbini zobisi ukwenza ipudini.Ukuba uyuphinde kabini iresipi,lungakanani ubisi aza kulidinga /kulifuna? • mlinganiselo weelithazi ; no • mlinganiselo weemililithazi Thathela ingqalelo uludwe lwamanani, kunye noludwe lweengxaki ngokufanelekileyo kule kota	

IZIHLOKO	IINGQIQO NEZAKHONO OKULINDELEKILEYO EKUPHELENI KONYAKA	IINGQIQO NEZAKHONO UGQALISELO LWEKOTA 3	AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo zezithathu iyure nemizuzu engama 24)
4.5 **Umjikelo nommandla**	**IPerimitha/ Umjikelo** • Phanda umgama kumacala onke kwizinto ezinemiloezino kwakheka kuka 2-D imilo ezinokwakheka kuka 3-D usebenzisa umtya **Ummandla/ Umjikelo** • Phanda **ummandla** usebenzisa itayile	**IPerimitha/ umjikelo** • Phanda umgama kumacala onke kwizinto ezinemilo ezinokwakheka kuka 2-D no 3-D usebenzisa umtya	**Umjikelo womlinganiso omtsha kwiBanga lesi 3 .** Umjikelezo ulinganiswa ngokungekho sesikweni kwiBanga lesi 3 kuphela. Nika Abafundi imisebenzi emininzi eyenziwayo besebenzisa imitya ukulinganisa bejikeleza uluhlu lwezinto ezinjenge ntloko zabo, iibhotile (kuquka zonke iibhotile ezinemilomo emincinci nevulekileyo) Bayeke baqikelele kuqala Abafundi izinto abacinga ukuba zineperimitha enkulu baze emva koko bajonge umgama eziwuthathayo ngokusebenzisa umtya baze bazithelekise. Abafundi bangaphinda balinganise umjikelo weemilo ezinokwakheka kuka **2-D** besebenzisa umtya. Abafundi bangaphinda benze umsebenzi wokulinganisa okungekho sesikweni besebenzisa iiyunithi ezingamiselwanga ezifana neziciko zebhotile, iibhokisi zematshisi, njalo njalo.	Isifundo 1

IBANGA 3 IKOTA3 5.INDLELA YOKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
IZIHLOKO	**IINGQIQO NEZAKHONO** **Okulindelekileyo ekupheleni konyaka**	**IINGQIQO NEZAKHONO** **UGQALISELO LWEKOTA YESI 3**	**AMANQAKU NGENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
5.4 **Qokelela ugcwangcise ulwazi**	**Qokelela ucwangcise ulwazi** • Qokelela ulwazi ngeklasi okanye ngesikolo ukuze uphendule imibuzo ebuzwe ngutitshala • Gcwangcisa ulwazi olunikwe ngutitshala okanye incwadi • Gcwangcisa ulwazi - kuluhlu - kwiithali - kwitheyibhile	**Qokelela ucwangcise ulwazi** Qokelela ulwazi ngeklasi okanye ngesikolo ukuphendula imibuzo ebuzwe ngutitshala **Ukusebenzisa umelo lwazi** Sebenzisa ulwazi kwizitena **Cazulula utolike ulwazi** Phendula imibuzo ngokolwazi olukwizitena	Kuyacetyiswa ukuba abafundi mabenze igrafu yezitena kwikota yokuqala,baze kwikota yesibini bacazulule iigrafu zemifanekiso netheyibhile ozinikiweyo zomjikelezo wolwazi kwikota yesithathu Abafundi mabasebenze .(jonga amanqaku kwikota yokuqala) okanye uqale ngokusebenzisa umelo- lwazi lwezintlu okanye iithali okanye iitheyibhile ze uphinde uzilungise kwakhona zibe yigrafu yezitena. Kulula kubafundi xa bezoba igrafu yezitena kumaphepha ayibloko.Kufuneka ukhumbuze abafundi ngeempawu eziphambili zegrafu yezitena(jonga amanqaku kwikota yoku 1) Abafundi kufuneka baphendule imibuzo engegrafu yezitena,jonga kwikota yoku-1iintlobo zemibuzo eyahlukeneyo.	3 izifundo
5.6 **Ukusebenzisa umelo kulwazi**	**Ukusebenzisa i...umelo kulwazi** • igrafu ngemifanekiso • igrafu yezitena			
5.5 **Cazulula utolike ulwazi**	**Cazulula utolike ulwazi** Phendula imibuzo ; • igrafu zemifanekiso • igrafu zezitena			

IBANGA 3 IKOTA 4 1. AMANANI, II-OPAREYSHINI NOLALWAMANO				
IZIHLOKO	**IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO ZALE KOTA**	**INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA**	**IXESHA** (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.1 **Ukubala izinto**	**Ukubala izinto eziphathekayo.** Qikelela ze ubale malunga izinto zangemihla ngemihla ukuya kwi- 1 000 yonke imihla. Ubuchule bokwahlula ngokwamaqela buyakhuthazwa.		izinto ezili-1 000. Abafundi ngoku bamelwe kukuba nolwazi okanye ingqiqo yoku “ ingakanani “bezinto ze-1 000 .Ubuchule bokwahlula ngokwamaqela buyakhuthazwa.  	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.1 **Ukubala izinto**	**Ukubala izinto eziphathekayo.** Qikelela ze ubale malunga izinto zangemihla ngemihla ukuya kwi- 1 000 yonke imihla. Ubuchule bokwahlula ngokwamaqela buyakhuthazwa.		 Ekupheleni kwale kota abafundi bamelwe kukuba babone,, baphathe kwaye basuse Ekupheleni kwale kota kufuneka bakwazi ukuphendula imibuzo nemiyalelo efana nale • Bala ngezi – 5 nama- 10. • Phinda ulungise ubale kwakhona. Ufumana kwa elo nani lezinto zokubala? • Nazi izinto zokubala ezingama- 200. Zibale ze uzahlule ngokwamashumi. Xa ubala izinto zokubala ezingama -200, ingaba ukhetha ukuzibala ngama -20 okanye ngama-25? Ngoba? • Yiyiphi eyona ndlela ingcono yokubala ingqokelela yeepensile? • Nazi izinto zokubala ezingama -80 • Ukuba sibala ngezi-2 okanye ngamashumi, ingaba usaza kufumana kwa esasiphumo sinye senanani lezinto zokubala? • Bala izinto zokubala zibe -46 ngokuthi uzahlule ngezi-2. Ingaba kulula na ukuzibala ngezibini kunokubala ngoonye?	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.2 **Ukubala usiya phambili ubale ubuya umva.**	**Bala usiya phambili uphinde ubuye umva:** • ngo-1 ukusuka kwi- 0 ukuya kuma-1000 • ngama-10 ukusuka nakweziphina iziphindaphindi ukuqalela kwi-0 ukuya kuma- 1000 • ngezi-5 ukusuka nakweziphina iziphindaphindi zesi-5, uqalela kwi-0 ukuya ku-1000. • ngezi-2 ukusuka nakweziphina iziphindaphindi zesi-2 ukuqalela ku-0 ukuya ku-1000 • ngezi-3 ukusuka nakweziphina iziphindaphindi zesi-3 ukuqalela kwi-0 ukya kuma-1000. • Ngezi-4 ukusuka nakweziphina • iziphindaphindi zesi- 4 ukuqalela kwi-0 ikuya kuma - 1000 ngama-20, ngama- 25, ngama-50, ngama-100 ukuya ubuncinane kwi-1 000	**Bala usiya phambili uphinde ubuye umva:** • ngo-1 ukusuka kwi- 0 ukuya kuma-1000 • ngama-10 ukusuka nakweziphina iziphindaphindi ukuqalela kwi-0 ukuya kuma- 1000 • ngezi-5 ukusuka nakweziphina iziphindaphindi zesi-5, uqalela kwi-0 ukuya ku-1000. • ngezi-2 ukusuka nakweziphina iziphindaphindi zesi-2 ukuqalela ku-0 ukuya ku-1000 • ngezi-3 ukusuka nakweziphina iziphindaphindi zesi-3 ukuqalela kwi-0 ukya kuma-1000. • Ngezi-4 ukusuka nakweziphina iziphindaphindi zesi- 4 ukuqalela kwi-0 ikuya kuma - 1000 ngama-20, ngama- 25, ngama-50, ngama-100 ukuya ubuncinane kwi-1 000	**Ekupheleni kwale kota kufuneka abafundi bakwazi uku:** Bala ngokuzithemba, ngo-1, ngama-10, ngezi-5, ngezi-2, ngama-20, ngama-25, ngama-50, ngama-100 ukuya kwi-1 000 Phendula imibuzo enje ngale: • Bala ama-10 ukuqalela ku-400 ukuya ku-500. Wakugqiba, bala ubuya umva. • Bala ngezi-2 ukuqalela kuma-564 ukuya kuma-580. Wakugqiba bala ubuya umva kwakhona. Bala ubuya umva ngama-100 ukusuka kuma-620. Ubale ama-100 amangaphi? Bala ubuya umva ngo-1 usuka kuma -876 ukuya kuma-866.Ubale oonye abangaphi oo-1? Ungaqiniseka njani ukuba ubale kakuhle? Bala ubheka phambili nge-5 amanyathelo ali -15 usuka kuma -305. Uphi ngoku? Ukuba ubala ngama-25 ukusuka kuma-525 ukuya kuma-850, ingaba uza kusebenzisa inani elingama 725? Bala uqinisekise. Leliphi inani elilandelayo? Ama-467,ama- 468,ama- 469, Ama-725,ama- 750,ama- 775, Ama-420, ama-440, ama-460 Ama-820, ama-800, ama-780 Bala usebenzisa umgca manani Zoba umgca manani ongenanto, ze ubonise la manani andelayo kuwo: 602, 604, 610. Ungawabhala phi ama-606? Bala usebenzisa umgca manani, uqala kuma-602 ukuya ku-610. Bala ngamashumi uqalela kuma-314 ukuya kuma-344. Zeziphi iidijithi ezitshintshayo? Zeziphi iidijithi ezingatshintshiyo? Kutheni amakhulu engatshintshi? Ukuba ubala ubuya umva, kwenzeka ntoni	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.3 **Isimboli zamanani namagama amanani.**	**Chonga, nakana ze ufunde amanani:** • Chonga, nakana ze ufunde iisimboli zamanani ukuqala kwi-0 ukuya kwi-1 000 • Bhala isimboli zamanani ukuqala kwi-0 ukuya kwi-1 00 • Chonga, nakana ze ufunde amagama amanani ukuqala kwi-0 ukuya kwi1 000. • Bhala amagama amanani kwi-0 ukuya kwi--1 000	**Chonga, nakana ze ufunde amanani:** • Chonga, nakanze ufunde isimboli zamanani ukuqala kwi-0 ukuya • kwi -1 000. • Bhala isimboli zamanani u-0 ukuya kwi-1 000 • Chonga, nakana ze ufunde isimboli kunye namagama amnanani u- 0 ukuya kwi-1000 • Bhala amagama ala manani: u-kuqala kwi 0 – ukuya kwi-1000	**Ekupheleni kwale kota kufuneka Abafundi bakwazi uku:** • Bhala nokufunda amanani ubuncinane ukuya kwi-1 000. • Phendula imibuzo enje ngale: Ngubani eli nani likweli khadi? **642** Fumana ikhadi elinama-738 okanye amakhulu asixhenxe anamashumi amathathu anesibhozo. Funda la manani alandelayo ngokukhwaza: 534, 947, 974, 345 Funda la gama: • Amakhulu amathathu anamashumi amane anesibini • Amakhulu asibhozo anamashumi amabini ananye. • Amakhulu asibhozo anamashumi amathandathu anesithoba. • Iwaka ilinye • Amashumi amabini anethoba Bhala ngamanani. • Amakhulu amahlanu anamashumi asixhenxe. • Amakhulu amane. • Amakhulu amathandathu anamashumi asibhozo anesihlanu.	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.4 **Chaza, thelekisa ulandelelanise**	**Chaza, thelekisa ulandelelanise amanani uyokuma kuma- 999** • **Chaza, thelekisa amanani apheleleyo** uyokuma kuma- 999 usebenzisa uncinci kune- nonkulu kune- ilingana, ingaphezulu kune, ingaphantsi kune- no –ilingana no- • Chaza ulandelelanise amanani de ufike ku-999 usuka kwelona lincinci ukuya kwelona likhulu, ukusuka kwelona likhulu ukuya kwelona lincinci. **Sebenzisa amanani olandelelwano ubonise ukulandelena** **nendawo** **Sebenzisa, ufunde ze ubhale amanani olandelelwano, ukwasebenzisa nezifinyezo ukuya kuma 31**	**Chaza, thelekisa ulandelelanise amanani uyokuma kuma- 999** • Chaza, thelekisa amanani **apheleleyo** uyokuma kuma- 999 usebenzisa uncinci kune- nonkulu kune- ilingana, ininzi kuno, imbalwa kune- no –ilingana no- • Chaza ulandelelanise amanani de ufike ku-999 usuka kwelona lincinci ukuya kwelona likhulu, ukusuka kwelona likhulu ukuya kwelona lincinci **Sebenzisa amanani olandelelwano ubonise ukulandelena** **nendawo** **Sebenzisa, ufunde ze ubhale amanani alandelelanayo, ukwasebenzisa nezifinyo ukuya u kuma 31**	**Ekupheleni kwale kota kufuneka abafundi bakwazi uku:** Landelelanisa amanani ubuncinane akwazi ukufika kwi-1000. Ukuphendula imibuzo ebuzwe ngeendlela ezahlukileyo: Ukufunda ngomgca manani.  Andawoni ama-450? Andawoni ama-700? Andawoni ama-350? Ngoku fakela amanani aseleyo Bhala amanani ukususka kwelona likhulu ukuya kwelona lincinci 345, 428, 389, 561, 600, 739, 620, 824 Thelekisa amanani uyoma kuma -99 Ngubani inani elikhulu ngo-1 kunama-563 Ngubani inani elilandela emva kwama-768 Ngubani inani elingaphantsi ngo-1 kunama-431 Ngubani inani elingaphezulu nge-10 kunama- 620. Ngubani inani elingaphantsi ngo-10 kunama-650 Ngubani inani elingaphezulu magama-20 kunama-480 Ngubani inani elingaphantsi ngama-20 kunama-740 Ngubani inani elingaphhezulu ngama-25 kunama-625 Ngubani inani elingaphezulu ngama-50 kunama250 Ngubani inani elingaphantsi ngama-50 kunama-700 Ngubani inani elingaphezulu ngama-100 kunama-300 Yinyani okanye ayiyonyani. Xhasa impendulo yakho	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.4 **Chaza, thelekisa ulandelelanise**	**Chaza, thelekisa ulandelelanise amanani uyokuma kuma- 999** • **Chaza, thelekisa amanani apheleleyo** uyokuma kuma- 999 usebenzisa uncinci kune- nonkulu kune- ilingana, ingaphezulu kune, ingaphantsi kune- no –ilingana no- • Chaza ulandelelanise amanani de ufike ku-999 usuka kwelona lincinci ukuya kwelona likhulu, ukusuka kwelona likhulu ukuya kwelona lincinci. **Sebenzisa amanani olandelelwano ubonise ukulandelena** **nendawo** **Sebenzisa, ufunde ze ubhale amanani olandelelwano, ukwasebenzisa nezifinyezo ukuya kuma 31**	**Chaza, thelekisa ulandelelanise amanani uyokuma kuma- 999** • Chaza, thelekisa amanani **apheleleyo** uyokuma kuma- 999 usebenzisa uncinci kune- nonkulu kune- ilingana, ininzi kuno, imbalwa kune- no –ilingana no- • Chaza ulandelelanise amanani de ufike ku-999 usuka kwelona lincinci ukuya kwelona likhulu, ukusuka kwelona likhulu ukuya kwelona lincinci **Sebenzisa amanani olandelelwano ubonise ukulandelena** **nendawo** **Sebenzisa, ufunde ze ubhale amanani alandelelanayo, ukwasebenzisa nezifinyo ukuya u kuma 31**	Ama-220 akufutshane nama-200 kunama-250 Ama-403 akakho kufutshane nama-400 kunama-420 I-15 likufutshane kwi-0 kunama-30 Fakela u-khulu kuna- okanye u-ncinci kuna- Ama-145 _____kunama-145 Ama-823_____kunama-789 Ama-66 _____kunama- 664 Sebenzisa iidijithi 9, 0, 6 ukwenza elona nani likhulu onakho ukulenza . Leliphi elona nani lincinci onokulenza?	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo leedijithi ezintathu de uyokufika kuma-999** • Nakana idjithi ukuba yeyiphi idijithi eboniswayo. • Calucalula iidijithi ezintathu zamanani de uyokufika kuma-999 zibe ziziphindaphindi • zika- 100, zika-10 nezo-1 • Chonga uze uxele ixabiso ledijithi nganye.		Kule kota ukubethelelwa kwezi ngqiqo kufuneka kugxinisisiwe kwaye kukhuthazwe: • Amanani anokwahlulwa abe ngamakhulu, amashumi nemivo • Qonda ukuba ama-51 angaphezulu kune-15 kuba ama-51 anamaqela / aneenyanda ezi-5 zamashumi, kwaye ne-15 lineqela/linenyanda enye yeshumi kuphela. • Xa abafundi bebala ngamashumi, baze bafike kuma-40, bayazi ukuba babale amashumi-4.. **Ekupheleni kwale kota kulindeleke ukuba abafundi bakwazi uku:** **Sebenzisa, ukufunda nokubhala olu lwimi ukuze bakwazi ukuqonda nokusebenza ngexabiso lendawo** Imivo, amashumi, amakhulu, iidijithi, inani enedijithi enye inani elineedijthi ezimbini...,inani eneedijithi ezintathu, ixabiso lendawo... **Nakana i-0 njengexabiso lendawo kumanani aneedijithi ezimbini nezintathu njengaku:** 60 305 720 Yahlula ezi nombolo ubonise ixabiso ledijithi nganye: 637 = 600 + 30 + 7 Sebenzisa i-**iiflad khadi** ukubonisa oku: **600** **30** **7** Sebenzisa iibhloki zedienes ukubonisa ixabiso lendawo lenombolo. Phendula imibuzo efana nale: Xela ukuba ngaba idijithi isi-7 umele ntoni ku-127? No-2 ? No-1? Mangaphi amakhulu afumaneka kwinani ngalinye kula angezantsi: 300, 500, 700, 412, 568 Zingaphi iinyanda zamashumi ezifumaneka kula manani angezantsi? 50, 80, 100, 200, 700, 120	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.5 **Ixabiso lendawo elimi kuyo inani.**	**Nakana ixabiso lendawo leedijithi ezintathu de uyokufika kuma-999** • Nakana idjithi ukuba yeyiphi idijithi eboniswayo. • Calucalula iidijithi ezintathu zamanani de uyokufika kuma-999 zibe ziziphindaphindi • zika- 100, zika-10 nezo-1 • Chonga uze uxele ixabiso ledijithi nganye.		**Bhala ngamanani:** Ikhulu elinesihlanu Amakhulu amathandathu anamashumi amabini anesihlanu Amakhulu amane anamashumi asibhozo anethoba. Amakhulu amathathu anesithathu **Bhala ngamanani:** 1-ikhulu + 2 amashumi amakhulu amabini+ 3 amashumi + 7 imivo amakhulu amane+ 9 amashumi + 3 imivo Cacisa ukuba leliphi inani elimelwe kukungena kwibhokisi nganye 872 = □ + 70 + 2 129 = 100 + □ + 20 + 9 346 = 300 + 40 +6 Ixabiso lesi-dijithi nganye kuma-762	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
SOMBULULA IINGXAKI KWIMEKO ETHILE				
1.6 **Ubuchule bokusombulula iingxaki**	Sebenzisa obu buchule bulandelayo xa usombulula iingxaki uze nezisombululo : • Ukwakha nokwahlula amanani • ukuphinda phinda kabini nokohlula kabini ngokulinganayo • imigca manani • ukusondeza kumashumi		Abafundi balindeleke ukuba basombulule izibalo zamagama besebenzisa obu buchule bulandelayo: • Ukwakha okanye ukwahlula amanani • Ukuphinda phinda kabini nokohlula kabini ngokulinganayo • Imigca manani • Ukusondeza kumashumi Jonga kwikota-2 obu buchule bulandelyo: • Ukwakha nokwahlula amanani • Ukuphinda phinda kabini nokohlula kabini ngokulinganayo • Imigca manani **Ukusondeza kumashumi** Kule kota abafundi banokusebenzisa ubuchule bokusondeza xa besenza izibalo zamagama. Umzekelo: UNoah, unama-R48, 00. Iipakethe zamakhadi awaqokeleleyo zixabisa ama-R5,00. Zingaphi iipakethe zamakhadi anokuzithenga? Abafundi banokusondeza ama-R48 kufutshane namashumi, oko kukuthi ngama-R50.00.Loo nto ithethe ukufutshane ukuba angathenga iipakethe ezili-10. Abafundi kufuneka babale babone ukuba impendulo zabo zikufutshane kangakanani na kwimali esondezwa kuyo. Bavumele abafundi bazikhethele indlela ezakubenza ukuba babale lula. Kufuneka ubakhokele abafundi abafundi xa besebenzisa ubuchule obungebubo. Abafundi akuyomfuneko ukuba babe iingcali kwindlela abazisebenzisayo. Baya kuba nakho ukubusebenzisa ezi ndlela kwakhona kwisigaba esiphakathi..	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.7 **Ukudibanisa, ukuthabatha**	Sombulula izibalo zamagama kwimeko ethile uze uchaze isisombululo sakho sengxaki eziquka ukudibanisa, ukuthabatha ezineempendulo ukuya kuma- 999.		**Ekupheleni kwale kota, kulindeleke ukuba Abafundi bakwazi ukusombulula ezi zibaloi zilandelayo:** Ukudibanisa nokuthabatha Iindidi ezingundoqo zokudibanisa nokuthabatha zintathu, udidi ngalunye lunokubekwa ngeedlela ezahlukeneyo. Iindidi ezingundoqo zezi: Itshintshi UNoluthando uqokelele ama-234 ezinto zokuncamathelisa. USilo umongeze izinto zokuncamathelisa Ezingama - 80. Ingaba zingaphi zizonke izinto zokuncamathisela anazo ngoku? Uloliwe unabakhweli abangama- 500. Abangama-176 bohlika endleleni. Bangaphi abakhweli abashiyeke kuloliwe? Dibanisa UNosisi uqokelelela isikolo izinto zeprojekthi ebezikhe zasetyenziswa ze ziphinde zisetyenziswe ngokutsha. Uqokelele ama-124 eebhotile zeplastiki neetoti ezingama-268. Uqokelele izinto ezingaphi zizonke? Ivenkile inama-368 eepakethe zeetshipsi, ama-82 epakethi zii-tshippos eziseleyo ziiniknaks. Zingaphi iipakethe zeeniknaks eziseleyo ? Thelekisa Ibanga lesi-2 liqokelele ama- R446, laza ibanga lesi-3 laqokelela ama-R729. Imali eqokelelwe libanga -3 ingaphezulu ngamalini kweyebanga-2? **Ukubuzwa kwemibuzo ngeendlela ezahlukeneyo** Imibuzo mayizibuzwe ngeendlela ezahlukileyo Umzekelo, Zombini ezi zibalo zingxaki zezibalo zetshintshi, kodwa “ okungaziwayo” kona ziindawo ezahlukileyo kwingxaki. Ivenkile ineepakethi zomgubo wemili-mili; kuphinde kwa-odolwa iipakethe ezingama-55 kwakhona. Ngoku kukho iipakethe ezingama- 170 zikamili-mili. Ingaba bezingaphi iipakethe zemili-mili ekuqaleni? Ivenkile ibinepakethe ezingama-500 zeswekile. Emva kokuthengisa, kushiyeke ama-324 eepakethe zeswekile. Bathengise iipakethe ezingaphi?	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.8 **Ukudibanisa okuphinda phindiweyo kukhokelela kuphinda phindo**	Sombulula izibalo zamagama akwimeko ethile uze uchaze isisombululo sakho kuphinda phindo lweempendulo de uyokuma kuma- 99.		**Imizekelo yezibalo ezinokwenziwa kule kota** **Ukudibanisa okuphinda-phindayo** **Mangaphi amavili eemoto ezili-36?** **UKUHLELA** UThami uzigcinela ama-35c ngeveki. Unokuba uzigcinele malini ngeeveki ezisi-8? **ligridi** Umnumzana Khumalo utyala imiqolo yemithi yee-orenji engama-20. Umqolo ngamnye unemithi engama-12. Mingaphi imthi iyonke? **Izibalo ezibonisa unxulumano phakathi kwabanako nenzuzo yako.** UHeila uthengisa amqebengwana nge-R4 inye. Yenza itheyibhile ukumnceda umntwana ukuba afumane ixabiso lee-oda ezinkulu.	

Inani lamaqebengwana	1	2	3	4	5	10	20
Ixabiso ngeeR	4	8					

Sebenzisa le theyibhile ukufumana ixabiso lamaqebengwana asi-7 kunye namaqebengwana angama-23.

USindi ugcina umntwana Ubiza iR20 yokukhwela, ze abhatalise i-R5 ngeyure ukugcina usana olo. Mgqibezelele le theyibhile.

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1.9 **Ukwahlula amanani ngokwamaqela nokwaba ngokulin ganayo kukhokelela** **ekwahlula-hluleni**	Sombulula uze uchaze izisombululo kwingxaki ezenziwayo eziquka ukwaba ngokulingana nokwahlula ngokwamaqela de ufike kuma-100, kuquka neempendulo ezineentsalela.		**Imizekeliso yezibalo ezinokwenziwa kule kota.** Ukwahlula ngokwamaqela Ukubeka ngamaqela, ze ulahle intsalela Iziko lokubhaka lithengisa amaqebengwana ali-12 kwingxowa nganye. Banamaqebengwana angama-118. Zingaphi iingxowana zamaqebengwana ekufuneka benazo ukuba ingxowa nganye inamaqebengwana ali-12? **Yahlula ngamaqela ubandakanya netsalela kwimpendulo yakho** Umfama unama-227 amaqanda. Zingaphi iibhokisana zamaqanda anokuzisebenzisa ukupakisha onke la maqanda. ezinokuthatha amaqanda ama-6 inye **Ukwaba ngokulinganayo** Ukwaba ngokulinganayo, de ulahle intsalela Abahlobo abahlanu bohlulelana ngokulinganayo ngeelekese ezingama-84. Bafumana zibe ngaphi emnye	

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1.10 **Ukwaba oku khokelela kumaqhezu**	Sombulula uze uchaze izisombululo kwiingxaki ezenziwayo ezibandakanya ulwabiwo ngokulinganayo olukhokelela kisisombululo samaqhezu umz. ½, ¼, ¾, 2/5 njl		**Imizekelo yezibalo ezinokwenziwa kule kota.** **Ukwaba ngokulinganayo okukhokelela kumaqhezu** Ningabahlobo aba-6, yabelanani ngokulinganayo ngamaxwebhu ama-6 eetshokholethi ze kungabikho kwanto isalayo. Ningabahlobo aba-3, yabelanani ngokulinganayo ngamaxwebhu asi-7 eetshokholethi ze kungabikho kwanto isalayo. **Iqhezu lengqokelela** Umakhulu unika uKiki a-R12. Yena uKiki ufuna ukugcina isithathu eshumini samaqhezu semali yakhe. Kufuneka egcine malini? Ezi izibalo kufuneka zenziwe emveni kokuba Abafundi sebekwazi ukusombulula Iingxaki zokwabelana nokuba zine nokuba zintlanu, ezikhokelela kumaqhezu kwaye bawazi amagama amaqhezu. **Ukudityaniswa kwamaqhezu** Abadlali bebhola yomnyazi bali-14 bebonke. Umqeqeshi wabo unika umdlali ngamnye isiqingatha se-orenji. Zingaphi ii-orenji anokuzisebanzisa ukwabela abadlali? Ezi izibalo kufuneka zenziwe emveni kokuba abafundi sebekwazi ukusombulula iingxaki zokwaba ngokulinganayo nokuba zine nokuba zintlanu, ezikhokelela kumaqhezu kwaye bawazi amagama amaqhezu. **Ukubhalwa kwamaqhezu** Abafundi abamelanga ukuba babhale iisimboli zamaqhezu. Bona mabafunde ukuleyibhelisha amaqhezu umzekelo: 1/5, 3/4 okanye 3/6. Loo nto inokubanceda okokuqala Abafundi bawazi amagama amaqhezu nokuchaza ukuba mangaphi amaqhezu alinganyo enza into epheleleyo, umzekelo ihafu,isithathu eshumini, iikota, njl olwesibini mangaphi amaqhezu amkaqwalaselwe,umz: iqhezu u-mbini kwisithathu Ukubonisa izibalo zamaqhezu Abafundi mabazizobe iimpendulo zabo ukubonisa ukuba bayaziqonda izibalo. Kulindeleke ukuba abanye Abafundi bangakwazi ukuzoba chanekileyo, kodwa bawaphose amagama amaqhezu. Abafundi mabawanike amagama amaqhezu awabiweyo ngokulibhala njenge - **2/3**	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.10 **Ukwaba oku khokelela kumaqhezu**	Sombulula uze uchaze izisombululo kwiingxaki ezenziwayo ezibandakanya ulwabiwo ngokulinganayo olukhokelela kisisombululo samaqhezu umz. $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{2}{5}$ njl-njl		**Ukubonisa izibalo zamaqhezu ngemizobo** Abafundi mabenze imizobo ukubonisa ukulandela kwabo iingxaki zezibalo. Lindela ukuba abanye abafundi basenokuzoba ngokufaneleyo ngeli xa bengekakwazi ukuwabiza ngokufanelekileyo amaqhezu. Abafundi mabathiye iindawo /amaqhezu asele babelene ngawo ngokubwabhala njengesibini kwisithathu.	
1.11 **Imali**	• Nakana uchonge iimali yaseMzantsi Afrikaca ezinkozo nengamaphepha • Sombulula izibalo zemali ezibandakanya iitotali netshintshi yeerandi neesenti. • Guqula iisenti uzise kwiirandi neeradni uzisekwiisenti.		**Imizekeliso yezibalo ezinokwenziwa kule kota.** **Ixabiso lemali nokwenza iitotali umz:** • Ixabiso lemali nokwenza iitotali umz: - Bhala ama-325 eesenti njengeerandi neesenti.. - Zingaphi iindlela ezahlukeneyo zokwenza ama-400 usebenzisa imali engamaphepha kuphela? Wazi njani ukuba unezisombululo kuzo zonke iingxaki? - UTravis unama-50 eesenti nee-20 eesenti ezi-4. Iithofi zixabisa i-R1,20. Yimalini itshintshi amakayifumane? • UMandla ubhatala ama-R5,50 kwisithuthi esimsa esikolweni. - Ubhatala malini ukuya nokubuya esikolweni ngemini? Izibalo zokuthenga nokuthengisa • UVuyisa unikwa ama-R5 nguninakhulu. Zeziphi iilekese ezintathu anokuzithenga, kukho iiChoc chuckle ze-R2.70; kukho iitshungam ze-R1.80; iiwilson ze-R1.40; iihmbaze ze-R1.60; iimagic mints ze-R2.20; iithofi ze-R1.20. • UDamon wathenga iincwadi ezi-3 ngama-R80 inye. Iyakuba yimalini itshintshi yakhe xa enama-R300? Iipakethe ezi-5 zeelekese zixabisa ama-44 eesenti inye. Umelwe kukuthenga iipakethe ezingaphi? Uyakubhatala malini?	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
IZIBALO EZINGASEKWANGA MXHOLWENI				
1.12 **Ubuchule** **[iindlela yokwenza, ubuchule]**	Sebenzisa ez i ndlela zilandelayo xa usenza izibalo. • ukwakha nokwahlula amanani • ukuphinda kabini nokohlula kabini ngokulinganayo • imigca manani • ukusondeza kumashumi		Jonga kwikota yesi-3.	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uyokuma kuma- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ziqhelanise neebhondi zamanani uyokuma kuma- 30		Kule kota abafundi bayaqhubekeka ukwahlula-hlula amanani ukuze babale. Iindlela ezinokusetyenziswa xa ubonisa izibalo zokudibanisa nokuthabatha **Ukwahlula amanani abengamanani amancinane ukwenza kube lula ukubala** **Ukusebenzisa ulwazi lwexabiso lendawo ukwhlula amanani abe ngamakhulu, amashumi, nemivo.** • Ukudibanisa ngokwahlula omabini amanani. Ukudibanisa iidijithi ezi-3 needijithi ezi-2 524 + 82 = ☐ = (500 + 20 + 4) + (80 + 2) = 500 + (20 + 80+ (4 + 2) = (500 + 100) + 6 = 600 + 6 = 606 Ukudibanisa iidijithi ezi-3 needijithi ezi-3 323 + 436 = ☐ 323 + 436 = = (300 + 20 + 3) + (400 + 30 + 6) = (300 + 400) + (20 + 30) + (3 + 6) = 700 + 50 + 9 = 759 • Dibanisa (ngokwahlula inani emalidityaniswe) Abafundi bayakucalucalula inani ngendlela esemandleni abo. Loo nto ithethe ukuba bayakuyenza ngeendlela ezahlukeneyo. 524 + 82 = ☐ 524 + (40 + 40 + 2) 524 + 40 → 564 + 40 → 604 + 2 = 606	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uyokuma kuma- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ziqhelanise neebhondi zamanani uyokuma kuma- 30		Ukudibanisa iidijithi ezi-3 needijithi ezi-3 323 + 436 = ☐ = 323 + (400 + 30 + 6) = (323 + 400) + 30 + 6 = (723 + 30) + 6 = 743 + 6 = 749 • Ukuthabatha ngokwahlula omabini amanani. Kwiidijithi ezi-3, thabatha iidijithi ezi-3 889 – 137 = ☐ 889 – 137 = (800 + 80 + 9) – (100 + 30 + 7) = (800 – 100) + (80 – 30) + (9 – 7) = 700 + 50 + 2 = 752 • Thabatha ngokwahlula inani elinye 889 – 137 = ☐ 889 – (100 + 30 + 7) 889 – 100 → 789 – 30 → 759 – 7 = 752 • Sebenzisa ukwahlula kabini ngokulinganayo ukwahlula inani 525 + 16 = 525 + 8 + 8 = (525 + 8) + 8 = 533 + 8 = 541	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uyokuma kuma- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ziqhelanise neebhondi zamanani uyokuma kuma- 30		• Bala ngokongeza uphinde ubale ubuya umva. 805 = 798 = ☐ Ukubala ngemivo ukusuka kuma-798 bubuchule obufanelekileyo kuba amanani asondelelene. • Chonga ukuphinda phinda kabini okusondeleyo 245 + 246 Sinokutsho ukuba esi sibalo singasengentla sisiphinda kabini kabini 245 + 1 isiphindi kabini 246- 1 245 + 245 + 1 = (200 + 40 + 5) + (200 + 40 + 5) + 1 = (200 + 200) + (40 + 40) + (5 + 5) + 1 = 400 + 80 + 10 + 1 = 400 + (80 + 10) + 1 = 400 + 90 + 1 = 491 **Ukukhulisa nokuziqhelanisa nezakhono zokudibanisa nokuthabatha** Abafundi mabaziqhelanise nezakhono ezithile zokudibanisa nokuthabatha. **Bala usiya phambili okanye ubuya umva, usondele kuma-10 akufutshane** 588 + 9 588 + 10 = 598 598 - 1 = 597 588 + 19 588 + 20 = 608 608 – 1 = 607 Abafundi mabanikwe amathuba okwenza ezi ntlobo zilandelayo zezibalo de bayokufika kuma-800:	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uyokuma kuma- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ziqhelanise neebhondi zamanani uyokuma kuma- 30		Dibanisa okanye thabatha isibini seziphinda-phinwa ze-10 ugqithele ngaphaya kwe -100 40 + 70 70 + 80 120 – 30 150 – 60 Dibanisa okanye thabatha i-10 okanye kwiinani elineedijithi ezi-2 0kanye ezi-3, ugqithe ngaphaya kwe-100 Umzekelo: 65 + 10 124 + 10 326 – 10 358 - 10 Dibanisa okanye thabatha idijithi enye okanye kwinani elineedijithi ezi-3, ungagqithi kwi-10 Umzekelo: 634 +5 775 + ☐ = 779 768 – 4 Dibanisa okanye thabatha idijithi enye kwi- okanye ukusuka kwiziphinda-phindi ze-100 Umzekelo: 600 + 4 500 + 3 700 - 6 800 - 5	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uyokuma kuma- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ziqhelanise neebhondi zamanani uyokuma kuma- 30		Qala ukudibanisa nokuthabatha izibini zeziphinda-phindi ze-100 100 + 100 100 + 200 200 + 200 300 + 400 Abafundi mabanikwe amathuba okuziqhelanisa neepateni zokudibanisa nokuthabatha. Ukuba ndiyazi ukuba 1+ 1 = 2 Ngoko ke: 10 + 10 100 + 100 Qala ukudibanisa nokuthabatha izibini zeziphinda-phindi ukusuka nakweliphi na inani elineedijithi ezi-3 Umzekelo: 675 + 100 762 – 100 **Ukuqonda ukudibanisa ekupheleni konyaka** Ekupheleni konyaka, kulindeleke ukuba abafundi bakwazi: Ukusebenzisa ngokuqonda ulwimi lokudibanisa: Ngaphezulu, dibanisa, inpendulo xa ubudibanisa, itotali, zizonke zidibene, zilingana. Impawu.....Funda ze ubhale uphawu lokudibanisa (+) uzilingana (=) Qhubekeka ukhulise ulwazi lokudibanisa njengokubala ubheka phambili namanqanaba kumgca-manani. Umzekelo: Phendula le mibuzo ilandelayo: Ndingadibanisa ntoni kuma-67 ukwenza ama-85. Sisivakalisi samanani sombuzo wam esi: 67 + ☐ = 85.	

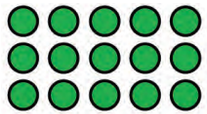
IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uyokuma kuma- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ziqhelanise neebhondi zamanani uyokuma kuma- 30		Yazi ukuba ungadibanisa nangayiphi na indlela: 178 + 12 = 190 ngoko 12 + 178 = 190 **Ukuqonda ukuthabatha ekupheleni konyaka.** Ukusebenzisa ngokuqonda ulwimi lokuthabatha: Susa, thabatha, zingaphi ezishiyekileyo, ingaphantsi kangakanani, umahluko phakathi, ingaphezulu kangakanani kune.....kufuneka wongeze ezingaphi ukwenza u.....funda Qhubekeka ukukhulisa ulwazi lokuthabatha njenge: • susa; and • nokuba yintoni umahkuko phakathi ko.... Qaphela ukuba ukuthabatha iqanda akutshintshi nombolo: 192 – 0 = 192 192 = 192 – 0 Phendula imibuzo ebhalwe ngeendlela ezahlukeneyo enjengale: Ama-37 susa ama-13 Susa ama-40 kuma-280 Kuma-162 thabatha ama-42 Thabatha ama- 45 kuma-390 Yintoni umahluko phakathi kwama-738 nama -157? Mancinci kangakanani ama-117 kunama-449? Ngubani inani onokulthabatha kulo ama-56 ukuze ufumane ama-122? Ngubani inani onokuthabatha kulo ama-56 ukuze ufumane ama-132? Ungawathabatha kubani ama-56 ukuze ufumane ama-142? Fumana izibini zamanani ezinomahluko we-10 Kukho ama-45 eepensile edrowini katitshalakazi. Unikisa ngeepensile ezili-17. Kushiyeke iipensile ezingaphi ? Fumana izibini zamanani ezinomahluko we-20	

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1.13 **Ukudibanisa nokuthabatha**	• Dibanisa uyokuma kuma- 999 • Thabatha kuma-999 • Sebenzisa iisimboli ezifanelekileyo (+, -, =, ☐) • Ziqhelanise neebhondi zamanani uyokuma kuma- 30		Yazi ukuba ☐ umele inombolo engaziwayo 557 – 134 = ☐ 800 – 530 = ☐ 762 - ☐ = 448 598 – 42 = ☐ 687 - ☐ = 375 13 – 6 = 15 - ☐ ☐ - 18 = 24 174 – 14 = ☐ 199 - ☐ = 25 Qaphela: Ama -125-10 wahlukile kwi-10 - ama-125 Wazi umahluko wokuzalana phakathi kokudibanisa nokuthabatha. Bonisa ukuzalana phakathi kokudibanisa nokuthabatha. Yithethe uze ubhale ukuthabtha okuhambelana nokudibanisa uphinde wenjenjalo ukudibanisa umzekelo: 25 + 68 = 93 ithetha ukuba 93 – 68 = 25 68 + 25 = 93 ithetha ukuba 93 – 25 = 68 122 – 104 = 18 ithetha ukuba 18 + 104 = 122 Ngaphandle kokusebenzisa isixhobo, phendula le mibuzo ilandelayo: Uyazi ukuba ama-145 + 120 = 265 Gqibezela : 120 + 145 265 – 120 265 – 145	

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1.14 **Ukudibanisa okuphin diweyo okukhokelela kuphinda phindo**	• Phinda-phinda amanani u-1 ukuya ku-10 ngo 1, 2, 3, 4, 5, 10 • Sebenzisa iisimboli ngokufanelekileyo (x, =, □)		Kule kota Abafundi bayaqhubekeka uku: • Sebenzisa ulwimi lophinda phindo; • Bonisa uphinda phindo njengocwangcise olwenziwe ngendlela ethile • Sebenzisa isimboli efanelekileyo ukutolika izivakalisi zamanani. • Ukuqonda ukuba ukudibanisa ngokuphindiweyo kunokubonisai kusetyenziswa isimboli yophinda-phindo • Ziqhelanise uze uqonde ukuba uphinda-phindo lunokwenziwa nangayiphi na indlela. *(umthetho othi xa ubala ngokudibanisa okanye ngokuphinda phinda u a+b = b+a okanye u4+5 uyalingana no 5+4 ngokufanayo nakukuphindaphinda.)* • Sebenzisa imigca manani ukubonisa izibalo zophinda phindo kwaye ukwazi ukucacisa indlela obonise ngayo uphinda phindo kumgca manani. (Ukubala ngokuqakatha kukubonisa njani ukudibanisa okuphindiweyo) kwakunye • Ukucula itheyibhile yophinda-phindo. **Ekupheleni kwale kota, kulindeleke ukuba abafundi bakwazi uku:** Sebenzisa ulwimi lophinda phindo kwiimeko zokubaqhelisa: Phinda kabini, phinda-phinda, uphinda-phindo, phinda-phinda ngo-, iziphinda-phindi zika...,iqela le...amaqela e..., phinda-phinda ka- (khulu. De, banzi...)kabini, ngokuphinda –phindwe kathathu, ze ufunde kwaye ubhale uphawu lophindaphindo.(x) Sebenzisa ulwimi ukwenza izibalo zophinda-phindo **Qonda uphinda-phindo njengokudibabisa okuphindindiweyo** Xa isi-6 sidityanisiwe amaxesha ama-3 uyafana no- 6 + 6 + 6 = 18 Amaqela ama-3 ka-6 = 18 3 phinda-phinda ngesi- 6 = 18 6 x 3 = 18 3 x 6 = 18	

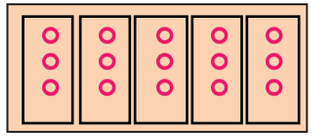
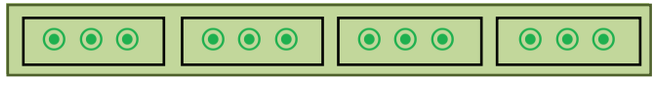
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1.14 **Ukudibanisa okuphin diweyo okukhokelela kuphinda phindo**	• Phinda-phinda amanani u-1 ukuya ku-10 ngo 1, 2, 3, 4, 5, 10 • Sebenzisa iisimboli ngokufanelekileyo (x, =, ☐)		**Qonda ukuba uphinda-phindo njengohlobo luthile locwangciso**  $5\times3=15$ $3\times5=15$ Qalisa ukunakana ukuba uphinda-phindo lunokwenziwa ngayiphina indlela **Phendula imibuzo ebuzwe ngeendlela ezahlukileyo** Izihlanu ezibini Isi--5 esiphindwe kabini 3 phinda phinda ka -5 Izixhobo zokubala ezi-3 kumqolo omnye. Imiqolo mi-4. Zingaphi izinto zokubala zizonke? 2 phinda-phinda ngo- 7 16 phinda-phinda ngo-2 **Qonda uphawu lolandelelwano lophinda-phindo** 3 x 4 = 12 uyafana no- 4 x 3 = 12 **Nakana ukusetyenziswa kwesimeli-nani ☐ ukubonisa inani elingaziwyo.** 2 + 2 + 2 = ☐ 2 x ☐ = 6 5 + 5 +5 + 5 + 5 ngoko 5 x △ = 25 4 + 4 + 4 ngoko 4 x 3 = ☐ 10 + 10 + 10 + 10 + 10 ngoko 10 x ☐ = 50 5 x ☐ = ☐ x 5 = 45 4 x 8 = ☐ x 4 8 + 8 + 8 = 3 izibhozo = 8 x ☐ = 24	

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<tr><th>IZIHLOKO</th><th>IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA</th><th>IIKHONSEPTHI NEZAKHONO ZALE KOTA</th><th>INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA</th><th>IXESHA
(Kwisifundo seyure e-1 nemizuzu engama-24in izifund)</th></tr>
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Ukudibanisa okuphin diweyo okukhokelela kuphinda phindo</td>
<td>• Phinda-phinda amanani u-1 ukuya ku-10 ngo 1, 2, 3, 4, 5, 10
• Sebenzisa iisimboli ngokufanelekileyo (x, =, □)</td>
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<td>Qaphela ulwalamano phakathi kophinda-phindo nokuphinda kabini.
Kopa itheybhile engezantsi: Fakela kuqolo ka “x 4
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<tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr>
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IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.15 **Ukwahlula hlula**	• Yahlula-hlula amanani de uyokuma kuma-99 ngo- 1, 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, □)		**Yahluke ngantoni kwiKota yesi-3?** Ekupheleni kweKota qinisekisa ukuba abafundi: • Qonda ukuba ukohlula kabini ngokulinganayo ngumguqulelwa yophindo kabini kwaye bakhumbule ukuphinda phinda kabini amanani onke uye kuma-20 kunye neziqingatha ezingqinelanayo. • Sebenza ngolwahlula hlula njengokohlula ngokwamaqela. • Ukuqonda nokuncoma ukuzalana okuphakathi kophinda-phindo nokwahlula-hlula nokuba enye ngumguqulelwa wenye. • Sebenzisa iindlela ezenziwayo nezingekho sikweni ezibhalwayo, ukwahlula-hlula inani elineedijithi ezimbini ngenani elidijithi enye. • Sebenzisa ulwazi lwabo lwexabiso lendawo ukwenza izibalo zophinda-phindo nokwahlula-hlula. • Cacisa ngendlela ababale ngayo nonobangela woko. • Xoxe iimpendulo zabo baze bacacise iingcinga zabo; kwaye • Sebenzisa ulwazi kokubala ngamanani neenguqulelo ezihambelana nako, kuquka ukuphinda phinda kabini nokwahlula kabini ngokulinganayo ukuqikelela nokuqinisekisa ubalo. **Iindlela zokurekhodisha** Kukho iindlela ezithile zokurekhodisha ezinokusetyenziswa ngabafundi bebanga lesi-3. Abafundi abanokuba zincutshe kuzo zonke ezi ndlela. Kufuneka bakhokelwe ekwenzeni izibalo zokwahlua-hlula zezivakalisi zamanani nasekwenzeni izigqibo ngendlela ezifanelekileyo ekufuneka bezisebenzisile. Kulindeleke ukuba Abafundi abasazi kuxhomekekanga ekuzobeni imifanekiso, kodwa baza kusebenzisa amanani ukucacisa iingcinga zabo. **Ukuthabatha okuphindiweyo** Obu buchule bukhe basetyenziswa xa bekusonjululwa izibalo zamazwi kwaye kufuneka bancediswe ekujongeni uluhlu lwamanani,ze benze isigqibosokuba ingaba izibalo zingenziwa kusetyenziswa ukuthabatha okuphindiweyo okanye hayi. 40 ÷ 8 = □ 40 - 8 32 – 8 24 – 8 16 – 8 8 - 8 = 0 Abafundi babala amaxesha abathabathe ngawo isi- 8 ukuze bafumane i- 0	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.15 **Ukwahlula hlula**	• Yahlula-hlula amanani de uyokuma kuma-99 ngo- 1, 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)		**Ukudibanisa okuphindiweyo** **Abanye** abafundi banokusebenzisa obu buchule ukuba abayabuqonda ubudlelwane obuphakathi kophinda-phindo nokwahlula-hlula. Kwakhona uluhlu lwamanani luyakuqinisekisa ukuba le ndlela ifanelekile na okanye ayianelekanga. 40 ÷ 8 = ☐ 8 + 8 → 16 + 8 → 24+ 8 → 32 + 8 → 40 Abafundi babala amaxesha abadibanise ngawo ama- 8 ukufumnana- 0. **Sebenzisa uphinda phindo** Abafundi mabakwazi ukuthi:“ Ndazi ntoni ngophinda phindo enokundinceda ndikwazi ukwenza izibalo zokwahlula-hlula?” Abafundi banokubhala phantsi amanqaku ophinda-phindo abawaziyo kwibhodi enika isikhokelo ukubanceda ekwahlula-hluleni. **Ibhodi enika isikhokelo** Ndiyazi: 10 x 3 = 30 Ndiyazi: 4 x 3 = 12 72 ÷ 3 = ☐ 10 x 3 = 30 10 x 3 = 30 30 + 30 = 60 72 – 60 = 12. 4 x 3 = 12 10 + 10 + 4 = 24 Ngoko ke 72 ÷ 3 = 24	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.15 **Ukwahlula hlula**	• Yahlula-hlula amanani de uyokuma kuma-99 ngo- 1, 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)		**Ukubala ngokuwahlukanisa amanani (Distributive property)** Ukwahlukanisa amanani okwahlula hlula ngaphaya kokudibanisa kuthetha ukuba inani linokwahlulwa libe ngamalungu ukuze kube lula ukubala. 39 ÷ 3 = ☐ = (30 + 9) ÷ 3 = (30 ÷ 3) + (9 ÷ 3) = 10 + 3 = 13 Ukwahlula amanani kabini ngokulinganayo: 60 – wenziwa isiqingatha. Apha abafundi bathi: “Ndazi ntoni ngokwahlula-hlula ngesi-5?” Abafundi bayazi ukuba ama-30 ayohluleka ngesi-5 kungabikho ntsalela. 60 ÷ 5 = ☐ 30 ÷ 5 = **6** 30 ÷ 5 = **6** **6** + **6** = 12 Sebenzisa iziqingatha ukwahlula ngesi-4 Abafundi bebesoloko bephinda kabini besohlula ngeziqingatha iminyaka emithathu. Kufuneka basebenzise ezi zakhono njengobuchule bokubala.Ulwazi lokuphinda kabini nokwenza iziqingatha (ukwahlula kabini ngokulinganayo) lunokusetyenziswa xa kusahlulwa-hlulwa: 96 ÷ 4 = ☐ 96 ÷ 2 = 48 48 ÷ 2 = 24 **Ekupheleni kweKota abafundi kulindeleke ukuba:** Bakwazi ukuqonda ukusebenzisa nokuqalisa ukufunda: Ibenye kumntu ngamnye, zibembini kumntu ngamnye, ... yabelana, isiqingatha, ukohlula kabini ngokulinganayo,epheleleyo, yahlula, yahlula ngesi-3, yahlula ngesi-4, Yahlula ka-2, Yahlula ka-3, intsalela, yohlulwe ngo-, amaqela alinganayo e/o…	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.15 **Ukwahlula hlula**	• Yahlula-hlula amanani de uyokuma kuma-99 ngo- 1, 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)		Funda,bhala usebenzise umpawu lokwahlula-hlula (÷) Sebenzisa ulwimi lwezibalo lokwahlula-hlula Qonda ukwahlula njengokwahlula ngokwamaqela okanye ukuthabatho okuphindiweyo Phendula imibuzo ebhalwe ngeendlela ezahlukeneyo Yaba i-16 ngo- 2 Yahlula ama- 20 ngesi- 5 Zingaphi izihlanu ezenza ama- 50? Zingaphi iinkozo ze-10 eesenti ezenza ama-50 eesenti? Zingaphi izine kuma-20, kuma-28, kuma-36? Zingaphi izihlanu kuma- 20, kuma- 40, kuma-50, kuma- 60? U-Annina uthi ufunda amagama ama-5 amatsha yonke imihla. Uthatha ama- ☐ eentsuku ukufunda ama-40 amagama. 6 amashumi ÷ 3 = ☐ amashumi Qaphela ukuba kusetyenziswa iisimboli ezinjenge-☐ kumanani angaziwayo. Jonga izixhobo zokubala ezingezantsi, ze ufakele izivakalisi zamanani.  Kukho -☐ amaqela asi- 3 15 – 3 – 3 - ☐ - ☐ - ☐ = 0 15 ÷ 3 = ☐ Jonga le imizobo ze ufakele zizvakalisi: 	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.15 **Ukwahlula hlula**	• Yahlula-hlula amanani de uyokuma kuma-99 ngo- 1, 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)		Kukho amachaphaza a- ☐ ewonke, ze kubekho amaqela a-△ amaqela amachaphaza ama-3 kwindawo nganye. Ngoko: ☐ ÷ 3 = △ Kukho amachaphaza a- ☐ ewonke, ze kubekho amaqela ama-4 amachaphaza ama -3 kwiqela ngalinye. Ngoko ke: ☐ ÷ 4 = △ Kopa ze ufakele 20 ÷ 2 = ☐ 20 ÷ ☐ = 10 20 ÷ ☐ = 2 21 ÷ 3 = ☐ 21 ÷ ☐ = 7 21 ÷ 7 = ☐ Qonda imithetho yokwahlula-hlula ngo-1 no-0 6 ÷1 = ☐ 8 ÷ 1 = ☐ 12 ÷ ☐ = 12 6 ÷ 0 = ☐ ☐ ÷ 4 = 0 1 ÷ 1 = ☐ 0 ÷ 7 = ☐ Sebenzisa, funda ze uqale ubhale: Intsalela Bala iintsalela xa usenza izibalo zokwahlula-hlula: 12 ÷ 5 ngu-2 intsalela 2 23 ÷ 7 ngu 3 intsalela 2 Qonda ukuzalana phakathi kophinda-phindo nokohlula kabini ngokulinganayo. Phendula le mibuzo ilandelayo: Kopa le tafile ingezantsi	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.15 **Ukwahlula hlula**	• Yahlula-hlula amanani de uyokuma kuma-99 ngo- 1, 2, 3, 4, 5, 10 • Sebenzisa iisimboli ezifanelekileyo (÷, =, ☐)		Fakelela umqolo woku “phinda phinda ngo 4 “Yeyiphi ipateni oyibonayo? Hlula amanani kabini ngokulinganayo (iziqingatha) kumqolo woku “phinda phinda ngo -4”ukufumana amanani kumqolo woku “phinda phinda ngo -2 “ Yeyiphi ipateni oyibonayo? Qonda ukuba ukwahlula-hlula kukubuyisela umva uphinda-phindo Bonisa ngomzobo ezi zivakalisi zamanani, 4 x 5 = ☐ 20 ÷ 5 = ☐ 12 x 4 = ☐ 48 ÷ 4 = ☐	

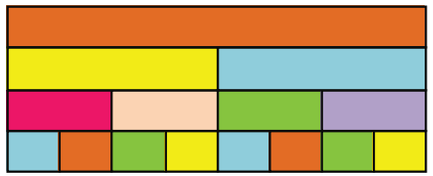
	1	2	3	4	5	6	7	8	9	10
4s										
2s										

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.16 **Izibalo zentloko**	**Iingqiqo zamanani: Uludwe ngu: 999** • Landelelanisa isethi oyinikiweyo yamani akhetiweyo • Thelekisa amanani ukuya kuma- 999 ze utsho ukuba leliphi inani elingaphezulu okanye elingaphantsi ngo- 1,2,3,4,5, ne-10. **Khumbula ngokukhawuleza:** • Amanqaku okudibanisa nokuthabatha ukuya kuma ngama- 20 • Dibanisa okanye uthabathe iziphinda-phindi ze-10 ukusuka ku- 0 ukuya ku-100 • Amanqaku ophinda-phindo nokwahlula e-: • Itheyibhile yophinda-phindo ye-2 uyokuma ngo-2 x10 • Itheyibhile ye-10 uyokuma ngo-10x10		**Imizekelo yemibuzo enokubuzwa:** **Ingqikelelo -manani** **Amagama neesimboli zamanani** **Phakamisa ikhadi okanye ubhale igama lenani. Khetha umntwana abhale inani alitshatisileyo** **Ininzi kuno/kune - okanye Imbalwa kunesinye-** Ingaba u/i: 1 mbalwa kunama- 900 1 mninzi kunama-899 2 mninzi kunama-702 2 mbalwa kune - 405 3 mninzi kunama-477 3 mbalwa kunama -251 4 mninzi kunama-868 4 mbalwa kunama -967 5 mninzi kunama-729 5 mbalwa kunama -685 10 mninzi kunama- 490 10 mbalwa kunama-660 Ngubani unobumba wesi-5 we-alfabhethi. Ngubani inyanga yesi-9 enyakeni? **Ulandelelaniso nothehelekiso** Leliphi inani elikhulu: 621 okanye 671 Nika inani eliphakathi kwama-154 nama-159 Amanqaku okudibanisa nokuthabatha:	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.16 **Izibalo zentloko**	**Ubuchule bokwenza izibalo** Sebenzisa obu buchule bokubala bulandelayo: • Qala ngokubeka inani elikhulu, ukuze ubale ubheke phambili okanye ubale ubuye umva. • Imigca manani • Ukuphinda phinda and ukwenza iziqingatha • Ukubumba nokucazulula • Sebenzisa ukuzalana phakthi kokuthabatha nokudibanisa • Sebenzisa ukuzalana phakathi kophinda-phindo nokwahlula-hlula		• Cengceleza zonke ibhondi zamanani okudibanisa nokuthabatha uyokuma ngama-20. □ + △ = 20 □ + △ = 16 20 = □ - △ Dibanisa ze uthabathe amanqaku awo onke amanani ukfikela kuma-20 1 + 11 = 12 11 + 1 = 12 2 + 10 = 12 10 + 2 = 12 3 + 9 = 12 9 + 9 = 12 18 – 4 = 14 18 – 14 = 4 18 – 5 = 13 18 – 13 = 5 18 – 6 = 12 18 – 12 = 6 Khumbula ngokukhawuleza ukudibanisa ngokuphindwe kabini ukuya kuma-20. Oku kufuneka kudibanise amanqaku okuthabatha ahambelanayo. • 1 + 1 = 2 • 2 + 2 = 4 • 3 + 3 = 6 • 4 + 4 = 8 • 5 + 5 = 10 • 6 + 6 = 12 • 7 + 7 = 14 • 8 + 8 = 16 • 9 + 9 = 18 • 10 + 10 = 20	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.16 **Izibalo zentloko**			Bonisa inani elinokudityaniswa ukwenza ama-20.(Libhale phantsi usebenzisa ixabiso lendawo okanye iiFladi Khadi) • 8 • 2 • 9 • 15 • 3 Bonisa inani elishiyekileyo xa.....esusiwe kuma-20. (Ukubhala phantsi, ukusebenzisa ixabiso lendawo okanye iiFladi khadi) • 5 • 18 • 0 • 14 • 7 **Ubuchule bokubala:** Sebenzisa ubuchule bokubala ukwenza izibalo zokudibanisa nokuthabatha ngokufezekileyo. Dibanisa amanani amannzi ngokusebenzisa ubuchule obunje: • Khangela izibini zamanani ezinokwenza i-10. Qala usebenzise ezi: 2 + 7 + 8 2 + 8 benza u-10 ze udibanise - 7. • Bekainani elikhulu ukuze ukwazi ukubala ngokongeza nokubala ubuya umva. 5 + 15 Xela isivakalisi samanani: 15 + 5 uqhubekeke ubale uyokuma ngo - 20 • Jika inani libe ngu-10 wandule ukuthabatha okanye udibanise u-1	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.16 **Izibalo zentloko**			Umzekelo: 8 + 9 = 17 uze uchaze ukuba ubani unokwenza 8 + 9 = 8 + 10 – 1 6 + 11 = 17 uze uchaze ukuba umntu angabala nangolu hlobo 6 + 10 + 1 17 – 9 = 8 uze uchaze ukuba umntu angabala nangolu hlobo 17 – 10 + 1 Hlula inani wandule ukulidibanisa Yakha wandule ukwahlulaamanani: Umzekelo : Zibale ngentloko uze uchaze: Qhubekeka usahlula amanani abemancinci kakhulu 8 + 12 = 8 dibanisa (10 + 2) = 8 + 2 + 10 = 10 + 10 = 20 • Sebenzisa uphindo kabini njengobuchule bezibalo zentloko. Chonga ukuphinda-kabini kusondeleyo. Umzekelo: 8 + 7 = 15 ucacisa ukuba isi-7 esiphindwe kabini saze sadityaniswa no-1 okanye isi-8 esiphindwe kabini thabatha u-1 Qaphela ukuba xa amanani amabini ephantsa kulingana ngobungakanani, kulula ukufumana umahluko ngokubala ubheka phambili ungabuyi mva. 17- 13 = 4 uze uchaze ukuba ukubala ubheka phambili ukusuka ku-13 ukuya ku- 17 ibangu- 4 Ezinye izibalo zentloko zinokwenziwa ngaphandle kwezixhobo kodwa kububulumko ukwenza izibalo zentloko ngezixhobo. **Izixhobo ezicetyiswayo** • Umgca –manani (owakhiweyo kwaye ongenanto) • Igridi yamanani • Ikhadi yexabiso lendawo (Fladi khadi) • Amaso okubala	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.17 **Amaqhezu**	• Sebenzisa ze unike amagama amaqhezu ngendlela eqhelekileyo udibanisa neziqingatha, iikota, izibhozo eshumini, isithathu eshumini, isthandathu eshumini, isihlanu eshumiini. • Qaphela amaqhezu azotyiweyo. • Qaphelaukuba iziqingatha ezi-2 okanye izithathu ezi-3 zenza into epheleleyo nokuba isiqingatha neekota ezimbini ziyalingana. • Bhala amaqhezu ngale ndlela:i siqingatha esi-1, 2 esithathwini .		**Ekupheleni kweKota kulindeleke ukuba Abafundi bakwazi u:** • Qaphela iimilo zamaqhezu, ubethelele ezingqondweni ukuba isiqingatha yinto eyahlulwe kabini ngokulinganayo. • Yazi ukuba iikota ezine zenza into enye epheleleyo nokuba ikota nganye mazilingane ngesayizi. • Funa amaqhezu ayingqokelela yezinto. • Funda ze ubhale amagama amaqhezu • Landelelanisa, uchaze ze uthelekise amaqhezu Ekupheleni kweKota kulindeleke ukuba abafundi baqonde ukuba amaqhezu yinxalenye yento epheleleyo kwaye bakwazi ukuphendula imibuzo efana nale: • isiqingatha = into epheleleyo • iikota = into epheleleyo • isithathu eshumini = into epheleleyo • isiqingatha= into epheleleyo • isihlanu eshumi = into epheleleyo • isithandathu eshumini = into epheleleyo Phendula le mibuzo enjengale: Xa imilo yahlulahlulwe yangamacala ama-2 alinganayo, sizibiza ngokuba ----------. Xa imilo yahlulahlulwe yangamacala ama-3 alinganayo, sizibiza ngokuba ..... Xa imilo yahlulahlulwe yangamacala a.... ..... alinganayo, sizibiza ngokuba ziikota **Bakwazi ukuthelekisa ubungakanani zamaqhezu** 	

IZIHLOKO	IINGQIQO NEZAKHONO EZIYIMFUNEKO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO ZALE KOTA	INGCACISO OKANYE ISIKHOKELO SOKUFUNDISA	IXESHA (Kwisifundo seyure e-1 nemizuzu engama-24in izifund)
1.17 **Amaqhezu**	• Sebenzisa ze unike amagama amaqhezu ngendlela eqhelekileyo udibanisa neziqingatha, iikota, izibhozo eshumini, isithathu eshumini, isthandathu eshumini, isihlanu eshumiini. • Qaphela amaqhezu azotyiweyo. • Qaphelaukuba iziqingatha ezi-2 okanye izithathu ezi-3 zenza into epheleleyo nokuba isiqingatha neekota ezimbini ziyalingana. • Bhala amaqhezu ngale ndlela:i siqingatha esi-1, 2 esithathwini .		Ingaba isiqingatha esinye sikhulu okanye sincinci kuneekota ez-3? Zingaphi iikota ezilingana nento enye epheleleyo / whole? Zingaphi izibhozo eshumini ezilingana nento enye epheleleyo / whole? Ingaba iikota ezimbini zilingana nesiqingatha esinye? Funa iqhezu yengqokelela yezinto Amaso ali-12. Asi- 8 apinki ze ama - 4 abe mhlophe. Xela iqhezu lamaso amhlophe?	

IBANGA 3 - IKOTA 4 UMXHOLO 2: IPATENI, IMISEBENZI, NEAJIBRA				
ISIHLOKO	**IIKHONSEPTHI NEZAKHONO** **EZIFUNEKAYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO** **UGXININISO KWIKOTA 4**	**AMANQAKU ENGCACISO OKANYE IZIKHOKELOZOKUFUNDISA**	**IXESHA**
2.1 **Ipateni zejiyometri**	**Kopa,wandise ze uchaze** Kopa, wandise ze uchaze ngamazwi: • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwe nje ngokukrwela imigca ezibonisa ubume bezinto **Yenza eyakho ipateni** Yenza ezakho iipateni zejiyometri • Ngezinto eziphathekayo • Ngokuzoba imigca, iimilo okanye izinto **Iipateni ezisingqongileyo** Chonga, uchaze amanani ngamazwi ze ukope iipateni zejiyomtri: • kwindalo • kwizinto zentlalo yemihla ngemihla • kwimibhiyozo yenkcubeko	**Iipateni ezisingqongileyo** Chonga, uchaze ngamazwize ukope iipateni zejiyometri: • kwindalo • kwizinto zentlalo yemihla ngemihla • kwimibhiyozo yenkcubeko	Abafundi bazakusebenza ngeepateni ezivela kwindalo, kwizinto zentlalo yemihla ngemihla kunye nemibhiyozo yenkcubeko ukusuka kwibanga -1 ukuya kwibanga-6. Ithethe ukuthi awunakuchitha ixesha elininzi kwesi sihloko. Kwakhona kufuneka ukhethe imisebenzi neepateni ezifanelekileyo kwibanga ngalinye. Uhlobo lwepateni olunokufunwa ngabafundi lulingano macala umzekelo: uninzi lwamagqabi nobuso bezilwanyana zinamacala amabini alinganayo. Ngokunjalo nezinambuzane ukuba zijongwe ukusuka ngaphezulu. Iipateni kuninzi lweentaka zijongwa ngezantsi. Kwibanga -3 kugxininiswa ekufuneni umgca olingano macala i ngokusongwa kwamaphepha kunye nembonakalo. Abafundi banokwenza iipateni ngokuthi benze iimilo ngamaphepha asongwayo. Idibanisa nokwenziwa kweedoyli namaphepha okwenza iishelufu besebenzisa iipateni ezisikiweyo Abafundi banokucinga ze bathethe ngeepateni ezikwiidoyli ezolukiweyo nemifanekiso yeepateni ezisikwe ngokwendlela yephepha lokubeka kwishelufu-. Abafundi banokujonga kwiipateni • kwiingcingo (amacingo,zamaplanga) • umsebenzi wezitena neethayili; • uphahla / irufu • iimpahla namalaphu • iipleyiti, iikomityi neesosa; • iibhola zesoka; • izilwanyana ezinjengeenkomo, amabhabhathane, izilwanyana, izebra, indlulamthi, amahlosi, iintaka nezinambuzane; • Iintyatyambo namagqabi; • Amaphepha okuhombisa iindonga ezifumaneka ngaphakathi kwizindlu ezingekho sesikweni. • Imisebsenzi yezandla yamaso yamandulo neyanamhla kunye • neembiza zomdongwe zamandulo okanyeiingobozi ezolukiweyo	

ISIHLOKO	IIKHONSEPTHI NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXININISO KWIKOTA 4	AMANQAKU ENGCACISO OKANYE IZIKHOKELOZOKUFUNDISA	IXESHA
2.1 **Ipateni zejiyometri**	**Kopa,wandise ze uchaze** Kopa, wandise ze uchaze ngamazwi: • Iipateni ezilula ezenziwe ngezinto eziphathekayo. • Iipateni ezilula ezenziwe nje ngokukrwela imigca ezibonisa ubume bezinto **Yenza eyakho ipateni** Yenza ezakho iipateni zejiyometri • Ngezinto eziphathekayo • Ngokuzoba imigca, iimilo okanye izinto **Iipateni ezisingqongileyo** Chonga, uchaze amanani ngamazwi ze ukope iipateni zejiyomtri: • kwindalo • kwizinto zentlalo yemihla ngemihla • kwimibhiyozo yenkcubeko	**Iipateni ezisingqongileyo** Chonga, uchaze ngamazwize ukope iipateni zejiyometri: • kwindalo • kwizinto zentlalo yemihla ngemihla • kwimibhiyozo yenkcubeko	Abafundi bangazichaza njani iipateni ezibangqongileyo Kukho iindlela ezahlukileyo zokuchaza iipateni ezisingqongileyo. Uninzi lweepateni ezisingqongileyo zenziwe ngemigca, iimilo nezinye izinto. Akuyo mfuneko ukuba unxulumanise iimilo okanye izinto kunye neemilo ze jiyometri ezinokwakheka kuka 2-D nezinto ezinokwakheka kuka 3-D kwibanga le -2. Abafundi bafanele ukuba bajonge oku kuphela: Yintoni ephindiweyo: umzekelo: amachaphaza, imigca, naluphina uhlobo lwemilo kwaye: • Iphindwe njani umzekelo: - Imigca ethe tse exweseneyo (njengakwifayidukhwe), imigca emazantsi elaphu - okanye exwese ehempeni, imigca enyukileyo emilenzeni yebhulukhwe - Imigca egoso okwemigca ejikelezayo, ecace gca xa usika itswele kubini. - Amagosogoso emigca njemigca yeminwe nemigca yezebra,namanya kwindlovu, nasebantwini abagugileyo - Imigca engathanga tse xa unqunqa ikhaphetshu, okanye ezifumaneka kwindulana zentlabathi; - Amachaphaza alinganayo, amachaphaza athe saa ngokulinganayo - Iimilo ezilinganayo ngobukhulu - Iimilo ezifanayo ngombala okanye - Iipateni ezenziwe ngeemilo ezahlukeneyo: Iimilo zeepateni ezahlukeneyo ezifumaneka kwisikhumba sendlulamthi.	Isifundo 1

ISIHLOKO	IIKHONSEPTHI NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXININISO KWIKOTA 4	AMANQAKU ENGCACISO OKANYE IZIKHOKELOZOKUFUNDISA	IXESHA
2.2 **Iipateni zamanani**	**Kopa, yandisa ze uchaze** Kopa, yandisa ze uchaze ukulandelelanisa amanani alula ukuya ubuncinane kuma-200 **Yila ze uchaze ezakho iipaten zamanani**	**Kopa, yandisa ze uchaze** Kopa, yandisa ze uchaze ukulandelelanisa amanani alula ukuya ubuncinane kuma- 1 000 Ulandelelwano malubonise ukubala ubheka phambili nokubuya umva: • Ngoo -1 ukususka nokuba kukweliphina inani phakathi kwe-0 ne -1 000 • Ngezi - 10 ukusu nokuba kukweziphi iziphinda-phindi ze-10 phakathi • kwe-0 ne -1 000 • Ngezi - 5 ukusuka nokuba kukweziphi iziphinda-phindi zesi -5 phakathi kwe-0 ne -1 000 • Ngezi -2 ukusuka nokuba kukweziphi iziphindaphindi zesi- 2 phakathi kwe-0 ne-1 000 • Ngama -100 ukusuka nokuba kukweziphi iziphinda-phindi zika-100 ukuya ubuncinane kwi-1 000	Onga kwiKota 1 Landelelanisa ezi zinto zilandealyo ngokufanelekileyo: • Ngoo -1 ukususka nokuba kukweliphina inani phakathi kwe-0 ne -1 000 • Ngezi - 10 ukusu nokuba kukweziphi iziphinda-phindi ze-10 phakathi kwe-0 ne -1 000 • Ngezi - 5 ukususka nokuba kukweziphi iziphinda-phindi zesi -5 phakathi kwe-0 ne -1 000 • Ngezi -2 ukususka nokuba kukweziphi iziphindaphindi zesi- 2 phakathi kwe-0 ne-1 000 • Ngama -100 ukususka nokuba kukweziphi iziphinda-phindi zika-100 ukuya ubuncinane kwi-1 000 • Ngama -50 ukususka nokuba kukweziphi iziphindaphindi zama- 50 ukuya ubuncinane kwi-1 000 • Ngama -25 ukususka nokuba kukweziphi iziphindaphindi zama- 25 ukuya ubuncinane kwi-1 000 • Ngama -20 ukususka nokuba kukweziphi iziphindaphindi zama- 20 ukuya ubuncinane kwi-1 000 Sebenzisa izinto, imifanekiso, iitafile, nemizobo yeflowu ukuxhasa abafundi kwinguqulelo ukususka ekubaleni ngokuqakatha nangokulandelelanisa ukuya kuphinda-phindo ngama-10, 5, 2, 4, 3	3 isifundo

ISIHLOKO	IIKHONSEPTHI NEZAKHONO EZIFUNEKAYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO UGXININISO KWIKOTA 4	AMANQAKU ENGCACISO OKANYE IZIKHOKELOZOKUFUNDISA	IXESHA
2.2 **Iipateni zamanani**	**Kopa, yandisa ze uchaze** Kopa, yandisa ze uchaze ukulandelelanisa amanani alula ukuya ubuncinane kuma-200 **Yila ze uchaze ezakho iipaten zamanani**	• Ngama -50 ukusuka nokuba kukweziphi iziphindaphindi zama-50 ukuya ubuncinane kwi-1 000 • Ngama -25 ukusuka nokuba kukweziphi iziphindaphindi zama-25 ukuya ubuncinane kwi-1 000 • Ngama -20 ukusuka nokuba kukweziphi iziphindaphindi zama-20 ukuya ubuncinane kwi-1 000 **Yila ze uchaze ezakho iipaten zamanani** • Amathuba abelwe ngqo ibanga lesi-2 • zinokwanda kwamanani alandelelanayo • Ama-20, 25, 50,100 sukuya ubuncinane 1 000		3 isifundo

IBANGA 3 IKOTA 4 3. ISITHUBA NEMILO				
IZIHLOKO	**IIKHONSEPTHI NEZAKHONO:** **EZIFUNEKAYO EKUPHELENI KONYAKA**	**IIKHONSEPTHI NEZAKHONO:** **ZEKOTA**	**INGCACISO EZITHILE OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwizifundo ze-1 iyure 24 imizuzu)
3.2 **3-D izinto**	**Landelelanisa izinto** Cinga ze uxele amagama ezinto ezinokwakheka kuka-3-D ezisegumbini lokufundela nezisemifanekisweni: • Iimilo zeebhola, (ezingqukuva) • Iimilo zebhokisi (prisms) • Iisinda (cylinders) • Ipyramids • Iikhowuni **Iimpawu zezinto** Chaza, hlela ze uthelekise izinto Ezinokwakheka kuka3- D malunga : • Neemilo ezinokwakheka kuka-2-D ezenza ubuso bezinto ezinokwakheka kuka-3-D • Imiphezulu esicaba okanye enamagophe	**Landelelanisa izinto** Cinga ze uxele amagama ezinto ezinokwakheka kuka-3-D ezisegumbini lokufundela nezisemifanekisweni. • Iimilo zeebhola, (ezingqukuva) • Iimilo zebhokisi (prisms) • Iisinda (cylinders) • Ipyramids • Iikhowuni **Iimpawu zezinto** Chaza, hlela ze uthelekise izinto Ze-3- D malunga : • Neemilo ze -2-D ezenza ubuso bezinto be-3- • Imiphezulu esicaba okanye enamagophe	Jonga umsebenzi weKota 2. Kule kota unokuziqhelanisa, uhlaziye, udibanise umsebenzi obhalwayo ngezinto ezinokwakheka kuka- 3-D. Thatha ingqalelo ekucingeni nasekunikeni amagama • Iimilo zeebhola, (ezingqukuva) • Iimilo zebhokisi (iiprizimu) • Iisinda (cylinders) • Ipyramidi nee- • neekhowuni Xa beboniswe imifanekiso yejiyometri okanye izinto zemihla ngemihla. Imibuzo ebuzwayo kufuneka yenze abafundi ukuba bathathele ingqalelo ukuba ; • ingaba imiphezulu yezinto inamagophe okanye imthebelele; kwayeIngaba imiphezulu yezinto ingoonxantathu, luxande, isikwere okanye isangqa.	1 isifundo

IZIHLOKO	IIKHONSEPTHI NEZAKHONO: EZIFUNEKAYO EKUPHELENI KONYAKA	IIKHONSEPTHI NEZAKHONO: ZEKOTA	INGCACISO EZITHILE OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwizifundo ze-1 iyure 24 imizuzu)
3.2 **3-D izinto**	**Gqalisela kule misebenzi** • Qwalasela ze wakhe izinto zika-3-D usebenzisa izinto eziphathekayo ezinjengeemilo ezinokwakheka kuka -**2-D** ezisikwe emaphepheni., ezenziwe ngomdongwe, amkhunana okuvungula, imicinga yokusela,nezinye izinto zejiyometri ze-3-D			1 isifundo
3.4 **Ulingano-macala (isimetri)**	**Ulingano-macala /Simetri** • Cinga uzobe umgca wolingano-macalai kwi-jiyometri ye2-D nezingezomilo zejiyometri. • Qikelela umgca wolingano-macala ngokuthi usonge iphepha nangembonakalo.	**Ulingano macala/ Simetri** • Qaphela ze uzobe umgca wolingano-macala zomilo yejiyometri ye-ezinokwakheka kuka 2-D nengeyiyo yemilo yejiyomet	Umsebenzi wolingano-macala wokusonga amaphepa owenziwe kwiKota 2, unokunceda abafundi bakwazi ukuchonga imigca yolingano-macala ngemizobo yezinto zejiyometri nezingezizo zejiyometri. Umsebenzi obhalwayo mawuquke le mizekelo: • Umgca wolingano-macala asingomgca oxwesileyo kwaye • Iimilo nezinto zolingano-macala zinemigca engaphezulu komnye.	Isifundo esi-1

IBANGA 3 IKOTA4 4. UMLINGANISELO				
ISIHLOKO	**IIKHONSEPTI NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTI NEZAKHONO** **ZEKOTA YOKU -1**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24in)
4.1 **IXESHA**	**UKUXELA IXESHA** • Funda imihla kwiikhalenda • Bhala imihla yokuzalwa,umbiyozo wezenkolo,iholide kawonke wonke,iziganeko zembali,iziganeko zesikolo ezikwikhalenda. • Xela ixesha leeyure ezili 12 nge: - yure - Isiqingatha seyure - Ikota yeyure - imizuzu kwiwotshi yosiba okanye yamanani kwakunye nezinye izibonisi maxesha ezikhoyo umz oonomyayi/ iselula **Bala ubude bexesha namaxesha adlulayo** Sebenzisa ikhalenda ukubala	**UKUXELA IXESHA** • Funda imihla kwiikhalenda • Bhala imihla yokuzalwa,umbiyozo wezenkolo,iholide kawonke wonke,iziganeko zembali,iziganeko zesikolo ezikwikhalenda. • Xela ixesha leeyure ezili 12 nge: - Iyure - Isiqingatha seyure - Ikota yeyure - imizuzu kwiwotshi yosiba okanye yamanani kwakunye nezinye izixhobo zedijithali ezikhoyo umz. oonomyayi/ iselula **Bala ubude bexesha kunye namaxesha adlulayo**	Abantwana baqhubekeka beziqhelanisa nokuthetha ngobude bexesha nokulandelelanisa amaxesha. Ngexesha lokufundisa uwonke wonke nangexesha lokunika ingqwalasela kumaqela athile, abantwana baqhubekeka ukuthetha malunga neentsuku zeveki, iinyanga zonyaka kunye nomhla wemini kanye kanye le imiyo kanti nezinye ezisezayo. Abantwana baqhubekeka ukufaka oku kulandelayo kwikhalenda njengoko iziganeko zifika ngokufika. • Imihla yokuzalwa • Imibhiyozo yenkolo • Iziganeko ezingembali • Iziganeko zesikolo • Iiholide zikawonke wonke Qhubeka ubuza abantwana ukuba bakuxelele ixesha ngamaxesha athile kwimihla yonke yeveki,ixesha balixele • Ngeeyure nemizuzu kwiwotshi yamanani (idijithali) • Ngeeyure nemizuzu kwiwotsh yosiba Umzekelo, abantwana banokubuzwa ukuba baxele ixesha xa isikolo siqala, ngexesha lekhefu nexesha lokugoduka okanye xa betshintsha izifundo. Kuluncedo ukuba newotshi enkulu esebenzayo enokuthi ixhonywe egumbini lokufunda ukuze abantwana babe nokuyisebenzisa.Abantwana banokuzenzela iimodeli zeewotshi.Utitshala unokubuza abantwana ukuba babonise kwiimodeli zabo amaxesha awohlukileyo. Angafakela izibalo ezithile kwimibuzo yakhe, umz “ndibonise intsimbi yeshumi entloko. Ibingubani ixesha xa ibiyikota yeyure phambi keentsimbi ye- 10? “	Izifundo ezi-2

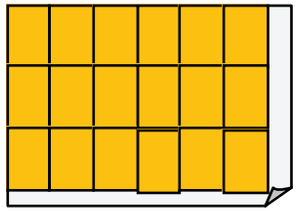
ISIHLOKO	IIKHONSEPTI NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTI NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.1 **Ixesha**	uze uchaze ubude bexesha ngeeveki neentsuku neenyanga • Guqula iintsuku uzise ezivekini • Guqula iiveki uzise ezinyangeni • Sebenzisa iwotshi ukubala ubude bexesha ngeeyure namacala eeyure	Sebenzisa ikhaenda ukubala nokuchaza ubude bexesha ngokwentsuku,iiveki kunye neenyanga kudibanise noku kulandelayo • ukuguqula phakathi kweeveki neenyanga • ukuguqula phakathi kweeveki neenyanga Sebenzisa iiwotshi ukubala ubude bexesha ngokweyure nangeekota zeeyure.	Ngexesha lokuba abantwana bezisebenzela bebodwa banokuqhubeka besenza imisebenzi enxulumene nokuxela ixesha • ngeeyure,isiqingatha seyure besebenzisa iwotshi yosiba • ngeeyure,isiqingatha seyure besebenzisa iwotshi yamanani(idijithali) Abantwana bangenza izibalo ngeeveki okanye ngeentsuku ukuba banikwe ikhalenda okanye iindawana ezithile kwikhalenda zekhalenda umz.ukufumana imihla nokubala umahluko pakwathi kwawo. **Ukufunda imizuzu kwiwotshi yosiba** Chitha izifundo ezibini uqwalasele ekubetheleleni kubafundi isakhono sokufunda ngewotshi yosiba imizuzu.Jonga namanqaku kwikota yesi-3.	Izifundo ezi-2

ISIHLOKO	IIKHONSEPTI NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTI NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.2 **Ubude**	**Umlinganiselo ongekho sesikweni** • Thelekelela, linganisela, thelekisa, landelelanisa urekhode /bhala phantsi ubude esebenzisa iindlela ezingekho seSikweni kokukala umz.usebenzisa izandla iimitsi, ubude beepensile, iikhawuntari njl-njl • Chaza ubude bezinto ngokubala uxele ubude ngeeyunithi ezingekho seSikweni • Sebenzisa ulwimi lokuthelekisa umz. ndana, mfutshanana, ndana nebanzana **Fundisa umlinganiselo osesikweni** • Qikelela uze uthathe umlinganiselo usebenzisa iimitha(istiki semitha,umtya obude buyimitha) njengomlinganiselo omiselekileyo. Akukho kuguqulwa kufunekayo phakathi kwemitha neesentimitha • Qikelela uze uthathe umlinganiselo usebenzisa iisentimitha usebenzisa irula Akukho kuguqulwa kufunekayo phakathi kwemitha neesentimitha		Yonke imilinganiselo yobude ekhankanywe kumqolo osecaleni abafundi bangaziqhelanisa nawo ngexesha labo lokuzisebenzela bebodwa.Wonke umsebenzi mawubhalwe phantsi	

ISIHLOKO	IIKHONSEPTI NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTI NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.3 **Umthamo**	**Umlinganiselo ongekho sesikweni** • Thelekelela, uthathe umlinganiselo, uthelekise, ulandelelanise uze urekhodishe usebenzisa umlinganiselo ongekho sesikweni. • Sebenzisa ulwimi lokuthelekisa umz. ikhaphukhaphu, inzima, ikhaphukhaphana, inzinyana. **Ukufundisa umlinganiselo osesikweni** • Thelekisa, ulandelelanise uze urekhode ubunzima kwiipakethi zezinto ezithengwayo ezinomlinganiselo wobunzima ozi-kilograms umz. iikilograms ezi-2 zerayisi nekilogram yomgubo e-1 okanye iigrams eziyi - 500 zetyuwa. • Ukuthatha umlinganiselo wobunzima bakho usebenzisa isikali sasendlini yokuhlambela. Akukho nguqulelo yeegram neekilograms emayenziwe.	**Umlinganiselo ongekho sesikweni** Abafundi benza imisebenzi ebhalwayo ukubethelela ezi zinto zilandelayo,ekuquka ukufunda imifanekiso ye: including reading pictures of • Izinto ezithengwayo ezinobunzima obubhalwe kuzo. • Imifanekiso yobunzima obukwisikali sasendlini yokuhlambela apho isikali sibonakalisa usiba olwalathe kwimigca enamanana ebonisa ubunzima	Ukubethelela umsebenzi wobunzima owenziwe apha enyakeni,, abafundi kufuneka benze imisebenzi ebhalwayo apho baza: • Kufunda imifanekiso ebanika amathuba okuba bathelekise ubunzima bezinto obuboniswe kwisikali. • Kufunda imifanekiso ebanika amathuba okuba baxele ubunzima bezinto obuboniswe kwisikali besebenzisa iiyunithi ezingekho seSikweni • Thelekisa,landelelanisa baze barekhodishe iziphumo ze: - mifanekiso ezinobunzima obuxelwe ngeekilogram - mifanekiso yegrosari enobunzima obuxelwe ngeegrams baze: • Bafunde imifanekiso yezikali zasendlwini yokuhlambela ezinobunzima obusondezwe kwikilogram egcweleyo. Jonga amanqaku kwiKota yesi-2 **Ukuthatha umlinganiselo kwiimeko ezingekho seSikweni ukusombulula iingxaki nezibalo** Ngexeshwa elabelwe Amanani, Izibalo noLalwamano abafundi banokusombulula iingxaki ezisebenzisa ezi meko • Ukuthatha umlinganiselo ongekho sesikweni; • Ubunzima ngeekilograms; • Nobunzima ngeegrams. Thathela ingqalelo ummandla wamanani olungele leKota,kunye nohlobo lweengxaki zezibalo ezikwafanelekileyo.	Isifundo esi-1

ISIHLOKO	IIKHONSEPTI NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTI NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.4 **Umthamo/ Ivolumu**	**Umlinganiso ongesesikweni** • Thelekisa uze ulthathe umlinganiselo womthamo wezikhongozeli (oko kukuthi isikhongozeli singathwala umthamo ongakanani xa sinokugcaliswa) ngokusebenzisa umlinganiselo ongekho sesikweni umz. amacephe neekomityi. • Chaza umthamo wesikhongozeli ngokubala nokuxela ukuba zingaphi iiyunithi ezingekho seSikweni esinokuzisebenzisa ukuzalisa isikhongozeli umz,ibhotile inomthamo weekomityi ezine.	**Ukufundisa umlinganiselo ongekho sesikweni** Abafundi benza imisebenzi ebhalwayo ukubethelela ezi zinto zilandelayo eziquka ukufunda imifanekiso ye: • Zinto ezithengwayo ezinemithamo yazo ebhalwe kuzo ukuze abafundi bakwazi ukuzilandelelanisa ngendlela efanelekileyo ngokokushiyana kwazo. • Mifanekiso yeejagi apho umthamo ukufutshane nomgca obonisa ilitha e -1, ezi-2, isiqingatha okanye ikota yelitha.	Ngexesha lokuba abafundi bezisebenzela bebodwa kufuneka baqhubeke uku: • Thelekisa nokuthatha umlinganiselo; ukulandelelanisa nokurekhodisha umthamo wezikhongozeli besebenzisa umlinganiselo ongekho sesikweni. • Thelekisa uze ulandelelanise umthamo woludwe lweebhotile kunye nezinto zegrosari apho umthamo ubhalwe kwiipakethi zezinto zegrosari okanye kwiibhotile. • sebenzisa iibhotile zelitha e-1 okanye iijagi zelitha e-1 ukuze bathelekelele baze bathathe umlinganiselo, balandelelanise baze barekhodishe umthamo wezikhongozeli ngokweelitha. Jonga kumanqaku ekota yesi-3. Abafundi kufuneka banikwe umsebenzi obhalwayo ukubethelela ezi zinto zilandelayo, ezikuquka ukufunda imifanekiso ye: • Zinto ezithengwayo ezinemithamo yazo ebhalwe kuzo ukuze abafundi bakwazi ukuzilandelelanisa ngendlela efanelekileyo • Imifanekiso yeejagi apho umyinge ukufutshane kumgca wenani elibonisa ilitha enye okanye ezimbini Bachaza umthamo ngolu hlobo:uphantse walingana ukufutshane,ungaphezulwana,ungaphezulu,ungaphantsi, kancinci,ulingana nqo (nenani lelitha) abazifunda ejagini. **Ukuthatha umlinganiselo njengemeko yokusombulula iingxaki nokubala** Ngexesha elabelwe Amanani, Ukubala noLalwamano abafundi basombulula iingxaki ezisebenzisa ezi meko zilandelayo: • Umlinganiselo ongekho sesikweni womthamo umz. UGogo usebenzisa iikomityi ezimbini zobisi ukwenza ikeyiki.Ukuba uyiphinda kabini iresipi yakhe ingaba uyakufuna ubisi olungakanani ? • iilitha • imililitha Thathela ingqalelo inani loludwe lwezinto ezifanele le kota kwakunye neengxaki zezibalo ezikwafanele le kota .	**Umjikelezo**

ISIHLOKO	IIKHONSEPTI NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTI NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.4 **Umthamo/ Ivolumu**	**Ukufundisa umlinganiselo ongekho sesikweni** • Thelekelela,uthathe umlinganiselo, thelekisa, landelelanisa uze urekhodishe umthamo wezinto ngokuthatha umlinganiselo ngeelitha, iziqingatha zeelitha kunye neekota zelitha. • Thelekisa, landelelanisa uze urekhodishe umthamo wezinto ezithengwayo ezinomthamo oxelwe ngokweelitha umz. iilitha ezi-2 zobisi, ilitha enye yesiselo, iilitha ezi – 5 zepeyinti okanye imililitha ezi-500 zobisi, imililitha ezi-250 zobisi neemililitha ezingama-750 ze-oyile. • Ikomityi inomthamo ozimililitha ezingama-250 • Azi ukuba itispuni inomthamo ozimililitha ezi-5 Akukho nguqulelo phakathi kweemililitha neelitha omawenziwe	• Mifanekiso yeejagi apho umthamo ukufutshane nomgca obonisa iimililitha.. Kulindeleke ukuba abafundi bafunde kuphela umgca okufutshane onamanani. Bachaza umthamo ngolu hlobo:uphantse walingana ukufutshane, ungaphezuli, ungaphantsi, kancinci, ulingana nqo (nenani lelitha) abazifunda ejagini. Akukho nguqulelo phakathi kwee mililitah neelitha omayenziwe.		Isifundo esi-1

ISIHLOKO	IIKHONSEPTI NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA	IIKHONSEPTI NEZAKHONO ZEKOTA YOKU -1	AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA	IXESHA (kwisifundo seyure e-1 nemizuzu engama-24in)
4.5 **Umjikelezo nommandla**	**Umjikelezo** • Phanda umgama ongumjikelezo kwiimilo ezinokwakheka kuka 2-D no 3-D usebenzisa umtya **Ummandla** • Phanda ummandla usebenzisa iithayile	**Ummandla** Phanda ummandla usebenzisa ithayile.	Abafundi bafundiswa ukuthatha umlinganiselo wommandla okokuqala kwibanga lesi-3.Kwisigaba esiphakathi ixesha elininzi umlinganiselo wommandla uthathwa kuphela ngokungekho sesikweni. Abafundi bafumanisa ukuba zingaphi iimilo okanye izinto ezigqume umphezulu. Babeka iimilo okanye izinto ngaphandle kokushiya izithuba phakathi kweemilo okanye izinto.Bathi ke babale ukuba zingaphi iimilo okanye izinto ezigqume umphezulu. Umz. abafundi banokubeka izikwere okanye amaxande ephepheni baze babale ukuba zingaphi iimilo ezigqume iphepha. Abafundi kufuneka baxele ummandla wephepha ngokeemilo.umz iphepha lam inommandla wamaxande ali-16. Kungenzeka ukuba iimilo lingaligqumi lonke iphepha njengokuba kubonisiwe ngasezantsi.  Abafundi kufuneka baxele ubungakanani bephepha ngokuthathela ingqalelo oku,umz iphepha lam linommandla onamaxande anagaphezulu kwe 18 kodwa ambalwa kunamaxande angama-28. Abafundi mababeke iithayile kummandla omnye besebenzisa iimilo ezahlukileyo ezinobungakanani obahlukileyo.Oku kuzakuvumela abafundi ukuba babone: • Ukuba imilo incinci, uya kufuna iimilo ezininzi ukugquma umphezulu wento. • Imilo oyikhethayo iya kuchaphazela isiphumo oza kusifumana. Abafundi abalindelekanga ukuba babale izikwere kwigridi yezikwere.Oku kuya kwenziwa kwisigaba esiphakathi.	Izifundo ezi-2

IBANGA LESI 3 IKOTA YOKU 4 5.UKUSEBENZA NGOLWAZI OLUQOKELELWEYO				
ISIHLOKO	**IIKHONSEPTI NEZAKHONO EZILINDELEKILEYO EKUPHELENI KONYAKA**	**IIKHONSEPTI NEZAKHONO** **ZEKOTA YOKU -4**	**AMANQAKU NGEENGCACISO OKANYE IZIKHOKELO ZOKUFUNDISA**	**IXESHA** (kwisifundo seyure e-1 nemizuzu engama-24in)
5.4 **Qokelela and lungisa ulwazi**	**Qokelela uze ulungise ulwazi** • Qokelela ulwazi malunga neklasi okanye isikolo ukuphendula imibuzo ebuzwe ngutitshala. • Lungisa ulwazi olunikwe ngutitshala okanye olufumane encwadini. • Lungisa ulwazi oluku: - luhlu - iithali - iitheyibhile			
5.5 **Bonisa ulwazi**	**Bonisa ulwazi** Bonisa ulwazi kwi • grafu yemifanekiso • grafu yezitena			
5.6 **Calula uze utolike ulwazi**	**Calula uze utolike ulwazi** Phendula imibuzo eboniswe kwi: • Igrafu yemifanekiso • igrafu yezitena	**Calula uze utolike ulwazi** Phendula imibuzo ngolwazi uphendula kwigrafu yezitena	Kweli xesha lonyaka abafundi kufuneka babe kanti sebesebenze ngazo zonke iintlobo zolwazi ekufuneka zibe zenziwe kwibanga lesi 3.(uluhlu,iithali,itheyibhile,ii grafu zemifanekiso,iigrafu zezitena).Kuyacetyiswa ukuba kwikota yesine abafundi bagqale kwiindlela zokusebenza ngolwazi.Nika abafundi imisebenzi yokucalula ulwazi ubuncinane kwezi zinto zilandelayo. • Igrafu yezitena e-1 • itheyibhile e-1. Abafundi kufuneka baphendule imibuzo ngegrafu netheyibhile.Imibuzo efanelekileyo uyakuyijonga kwijonga kwikota yoku-1.	Isifundo esi-1

ISAHLUKO SEI-4: UKUHLOLA

4.1 INTSHAYELELO

Ukuhlola yinkqubo eqhubekayo yokufunda ecwangcisiweyo yokuchonga, ukuqokelela nokutolika ulwazi malunga nendlela abaqhuba ngayo Abafundi usebenzisa iindlela ezahlukeneyo zokuhlola. Oku kubandakanya amanyathelo amane:

- Ukuqokelela ubungqina bokusebenza komfundi;
- Ukuphononga obu bungqina;
- Ukurekhoda okufunyanisiweyo noku
- Sebenzisa olo lwazi ukuqondisisa nokuncedisa uphuhliso lwAbafundi ukuphuhlisa ukufunda nokufundisa.

Ukuhlola kufanela kusekwe kokungekho seSikweni (ukuhlola kokufunda nokusesikweni (ukuhlola kokufunda). Kwiimeko zombini kunikwa ingxelo ekufanele Abafundi bayazi ngokufunda kwabo.

Kwinqanaba elisisiseko, obona buchule bungundoqo kuHlolo oluseSikweni nolungekho seSikweni kukujongwa baqatshelwe ngutitshala, iingxoxo zomlomo, imiboniso eyenziwayo nokurekhodisha ephepheni. UkuHlola kwibanga labaqalayo malwenziwe ngezomlomo nezenziwayo

4.2 UKUHLOLA OKUNGEKHO SESIKWENI OKANYE KWEMIHLA NGEMIHLA

Ukuhlola kokufunda kunenjongo yokuthi gqolo ukuqokelela ulwazi malunga nokusebenza komfundi . Oku kubizwa ngokuba kukuHlola okungekho seSikweni. Oku kukubeka esweni rhoqo kwenkqubo yomfundi. Oku kwenziwa ngokubonisa, ngokuxoxa, ngokwenza imisebenzi yeprekthikhali, imiboniso,ukusebenzisana okungekho seSikweni eklasini, njalo njalo. Makungabonwa oku njengokwahlukileyo koko kwaseklasini. UkuHlola okungekho seSikweni kunceda ukuba utitshala abeke esweni inkqubo yomfundi nokwenza izigqibo ezisekelwe kokufunyaniswe yonke imihla. UkuHlola okungekho seSikweni kusetyenziswa uku

- Ukunika ingxelo kubafundi
- Ukuncedisa kwisicwangciso sokufundisa.

Ngamanye amaxesha utitshala unokugcina itshekhilisti okanye asebenzise uludwe lwenkqubo yokukhangela njengendlela yokurekhoda inkqubo yAbafundi. Ngamanye amaxesha Abafundi okanye ootitshala banokumakisha le misebenzi yokuhlola. Noko kunjalo, ukuHlola okungekho seSikweni aluyiyo inxalenye yokurekhodwa njengoHlolo oluseSikweni. Iziphumo zemisebenzi yokuhlola zemihla ngemihla azithathelwa ngqalelo ekunyuselweni nasekukhutshelweni isatifikethi.

4.3 UKUHLOLA OKUSESIKWENI

Yonke imisebenzi yokuhlola iyinxalenye yenkqubo esesikweni yokuhlola yonyaka kwaye ithatyathwa njengokuHlola okuSesikweni. Imisebenzi yokuhlola okusesikweni iyamakishwa ize irekhodwe ngokusesikweni ngutitshala elungiselela ukuqhubela phambili nokukhutshwa kwesatifikethi. Imisebenzi yokuHlola okuseSikweni iyinxalenye yeNkqubo yokuHlola yonyaka eseSikweni kwibanga ngalinye nakwisifundo ngasinye.

Utitshala unokujonga Abafundi abali-10 ngexesha, ngoko imisebenzi yokuHlola okuseSikweni yenziwa ngokukodwa

kwumatyeli ogxininiso emaqeleni amancinane, yaye kuthabatha iintsuku ezimbalwa ukuHlola iklasi yonke. Zonke izixhobo abaqhele ukuzisebenzisa Abafundi, mazibe khona njengesiqhelo (izixhobo zokubala, iitshati zamanani njalo njalo).

Iindlela zokuHlola ezisetyenziswayo mazibe kwizinga neminyaka efanelekileyo, zibe nokukhulisa kubafundi. UkuHlola okuseSikweni makulungiselele onke amanqanaba anengqiqo nabanako ukukwenza Abafundi. Indlela eyilwe ngayo le misebenzi ma iquke umxholo wesifundo ngeendlela ezahlukeneyo.

Iindlela ezahlukeneyo zokuHlola (ukukhangela, ezomlomo, ezenziwayo nezibhalwayo) mazisetyenziswe ukunika umntwana ngamnye ithuba lokubonisa akwaziyo ukukwenza. Oku kwenziwa kuba abanye Abafundi babonisa abakwaziyo ukukwenza ngohlobo oluthile lwendlela yokuHlola. Umzekelo,

- Abafundi abafumana kunzima ukufunda, benza kakuhle kwiMathematika.
- Abanye Abafundi bangangabikho kwizinga elamkelekileyo kulwimi lokufunda nokufundisa..

Imisebenzi yokuHlola kwiMathematiki ma iquke imisebenzi engaxhomekekanga kulwimi, engaxhomekekanga kukwazi ukufunda, ukubonisa eyona nto banako ukuyenza Abafundi

Noko kunjalo, ma iqondakale eyona nto eHlolwayo. Ulwazi nezakhono ezithile ziHlolwa ngokukuko ngeendlela ezithile zokuHlola. Iintlobo ezahlukeneyo zokuHlola zilungele izakhono neengqiqo ezidingekayo kwiintlobo ngeentlobo zezihloko ngokweminyaka yAbafundi. Kuluncedo ukusebenzisa itshekhlisti yokukhangela ukuHlola Abafundi besenza imilinganiso kumabanga abaqalayo. IiRubhriki zingasetyenziswa ukuvavanya izakhono zAbafundi zokusombulula iingxaki.

4.4 INKQUBO YOKUHLOLA OKUSESIKWENI

Iimfuno zemisebenzi oykuHlola okuseSikweni kwe Mathematiki kumaBanga 1 ukuya ku-3 acaciswe kule theybhile ingezantsi:

Ibanga	Ikota yoku-1	Ikota 2	Ikota 3	Ikota 4	Iyonke
1	2	2	2	1	7
2	2	2	2	2	8
3	2	3	3	1	10

Ootitshala bayakhuthazwa ukuba mabenze ukuhlola okusisisseko kwikota yoku-1.Iziphumo zalo msebenzi usisiseko mazisetyenziselwe ukuthatha izigqibo malunga namanqanaba amabaqale kuwo xa befundisa okanye ukuqaphela iindawo zezifundo zabo ezisafuna ukuthathelwa ingqalelo ngaphezu kokuleyibhela abafundi ngokungabi namandla kwizifundo zabo.

Imisebenzi yokuHlola okuseSikweni yeMathematiki ibandakanya ngaphezu kwesihloko esinye kwiMathematiki. Imisebenzi yokuHlola ngonyaka kufuneka iquke zonke imimandla zomxholo nezihloko, kodwa asiyiyo yonke into kwiimfuno zekharityhulam ema ihlolwe kwenziwe ingxelo ngayo ngokuseSikweni. Amanani, ukusebenza nolwalamano kwenza ipesenti engama-60% yeMathematiki kwiBanga labaqalayo . Le nto ithetha ukuthi ipesenti engama - 60% yokuHlola okuseSikweni iKota nganye ngonyaka ma igxininise kumanani, imisebenzi nolwalamano.

Umsebenzi wokuHlola okuseSikweni ma ungabonwa njengesiganeko esinye okanye uvavanyo olunye. Eminye imilinganiso yokuHlola ingasetyenziswa ngexesha elinye, kodwa eminye ingaHlolwa ngamaxesha ohlukeneyo. Umzekelo, ukuba isakhono sokubala ngokuqakatha siyaHlolwa, ukukwazi ukwenza oku kulandelayo kungaHlolwa

kuwo lo msebenzi umnye:

- Ukugqibezela ukubala ngokulandelelanisa
- Ukufunda nokubhala iisimboli zamanani
- Ukubala

Nangona kunjalo, ukuba umsebenzi wokuHlola uquka ukusombulula izibalo zamanani zamazwi ngokwenza amaqela okanye ukwahlula ngokulinganayo, nokuHlola Abafundi ukukwazi ukwenza umlinganiselo womthamo; Kungenzeka ukuba le miba yeMathematiki iHlolwe ngamaxesha angafaniyo nangeendlela ezahlukeneyo.

4.5 UKUREKHODA NOKURIPOTA (NOKUNIKA INGXELO NGOMSEBENZI)

Ukurekhoda yinkqubo apho utitshala abhala phantsi izinga lokusebenza lomfundi ngamnye kumsebenzi othile ohlolwayo. Kubonisa inkqubela-phambili yomfundi ekuzixhobiseni ngolwazi oluxeliweyo ngokweeNkcazelo zePolisi yeKharityhulam nokuHlola. Iirekhodi zomsebenzi womfundi kufanele zinike ubungqina ngenkqubela-phambili yomfundi ngokwebanga kunye nokulungela kwakhe ukuqhubela phambili xa epasile ukuya kwibanga elilandelayo. Iirekhodi zomsebenzi womfundi kufanele zisetyenziswe ukungqinisisa inkqubela-phambili eyenziwe ngootitshala nAbafundi kwinkqubo yokufundisa nokufunda.

Ukukhupha iripoti okanye ingxelo yinkqubo yokwazisa Abafundi, abazali babo, isikolo nabanye abathathi-nxaxheba malunga nendlela asebenza ngayo umntwana ezifundweni zakhe gabalala. Zininzi iindlela ezisetyenziswayo ukunika iripoti okanye ingxelo ngomsebenzi womfundi. Ziquka amakhadi eripoti okanye engxelo, ukubiza iintlanganiso nabazali, iintsuku zokutyelela esikolweni, iinkomfa zabazali nootitshala, ukufownela abazali, ukuthumela iileta kubazali, ukuthumela oolindixesha besikolo okanye beklasi kubazali, njalo njalo. Ootitshala kumabanga onke banika iripoti okanye ingxelo ngokweepesenti ngesifundo ngasinye. Amazinga ohlukeneyo okusebenza kunye neepesenti ahambelana nazo adweliswe kwiTheyibhile engasezantsi.

Iikhowudi neepesenti zokurekhoda nokuripota (nokunika ingxelo ngomsebenzi

Khowudi	Inkcazelo ngendlela aqhube ngayo kumsebenzi wakhe umntwana	Ipesenti
7	Uphumelele emagqabini	80 – 100
6	Ugqwesile	70 – 79
5	Uphumelele ngokuqaqambileyo	60 – 69
4	Uphumelele ngokwanelisayo	50 – 59
3	Uphumelele ngokufanelekileyo	40 – 49
2	Uphumelele ngokuyinxalenye	30 – 39
1	Akaphumelelanga	0 - 29

4.6 UPHONONONGO LOKUHLOLA

Uphononongo okanye imodareyshini yinkqubo yokuqinisekisa ukuba imisebenzi ehlolwayo ichanekile, yamkelekile kwaye isemgangathweni ochanekileyo. Uphononongo lwenziwa esikolweni, esithilini, kwiphondo nakwandlunkulu. Zonke iinkqubo ezichanekileyo neziqingqiweyo zokuphononongа okanye zokumodareytha kufuneka zimiliselwe ukungqinisisa yonke imisebenzi yezifundo ehlolwayo.

4.7 ULWAZI GABALALA

Oluxwebhu malufundwe kunye nala:

4.7.1 *National policy pertaining to the progrmme and promotion requirements of national Curriculam statement Grades R-12; and*

4.7.2 The policy document, *National Protocol for Assessment Grades R-12*

4.8 EXEMPLAR ASSESSMENT TASKS FOR GRADES 1 TO 3

Imizekelo yeetshekilisti zokuHlola inikiwe ngezantsi: Injongo kukuncedisa ootitshala bacwangcise baze benze uHlolo oluseSikweni ngendlela eqhubekayo.

Ibanga1				
Itshekhlisti yokuqwalasela umsebenzi phantsi komthamo/ nomyinge				
Inkalo yomxholo	**Umxholo**	**Umlinganiselo wokuHlola**	**✓ okanye ×**	**Ukuphawula**
Ukulinganisa	**Umyinge /Umthamo**	Thelekisa ulandelelanise umthamo wamanzi kwizikhongozelo ezibini ezibekwe enye ecaleni kwenye.		
		Thelekisa imithamo yezikhongozelo ezibini ezahlukileyo ngokugalela kwisikhongozelo sesithathu.		
		Rekhoda umthamo wesikhongozelo ngokusebenzisa iindlela ezingekho seSikweni zokulinganisa. umz. Amacephe neekomityi.		
		Phendula Imibuzo malunga nokuba yiyiphi enomthamo ongaphezulu kowezinye.		
		Sebenzisa ulwimi ukuthelekisa umz. ngaphezulu kwe, ngaphantsi kwe,izele, ayinanto.		

Ibanga 1 Ikota 4: Ukuhlola 1				
Itshekhlisti yokujonga ubunzima				
Inkalo yomxholo	**Umxholo**	**Umlinganiselo wokuHlola**	**✓ okanye ×**	**Ukuphawula**
Umlinganiselo	**Ubunzima**	Landelelanisa uthelekise ubunzima bezinto ezintathu nangaphezulu ngokubeka izinto ngambini kwisikali zide zibe zilandelelaniswe zonke..		
		Xela iyunithi xa enika ubunzima. umz. Le ncwadi inibunzima obulingana namabhastile angama- 34.		
		Sebenzisa ulwimi ukuthelekisa, umz. Khaphu-khaphu, nzima, khaphukhaphana, nzinyana.		
		Ukukwazi ukurekhoda ubunzima abuthathileyo.		

Esebenzisa iirubriki ukuhlola ukusombulula iingxaki

Ukusombulula iingxaki kungahlolwa ngokusebenzisa irubriki.

Ziziphi iindlela ezivunyiweyo zokusombulula iingxaki?,

- Utshintsho olubonakaliswa ngAbafundi ngeli xa bakhulisa besandisa ukuqonda kwabo kwekhonsepthi yamanani kwanezakhono zabo zokubala;
- Kuxhomekeka kudweliso manani nakubume bengxaki okanye izibalo ngokwazo.

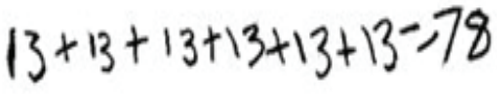
Irubriki yokusombulula ingxaki Ibanga 1	
Akazi nokuba aqale phi okanye wenza into ephume ecaleni /engekho mgceni.	1
Uyayiqonda ingxaki aqale kodwa akakakwazi ukugqibezela ngendlela eyiyo.	2
Uyayiqonda ingxaki kwaye uyayisombulula esebenisa imizobo (amanqaku) okanye izinto zokubala . Unika ingcaciso. Angazenza iimpazamo ezincinane.	3
Uyisombulula ngendlela eyiyo ingxaki.unika ingcaciso ngeyakhe neazabanye iingxaki ngendlela eyiyo.	4
Irubriki yokusombulula ingxaki Ibanga 2	
Akazi nokuba aqale phi okanye wenza into ephume ecaleni/engekho mgceni.	1
Uyayiqonda ingxaki aqale kodwa akakakwazi ukugqibezela ngendlela eyiyo. okanye Uyayiqonda ingxaki kwaye uyayisombulula esebenisa imizobo (amanqaku) okanye izinto zokubala *	2
Uyayiqonda ingxaki kwaye uyisombulula ngokusebenzisa amanani.kuqondas problem and solves esebenzisa amanani, Angazenza iimpazamo ezincinane. Uyayinika ingcaciso.	3
Uyisombulula ngendlela eyiyo ingxaki esebenzisa ulwazi lwakhe lwamanani kunye nobuchule obufana nokucazulula nokudibanisa amanani, ukuphinda phinda kabini,nokudibanisa kwakhona, umgca- manani njl.Uyakwazi ukunika ingcaciso ngeengcinga zakhe kwanezabanye..	4

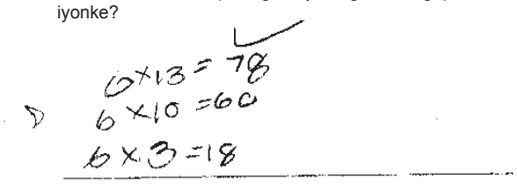
* Udweliso manani olusetyenziswa ngAbafundi bebanga lesibini yenza kungabi lula ukubala ngenxa yokuba besebenzisa imifanekiso baze bayibale.Kufuneka ke ngoko kuzanywe ukuba kukhuliswe iulwazi lwamanani ngokuthi bwawasebenzise xa besombuluula iingxaki bebala

Irubriki yokusombulula ingxaki Ibanga 3	
Akazi nokuba aqale phi okanye wenza into ephume ecaleni/engekho mgceni.	1
Uyayiqonda ingxaki aqale kodwa akakakwazi ukugqibezela ngendlela eyiyo., okanye uyayisombulula esebenisa imizobo (amanqaku) okanye izinto zokubala	2
Ubonakalisaukuqonda ingxaki kwaye usebenzisa amanani. Unika ingcaciso.	3
Uyisombulula ngendlela eyiyo ingxaki esebenzisa ulwazi lwakhe lwamanani kunye nobuchule obufana nokucazulula nokudibanisa amanani, ukuphinda phinda kabini,, ukuweza, ukwangeza, umgca manani njl ngokufanelekileyo. Uyakwazi ukucacisa ezakhe izisombululo kwakunye nezabanye.	4

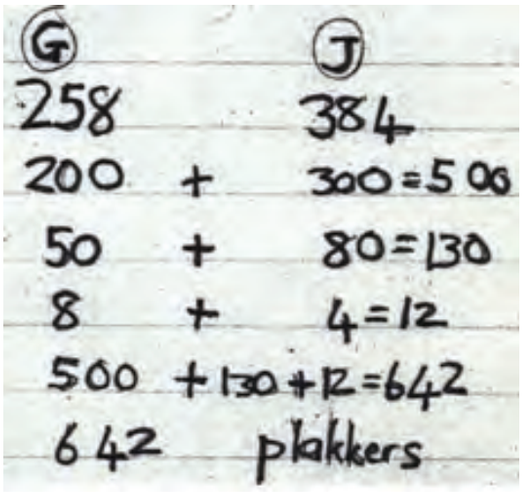
Imizekelo yendlela esetyenziswa ngayo le rubriki malunga neengxaki ezisonjululwa ngAbafundi bebanga 1 – 3

<table>
<tr><td colspan="2">Inja enye inemilenze emine . Mingaphi imilenze yezinja ezili-12?</td></tr>
<tr><td></td><td>Ibanga 1: Umlinganiselo wokuphumelela: 1.
Umntwana akayiqondi ingxaki kakngangokuba usebenzisa indlela engamncediyo ukusombulula ingxaki.</td></tr>
<tr><td>Inja enye inamanqina ama-4
Ingaba inja ezili-12 zinamanqina amangaphi zizonke? 48
</td><td>Ibanga 1: Umlinganiselo wokuphumelela 4
Umntwana uyayiqondile ingxaki,wayisombulule ngendlela efanele ibanga loku-1 kwaye unika ingcaciso ngengxaki.

Ibanga 2: Umlinganiselo wokuphumelela 2
Umntwana uyiqondile wayisombulula ingxaki . Noko kunjalo umntwana webanga lesi-2 kufuneka abonakalise ukukwazi ukusebenzisa iisimboli zamanani emininzi ngokudibanisa ngokwalekeneyo okanye aphinda-phinde (kuxhomekeke kwixesha lonyaka)</td></tr>
<tr><td colspan="2">Umfama ulima imithi kwimigca emi-6 .umqolo ngamnye unemithi eli-13. Mingaphi imithi ayityalileyo iyonke?</td></tr>
<tr><td></td><td>Ibanga 2, Umlinganiselo wokuphumelela 4
Umntwana uyiqondile wayisombulula ingxaki esebenzisa amanani nemiqondiso ngokufanele ibanga lesi- 2.

Ibanga 3: Umlinganiselo wokuphumelela 3
Umntwana uyiqondile wayisombulula ingxaki ngendlela eyanelisayo. Kodwa akagqwesanga kuba akabonisanga buchule baokubala obukwibakala lebanga lesi-3 njengokuphinda-phinda,esebenzisa ukucazulula nokuwahlanganisa kwakhona amanani. Jonga ngezantsi.</td></tr>
<tr><td>Umfama ulima imiqolo yemithi. Ulima imiqolo emi-6 enemithi eli-13 kumqolo ngamnye. Ingaba mingaphi imithi iyonke?
</td><td>Ibanga 3: Umlinganiselo wokuphumelela 4
Usombulula ingxaki ngendlela eyiyo esebenzisa amanani nemiqondiso ngokufanelekileyo nobuchule obufana nokucazulula kwanokuhlanganisa kwakhona amanani. Uyakwazi ukucacisa okwakhe ukucinga nokwabanye ngendlela eyiyo..</td></tr>
</table>

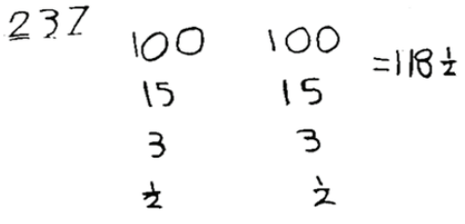
ULundi unezitikha ezi ngama- 258 UThandi yena unezingama- 384. Zingaphi izitikha abanazo zizonke?



Ibanga 3: Umlinganiselo wokuphumelela: 4

Nika impendulo efanelekileyo kwingxaki esebenzisa amanani ulwazi nobuchule obufana nokucazulula nokuhlanganisa amanani kwakhona, ukuphinda kwakhona, ukuweza nokuboleka, umgca mananii njl.Uyakwazi ukucacisa okwakhe ukucinga nokwabanye ngendlela eyiyo.

Ngubani isiqingatha sika- 237?



Ibanga 3. Umlinganiselo wokuphumelela: 4

Usombulula iingxaki ngendlela eyiyo esebenzisa amanani ulwazi ubuchule obufana nokucazulula nokuhlanganisa amanani kwakhona, ukuphinda phinda kabini, ukuhlula kabini, ukuweza nokuboleka, umgca manani njl. ngokufanelekileyo. Uyakwazi ukucacisa okwakhe ukucinga nokwabanye ngendlela eyiyo.

Ibanga 1:

IKOTA YOKU-1 Umzekelo womsebenzi osisiseko

Uhlobo lomsebenzi	Umlinganiselo wokuHlola	P okanye û	Amanqaku
I-Orali	Ingaba umntwana uyakwazi uku • Bala ngokukhwaza izinto ukuya kuma ku-10? • Xela kwingqokelela yezinto ukuba yiyiphi eyona incinci / eyona inkulu? • Funda iisimboli zamanani ukuya ku-5?		
Ngokwenza	Ingaba umntwana uyakwazi uku • landelelanisa izinto? • Kopa ipateni? • Beka izinto phambi kwakhe? • Beka izinto emva kwakhe? • hlela izinto ngokweempawu zazo? • Sebenza ngengxaki ukuze afumane isisombululo?		

Ibanga 1

Ikota yoku-1: Umzekelo womsebenzi

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala ngokukhwaza i-10 lezinto ngokuthembakeleyo, exela amagama ngokuzilandelelanisa
		Bhala afunde iisimboli zamanani ukuska ku- 1 ukuya ku- 5
		Landelelanisa amanani 1 – 5 ukusuka kwelona lincinci ukuya kwelona likhulu.
		Usebenzisa ulwimi ukuchaza ubungakanani bamanani: phambi, emva, phakathi ko-
	Sombulula iingxaki	sombulula izibalo zamagama kwimixholo efuna ukudibanisa, ukuthabatha ukuya kuma ngo -5 esebenzisa izixhobo okanye imizobo anike iingcaciso zakhe kwiingxaki.
		Sombulula iingxaki ezifuna ukwaba ngokulinganayo nokuhlanganisa ngamanani apheleleyo ukuya kuma ku-5 kunye neempendulo ezifuna iintsalela ngokusebenzisa izixhobo okanye imizobo. Ucacisa iingxaki
	Izibalo	Uyadibanisa aphele ku- 5 esebenzisa izixhobo okanye imizobo
		Uyathabatha ukusuka kulo naliphi na inani ukusuka ku-5 okanye ngaphantsi kwakhe esebenzisa izixhobo okanye imizobo
IIPATENI, II-FANSHINI NE-ALJIBRA	Inani Iipateni	Gcwalisa inani ulandelelanisa ukubala ngemivo ukuya kuma ku- 10 umz. 1, 2, 3, 4, __, __, __, __, 9, 10
ISITHUBA NESIMO	Indawo bume	Ulandela imiyalelo ukubeka into ngokumelene nenye umz. Beka ipensile ngaphakathi ebhokisini, beka ipensile kwisandla sasekuneneapha ebhokisini.
	3-D	Ukunakana nokuthiya amagama • Iimilo zebhola (into engqukuva eqinileyo) • Imilo zebhokisi (iprizimu)
UKULINGANISA	Ixesha	Chaza ixesha eyenzeka ngalo into esebenzisa ulwimi umz. kusasa, emva kwemini, ebusuku, kwangethuba, emva kwethuba
	Ubude	Linganisa ubude, ububanzi okanye ukuphakama esebenzisa imilinganiselo engekho seSikweni.Uxela imilinganiselo ngeeyunithi ezingekho seSikweni.
	Ubunzima	Linganisa athelekise ubunzima bezinto esebenzisa isikali esilinganisa ngokungekho seSikweni. Landelelanisa izinto ngokobunzima bazo. Chaza alandelelanise esebenzisa Khaphu khaphu, nzima kune, nzima kunezo zonke.
UKUSEBENZA NGOLWAZI OLUQOKELELWEYO	Hlela ingqokelela yezinto	Qokelela uhlele izinto zemihla ngemihla ngokomlinganiselo wokuHlola awunikwe ngutitshala. Zoba umfanekiso wezinto ezihleliweyo. Achaze ingqokelela ehleliweyo

Ibanga 1Ikota 2: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala ngokukhwaza zinto ezingama-20 ngokuthembeikileyo bexela amagama ngokuwalandelelanisa
		Xela ukuba yiyiphhi kwingqokelela yezinto engaphezulu okanye embalwa apho zombini ezi ngqokelela zilingana no-10 okanye zingaphantsi .
		Funda iisimboli zamanani ukuya kuma ku- 30
		Bhala iisimboli zamanani ume ku- 10
	Sombulula iingxaki	Sombulula izibalo zamagama kwimixholo efuna ukuba kudityaniswe okanye kuthatyathwe ezineempendulo eziphela ku-10. esebenzisa enye kwezi; • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca manani • Ukuphinda phinda kabini nokuhlula kabini Acacise iindlela enze ngayo izisombululo
	Izibalo	Uyadibanisa aye kuma ngo- 10 esebenzisa enye kwezi; • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca manani • Ukuphinda phinda kabini nokuhlula kabini Bhala inani ngesivakalisi esebenzisa +
		Uyathabatha kwi- 10 okanye ngaphantsi esebenzisa enye yezi; • izixhobo • imizobo • ukwakha okanye ukucazulula amanani • umgca manani • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi ngamanani esebenzisa -
IIPATENI, II-FANKSHINI NE-ALJIBRA	IIpateni zamanani	Gcwalisa amanani ngokulandelelana ukuya kuma ku-30 • Nganye nganye umz. 20, 21, 22, 23, __, __, __, __, 28; __; 30. • Ngezihlanu .5, 10, 15, __, __, 30,
	IIpateni zejiyometri	Kopa andise ipateni • Ezenziwe ngokusebenzisa into enye kodwa kwenziwe imibala yezinto itshintshe ngendlela elandelelanayo • Yenziwe ngokusebenzisa izinto ezifanayo ezinesayizi ezahlukeneyo.
ISITHUBA NESIMO	2-D	Chaonga uze uthiye izangqa izikwere oonxantathu

Ibanga 1 Ikota **2: Ukuhlola 2**

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI NOLWALAMANO	Ikhonsepthi yamanani	Ubala usiya phambili ubuye umva ngoo- 1 phakathi ko- 1 no 50
		Ubala ngokuya phambili ngoo- 5, 2 ukuya 50
		Usebenzisa ulwimi ukuchaza ubungakanani bamanani: phambi, emva, phakathi ko-
		Thelekisa ubungakanani bamanani ukya kuma ku- 10 esebenzisa ulwimi umz. ngaphezulu kwe, mbalwa kune njl.
		Usebenzisa ulwimi ukuchaza ubungakanani bamanani: phambi, emva, phakathi ko-
		Landelelanisa amanani 1 – 10 ukusuka kweyona incinci ukuya kweyona inkulu.
		Funda iisimboli zamanani ukuya kuma ku- 50
	Sombulula iingxaki	Sombulula iingxaki eziquka ukwahlulelana ngokulinganayo nokuhlanganisa ngamanani apheleleyo ukuya kuma ku-10 kunye neempendulo eziquka intsalela. Ngoku kulandelelayo • izixhobo • imizobo • imigca manani Ucacisa iingxaki
	Sombulula iingxaki	Sombulula izibalo zamagama kumxholo obandakanya ukudibanisa ngokuphinda okuneempendulo eziphela ku-10 esebenzisa enye yezi; • izixhobo • imizobo • ukwakha ukucazulula amanani • umgca manani • Ukuphinda phinda kabini nokuhlula kabini Uchaze izisombululo zeengxaki
	Imali	Ukunakana imali yaseMzantsi Afrika eziinkozo: 5c, 10c, 20, 50c, R1, R2; R5
		Sombulula iingxaki zemali ezibandakanya iitotali netshintshi ukuya kuma nge-R10 kunye neesenti ukuya kuma kwezingama- 20 iisenti.
	Izibalo	Abale ngokuphinda phinda ukuya kuma ku- 10 esebenzisa oku kulandelayo • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca manani • Ukuphinda phinda kabini nokuhlula kabini Bhala izivakalisi zamanani esebenzisa +
IIPATENI, II-FANKSHINI NE-ALJIBRA	Inani lipateni	Gqibezela inani ngokulandelelanisa • Ngoononye ebuya umva ukusuka ku- 50 umz. 50, 49, 48, __, __, 45, __, __, 42; __; 40. • ngamashumi ukuya 50 umz.10, 20, 30, __, __,
UMLINGANISELO	Umthamo/ umyinge/ ubunzulu	Thelekelela,alinganise, athelekise, alandelelanise aze arekhode umthamo wezikhongozelo esebenzisa imilinganiselo engekho sesikweni. umz. amacephe neekomityi.
UKUSEBENZA NGOLWAZI OLUQOKELELWEYO	Hlela iingqokelela yezinto	Qokelela ahlele yezinto zemihla ngemihla izinto ngokwendlela yokuhlela abayinikwe ngutitshala. Zoba imifanekiso yezinto ezihleliweyo okanye achaze le ngqokelela ihleliweyo.

Ibanga 1 Ikota 3: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala izinto ukuya kuma ku- 40 ngokuthembekileyo, ebiza amagama ngendlela elandelelanisayo.
		Xela ukuba yiyiphi kwiingqokelela azinikweyo ezimbini engaphezulu okanye embalwa apho zonke ezi ngqokelela zingadluli ku-15 okanye ngaphantsi.
		Funda iisimboli zamanani ukuya kuma ku- 70
		Bhala iisimboli zamanani ukuya ku 20
	Sombulula iingxaki	Sombulula izibalo zamagama kumxholo obandakanya ukudibanisa nokuthabatha ngamanani aphela ngo- 15 esebenzisa enye yezi ; • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca manani • Ukuphinda phinda kabini nokuhlula kabini Acacise isisombululo kwingxaki ayinikiweyo.
	Izibalo	Dibanisa aphele kwi- 15esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca manani • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa +, =
		Athabathe ukususka kwi- 15 okanye ngaphantsi esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa -, =
IIPATENI, IIFANKSHINI NEALJIBRA	Inani lipateni	Gqibezela amanani ngokulandelelanisa ukubala. • Nganye nganye ukuya ku- 60 umz. 60, 59, 58, __, __, __, 54, __, __, 51. • ngezibini umz.44, 46, 48, __, __, __,56; __, 60
	IIpateni zejiyometri	Kopa andise, achaze iipateni apho iimeko ezahlukahlukeyo zisetyenziselwe ukwenza iqela kodwa amaqela aphinda phindwe ngokufana ncam.
ISITHUBA NESIMO	3-D	Anakane aze athiye • imilo zebhola (into engqukuva eqinileyo) • imilo zebhokisi (iprizimu)
		Hlela izinto ngokokuqengqeleka nokutshebeleza

Ibanga 1 Ikota 3: Ukuhlola 2

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-PAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala uya phambili ngama- 10s, 5s, 2s ukuya ku-80
		Sebenzisa ulwimi ukuchaza umlinganiselo wamanani: phambi, emva, phakathi ko-
		Thelekisa ubungakanani bamanani ukuya kuma ku-15 esebenzisa ulwimi umz. ngaphezulu kwe, mbalwa kune njl.
		Angacazulula amanani 11 – 15 ukuya ku- 10 + 1 umz. 12 = 10 + 2
	Sombulula iingxaki	Sombulula izibalo zamagama kumxholo obandakanya ukuphinda phinda ukubala benika iimpendulo ukuya kuma ku- 15 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokwahlula kabini Aze acaise izisombululo zakhe kwiingxaki azinikiweyo zezibalo.
		Sombulula iingxaki azibandakanya ukwaba ngokulinganayo baze bahlanganise ngamanani azeleyo ukuya kuma ku-15 kunye neempendulo ezibandakanya ukusebenza ngentsalela ngenye yezi • izixhobo • imizobo • umgca mananii Ucacisa iingxaki
	Imali	Ukunakana iinkozo zemali yaseMzantsi afrika 5c, 10c, 20, 50c, R1, R2; R5
		Sombulula iingxaki zemali ezibandakanya iitotali kunye netshintshi R20 nakwiisenti ukuya kuma kwi- 20c .
	Izibalo	Ubala ngokuphinda phinda ukuya kuma ku-15 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa +, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela ukubala ngokukulandelelanisa amanani • Nganye nganye ubuya umva 80 umz. 80, 79, 78, __, __, __, __, 73, ___; __; 70. • ngamashumi ukuya ku- 80 umz.10, 20, 30, __, __,__, __, __, • ngezihlanu umz.5, 10, 15, __, __, 30, __, __.45, __, __, 60, __, __, __, 80
ISITHUBA NESIMO	Ulingano macala	Ukunakana aze akrwele umgca obonisa ulungano-macala kwi- 2-D kwiimilo zejiyometri nezingezizo ezejiyometri.
UMLINGANISELO	Ubude	Qikelela, linganisa, thelekisa, Landelelanisa uze urekhode ubude esebenzisa iindlela ezingekho seSikweni zokulinganisa umz. isandla, iinyawo, ubude beepensile, izinto zokubala, njl.
UKUSEBENZA NGOLWAZI OLUQOKELELWEYO	Ulwazi	Phendula Imibuzo ngolwazi kwiigrafu zemifanekiso

Ibanga 1 Ikota **4: Ukuhlola 1**

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala izinto ukuya ku-50 ngokuthembekileyo, bebiza amagama
		Xela ukuba yiyiphi kwiingqokelela azinikweyo ezimbini engaphezulu okanye embalwa apho zonke ezi ngqokelela zingadluli ku-20 okanye ngaphantsi
		Funda iisimboli zamanani ukuya kuma ku- 80
	Sombulula iingxaki	Sombulula, iingxaki zezibalo zamagama I kumxholo obandakanya ukudibanisa, ukuthabatha eneempendulo eziphela ku-20. esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Aze acacise isisombululo saloo ngxaki abeyisombulula.
	Izibalo	Dibanisa amanani ukuya kuma ku20 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa +, =
		Thabatha ukususka ku- 20 okanye ngaphantsi esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa -, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela ukubala ngokulandelelanisa • nganye nganye umz. ebuya umva ukususka ku-80: 80, 79, 78, __, __, __, 74, __, __, 71. ngambini umz.64, 66, 68, __, __, __,76; __, 80
ISITHUBA NESIMO	2-D	Anakane aze athiye • izangqa • oonxantathu • izikwere Hlela amacala ngokokuba angqukuva na nokuba olulekile
UMLINGANISELO	Ubunzima	• Qikelela, linganisa, thelekisa, landelelanisa uze arekhode ubunzima esebenzisa indlela ezingekho seSikweni zokulinganisa kunye nesikali sokulinganisa umz. iibhloko nezitena, njl-njl. • Sebenzisa ulwimi lokuthelekisa izinto umz. ekhaphu khaphu, enzima, ekhaphukhaphana kune, enzinyana kunenye

Ibanga 1 Ikota 4: Ukuhlola 2

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala uya phambili ngo-10s, 5s, 2s to 100
		Sebenzisa ulwimi ukuchaza usinga sayizi wamanani: phambi,emva, phakathi ko-
		Thelekisa ubungakanani yamanani ukuya kuma ku- 20 esebenzisa ulwimi umz. ngaphezulu kwe, mbalwa kune njl.
		Landelelanisa amanani 1 – 20 ukusuka kweyona inkulu ukuya kweyona incinci
		Cazulula amanani 11 – 20 ukuya ku- 10 + imivo umz. 14 = 10 + 4
		Funda iisimboli zamanani ukuya kuma ku- 100
		Bhala iisimboli zamanani ukuya ku 20
	Sombulula iingxaki	Sombulula izibalo zamagama ikumxholo obandakanya ukuphinda phinda ukubala oneempendulo ukuya kuma ku-20 oneempendulo eziphela ku- 20 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini anike ingcaciso ngezisombululo zeengxaki zezibalo
		Sombulula iingxaki eziphathekayo ezibandakanya ukwaba ngokulinganayo nokuhlanganisa ngamanani apheleleyo ukuya kuthi xhaxhe ku-20 ezineempendulo eziphuma nentsalela by enye yezi • izixhobo • imizobo • umgca mananii Ucacisa iingxaki
	Imali	Ukunakana imali ezinkozo yomzantsi Afrika ngokwezizintlu. 5c, 10c, 20, 50c, R1, R2; R5
		Sombulula iingxaki zemali ezibandakanya iitotali kunye netshintshi ukuya kuma ngeR20 kunye neesenti eziphela kwi-50 leesenti
	Izibalo	Ukuphinda phinda ukubala aye kuma ngo- 20 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa +, =
IIPATENI, II-FANKSHINI NE-ALJIBRA	Inani lipateni	Gqibezela ukubala ngokulandelelanisa • nganye nganye backwards umz. 99, 98, __, 96, __, __, __, 92, ___; __; 89. • ngamashumi to 100 umz.10, 20, 30, __, __, __, __, __, 90, __. ngezihlanu umz.20, 25, 30, __, __.45, __, __, 60, __, 70__, __,__, 90

ISITHUBA NESIMO	Indawo-bume	Sebenzisa ulwimi lwendwao-bume ulandela izalathisoejikelza apha kwiklasi.
		Thelekisa izimvo ezahlukeneyo ngento enye
UMLINGANISELO	Ixesha	Azi iintsuku zeveki Azi iinyanga zonyaka
UKUSEBENZA NGOLWAZI OLUQOKELELWEYO	Ulwazi	Phendula imibuzo ngolwazi olukwigrafu yemifanekiso

Ibanga 2 Ikota yoku-1: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI, II-OPAREYSHINI NOLALWAMANO	Ikhonsepthi yamanani	Hlanganisa abale izinto ukuya kuma ku- 100 .
		Thelekisa alandelelanise amanani apheleleyo ukuya kuma ku- 25
		Cazulula amanani aneedijithi ezimbini ukuya kuma ku- 25 ngokwamashumi nemivo umz. 23 = 20 + 3
		Funda abhale iisimboli zamanani ukusuka ku- 0 ukuya ku- 100
	Sombulula iingxaki	Sombulula iingxaki zezibalo kwimixholo ebandakanya ukudibanisa nokuthabatha enika iimpendulo eziphela ngo-20 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokohlula kabini anike ingcaciso ngezisombululo zeengxaki zezibalo
	Imali	Ukunakana imali ezinkozo yaseMzantsi Afrika ngokwezi zintlu 5c, 10c, 20, 50c, R1, R2; R5 kunye nengamaphepha ezii- R10, R20, R50
		Sombulula iingxaki zemali ezibandakanya iitotali kunye netshintshi ukuya kuma ngeR20 kunye neesenti eziphela kwi-50 leesenti
	Izibalo	Dibanisa amanani ukuya kuma ku20 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa +, =
		Thabatha ukuya ku- 20 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa +, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela ukubala ngokulandelelanisa ukuya phambili nokubuya umva • nganye nganye from 0 - 100 umz. 99, 98, 97, __, __, __, 93, __, 91, 90 • ngamashumi from 0 – 100 umz. 10, 20, 30, __, __, __, 70__, __, 100 • ngambini from 0 – 100 umz. 80, 82, 84, __, __, 90, _, __, __, ___, 100
ISITHUBA NESIMO	3-D	Anakane aze athiye • imilo zebhola (into engqukuva eqinileyo) • iimilo zebhokisi(iprizimu)
	2-D Imilos	Anakane aze athiye izangqa, oonxantathu, izikwere and iingxande
UMLINGANISELO	Ixesha	Xela ixesha ngewotshi yosiba
	Ubude	Qikelela, alinganise, athelekise, alandelelanise arekhode, ubude, ububanzi okanye ukuphakama ngeemitha.

Ibanga 2 Ikota 2: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Bala imifanekiso yezinto ezihlanganiswiweyo ukuya kuma ku-150
		Thelekisas amanani ukuya kuma ku- 50
		Funda abhale amanani ukusuka ku- 0 – 150
		Ubala ukuya phambili nokubuya umva ngama-10, 2, 5ukuya kuma ku- 150
	Sombulula iingxaki	Sombulula iingxaki ezibandakanya ukwaba ngokulinganayo nokuhlanganisa ngamanani apheleleyo ukuya kuma ku- 50 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini anike ingcaciso ngezisombululo zeengxaki zezibalo
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela ukubala ngokulandelelanisa ukuya phambili nokubuya umva nganye nganye from 0 - 150 umz.131, 132, 133, __, __, __, 137, __, ___, ___, 141 • ngamashumi phakathi ko- 0 no 200 umz.150, 140, 130, __, __, 100, __, __.70, __, __, 40 • bala ngambini umz. 150, 148, 146, 144, __, __, 138, __, __, 132. • bala ngezihlanu ukusuka ku- 0 – 150 umz. 105, 110, 115, __, __, __, 135, __, __, 150
		Kopa andise achaze iipateni apho iimilo ezahlukeneyo ukuhlanganisa zize ezo milo zihlanganisiweyo ziziphinde ngendlela efana ncam.
UMLINGANISELO	Ixesha	Xela ixesha kwiwotshi yosiba ngeeyure angengeziqingatha zeyure.

Ibanga 2 Ikota **2: Ukuhlola 2**

ONTENT AREA	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala uya phambili ngo-3, noo4
	Sombulula iingxaki	Sombulula acacise iingxaki ezibandakanya ukwaba ngamaqhezu alinganayo.
	Amaqhezu	Ukunakana esebenzisa isiqingatha,isithathu kwishumi, iikota,enye kwisihlanu. kwiimeko eziqhelekileyo
		Ukunakana amaqhezu akwimizobo/azotyiweyo
		Bhala amaqhezu aziziqingatha nesithathu kwishumi njl.
	Izibalo	Dibanisa amanani ukuya kuma ku50 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa +, =
		Thabatha ukuya kuma ngama- 50 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa _, =
IIPATENI, II-IIFANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani ulandelelanisa phakathi ko- 0 no150 • bala nganye nganye • bala ngezine umz.4, 8, 12 __, __, 24, __, 32, __, __, __, 48 • bala ngantathu umz. 3, 6, 9, __, __,21, __, __,__, 33, 36.
UMLINGANISELO	Ubunzima	Qikelela, linganisa, thelekisa, landelelanisa arekhode ubunzima esebenzisa imilinganiselo engekho sesikweni efana emilinganiselo eziibhloko nezitena njl.
		Beka ngokulandelelana izinto esebenzisa ubunzima obuziikilogram.

Ibanga 2 Ikota 3: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala imifanekiso eyi-180 yezinto ezihlanganisiweyo.
		Thelekisa ulandelelanise amanani uye kuma ku- 75
		Funda ubhale iisimboli zamanani ukuya kuma ku- 180
		Bala ukuya phambili nokubuya umva ngezi ziqendu 2, 10, 5 phakathi ko- 0 no 180
		Cazulula amanani aneedijithi ezimbini ukuya kuma ngo- 75 awabeke ngokwamashumi nemivo umz. 48 = 40 + 8
	Sombulula iingxaki	Sombulula izibalo zamagama ikumxholo obandakanya ukuphinda phinda amanani ukuphela ku- 40 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini anike ingcaciso ngezisombululo zeengxaki zezibalo
	Izibalo	Uyakwazi ukuphinda-phinda the amanani 1 – 10 ngo5, 4 esebenzisa enye yezi • izixhobo • imizobo • umgca manani Bhala isivakalisi samanani esebenzisa, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani ngaokulandelelanisa • ukubala ukuya phambili nokubuya umva nganye nganye phakathi ko- 0 no 180 umz. 180, 170, 160, __, __, 120, __,__ 90, • bala ngambini umz. 150, 152, 154, __, 156, __, 160, __, __, 166 • bala ngezihlanu ukusuka 0 – 150 umz.120, 125, 130, 135, __, __, __, 155, __, __, 170, __, 180
ISITHUBA NESIMO	Indawo-bume	Sebenzisa ngokusemxholweni ulwimi olubonisa indawo bume ngokulandela izalathiso zokujikeleza igumbi lokufundela.

Ibanga 2 Ikota 3: Ukuhlola 2

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala uya phambili ngoo-4, noo3
	Sombulula iingxaki	Sombulula ucacise iingxaki ezibandakanya ukwaba ngamaqhezu.
	Amaqhezu	Ukunakana abone iziqingatha, isinye kwisithathu, ikota, enye kwisihlanu kwiimeko eziqhelekileyo.
		Ukunakana amaqhezu akwimo yomzobo
		Bhala amaqhezu isiqingatha isinye kwisithathu.
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani ulandelelanisa phakathi ko- 0 no 180 ▪ bala nganye nganye ▪ bala ngane umz. 104,108, 112 __, __, 124, __, 132, __, __, __, 148 ▪ ba la ngantathu umz. 103, 106, 109, __, __,121, __, __,__, 133, 136.
	IIpateni zejiyometri	Kopa, andise, achaze ipateni zejiyometri ezineemilo ezifanayo kodwa inani lemilo nganye linyuka okanye lisihla ngendlela ehambelanayo oknye ngohlobo olunye
ISITHUBA NESIMO	Indawo -bume	Thelekisa izimvo ezahlukeneyo ngento enye
	2-D Imilos	Anakane aze athiye izangqa, oonxantathu, izikwere and iingxande
		Hlela imilo ingokobungqukuva bamacala okanye ukuba.
UMLINGANISELO	Umthamo	Qikelela, alinganise, athelekise, alandelelanise aze arekhode umthamo wezikhongozelo esebenzisa iindlela ezingekho seSikweni zokulinganisa umz. Amacephe neekomityi.
	Ixesha	Funda iwotshi yosiba ngeeyure, ngeziqingatha zeyure,iikota zeyure.
		Sebenzisa ikhalenda ukubala ubude bexesha ngeentsuku okanye ngeeveki.
INDLELA YOKUSEBENZA NGOLWAZI OLUQOKELELWEYO	Ulwazi	Yenza igrafu yemifanekiso kwiphepha elilungiselelwe oko ngolwazi alunikiweyo.

Ibanga 2 Ikota 4: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Bala imifanekiso yezinto ezihlanganisiweyo ukya kuma ku- 200
		Landelelanisa uthelekise amanani ukuya ku-99
	Sombulula iingxaki	Sombulula izibalo zamagama kwimixholo ebandakanya ukuhlanganisa okanye ukwaba ukuya ku-99 eneempendulo ezinentsalela esebenzisa enye yezi ; • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini anike ingcaciso ngezisombululo zeengxaki zezibalo
	Imali	Ukunakana imali yasemzantsi Afrika eziinkozo 5c, 10c, 20, 50c, R1, R2; R5 namaphepha R10, R20, R50
		Sombulula iingxaki zemali iezibandakanya iitotali kunye netshintshi ukuphela kwi- R99 kunye neesenti eziphela nge- 95c
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela ukubala ngokulandelelanisa ukuya phambili nokubuya umva. • nganye nganye phakathi ko- 0 and 200 • ngamashumi phakathi ko- 0 and 200 umz. 130, 140, 150, -__, ___, ___, __, 200
ISITHUBA NESIMO	2-D	Anakane aze athiye • izangqa • oonxantathu • izikwere • iingxande Hlela amacala ngokokuba angqukuva na nokuba olulekile
UMLINGANISELO	Ixesha	Sebenzisa iwotshi ukuba la ubude bamaxesha adlulayo ngeeyure, ngeziqingatha zeyure neekota zeyure.

Ibanga 2 Ikota 4: Ukuhlola 2

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala ukuya phambili nokubuya umva ngoo 2, 5 ukuya 200
		Funda ubhale iisimboli zamanani ukuya kuma ngo-200
	Izibalo	Dibanisa amanani ukuya kuma ku99 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa +, =
		Thabatha amanani ukusuka ku 99 okanye ngaphantsi koko esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini Bhala isivakalisi samanani esebenzisa -, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani ulandelelanisa phakathi ko- 0 no 200 • Bala ngambini umz. 160, 162, 164, __, 166, __, 170, __, __, 176, __, 180 • ebala ngezihlanu from 0 – 200 umz.160, 165, 170, __, __, __, 190__, 200
UKUSEBENZA NGOLWAZI OLUQOKELELWEYO	Ulwazi	Phendula imibuzo ngolwazi olukwigrafu yemifanekiso

Ibanga 2 Ikota 4: Ukuhlola 3

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala uya phambili ngo-4, noo-3
	Sombulula iingxaki	Sombulula iingxaki zezibalo zamagama kumxholo obandakanya ukuphinda phinda ekhokelela ukuphinda-phinda eneempendulo eziphela ku- 50 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini anike ingcaciso ngezisombululo zeengxaki zezibalo
	Izibalo	Uyakwazi ukuphinda-phinda amanani 1 – 10 ngo 3 esebenzisa enye yezi • izixhobo • imizobo • umgca mananii • ukuphinda phinda kabini Bhala isivakalisi samanani esebenzisa, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela ukubala ngokulandelelanisa phakathi ko- 0 and 180 • bala nganye nganye • bala ebuya umva ngoo4 umz. 48,44, 40 __, __, 28, __, __, 16, __, __, 0 • bala ebuya umva ngantathu umz. 36, 33, 30, __, __, 21, 18, __,__, 9, __, __, 0.
ISITHUBA NESIMO	Imilo enokwakheka kuka 3-D	Anakane aze athiye • imilo zebhola (into engqukuva eqinileyo) • iimilo zebhokisi(iprizimu) • iisilinda
		Hlela izinto ngokokuba ziyaqengqeleka na nokuba ziyatshebeleza
	Ulingano-macala	Ukunakana azobe umgca obonakalisa ukulingana macala kwimilo ezinokwakheka kuka- 2-D zejiyometri nezingezozayo.
UMLINGANISELO	Umthamo	Landelelanisa zinto zemihla ngemihla ezinomyinge obhalwe ngaphandle ngeelitha.
		Funda umyinge ngeelitha kwimifanekiso yeejagi.

Ibanga 3 Ikota yoku-1: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI, II-OPAREYSHINI NOLALWAMANO	Ikhonsepthi yamanani	Hlanganisa abale izinto eziyi-200.
		Thelekisa ulandelelanise amanani apheleleyo ukuya kuma ku- 99
		Funda ubhale iisimboli zamanani ukusuka ku-0 ukuya ku-500
		Yahlula amanani aneedijit ezimbini amanani ukuya kuma ku-99 ezahlulela kumashumi nemivo umz. 78 = 70 + 8
	Sombulula iingxaki	Sombulula iingxaki zezibalo kwimixholo ebandakanya ukudibanisa nokuthabatha enika iimpendulo ukuya ku-99 esebenzisa enye yezi • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini anike ingcaciso ngezisombululo zeengxaki zezibalo
	Imali	Sombulula iingxaki zemali ezibandakanye iitotali kunye netshintshi eziirandi kunye/ okanye neesenti
	Izibalo	Dibanisa amanani ukuya kuma ku99 esebenzisa enye yezi • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • Sondeza kwi- 10 Bhala isivakalisi samanani esebenzisa +, =
		Thabatha ukuya ku-99 usebenzisa enye yezi • ukwakha nokwahlula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • Sondeza kwi- 10 Bhala isivakalisi samanani esebenzisa +, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela ukubala ngokulandelelanisa ukuya phambili nokubuya umva • nganye nganye phakathi ko- 0 no200 umz. 199,1 98, 197, __, __, __, 13, __, 191, 190 • ngamashumi phakathi ko- 0 no 200 umz. 110, 120, 130, __, __, __, 170__, __, 200 • ngamakhuluphakathi ko- 0 no500 umz. 100, 200, 300, __, __, • ngezihlanu phakathi ko- 0 no 200 umz. 150, 155, 160, __, __, __, 180, __, __, 195, __ • ngambini phakathi ko- 0 no 200 umz. 180,182, 184, __, __, 190, _, __, __, ___, 200
ISITHUBA NESIMO	Imilo ezinokwa kheka kuka 2-D	Anakane aze athiye izangqa, oonxantathu, izikwere and iingxande
		Hlela iimilo ngokokuba zinthebelele na okanye zinamacala angamagophe
UMLINGANISELO	Ixesha	Funda imihla kwikhalenda
		Xela ixesha kwiwotshi yosiba ngeeyure,iziqingatha zeyure neekota zeeyure
	Umthamo	Qikelela, linganisa, thelekisa, landelelanisa, urekhode umthamo wezikhongozelo esebenzisa iindlela zomlinganiselo ezingekho seSikweni
		Landelelanisa izinto zemihla ngemihla ezinomthamo obhalwe ngeemililitha.

Ibanga 3 Ikota2: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Bala imifanekiso yezinto ezihlnganisiweyo (umz. Grouped ngama-10, 25, 50 okanya u-100) ukuya kuma ngama- 500
		Landelelanisauze uthelekise amanani ukuya kuma ngama- 500
		Funda ubhale amanani ukusuka- ku-0 – 1 000
	Sombulula iingxaki	Sombulula iingxaki ngezinto ezibonwayo ezibandakanya ukwaba ngokulinganyo nokuhlanganisa ngamanani aphelelyo ukuya ku-75 esebenzisa enye yezi; • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • wezela kwinani elingu- 10 anike ingcaciso ngezisombululo zeengxaki zezibalo
	Izibalo	Yahlula amanani akuya kuma ku- 50 ngo- 2, 5, 10
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela ukubala ngokulandelelanisa ukuya phambili nokubuya umva • nganye nganye phakathi ko- 0 no 500 umz. 389, 399, 400,, __, __, __, 404, __, ____, ____, 408 • ngamashumi phakathi ko- 0 no 500 umz. 300, 310, 320, __, __, 350, __, __.370, __, __, 400 • in amakhuluphakathi ko- 0 no 1 000 umz. 1000, 900, 800, __, __, 500, __, __.200, __, 0
ISITHUBA NESIMO	Izinto ezinokwa kheka kuka 3-D	Anakane aze athiye • imilo zebhola (into engqukuva eqinileyo) • iimilo zebhokisi(iprizimu) • iisilinda
		Hlela izinto ezinemiphezulu engamagophe nezo zimiphezulu imthebelele.
UMLINGANISELO	Ubude	Qikelela, linganisa, thelekisa ubude, ukuphakama, ububanzi, esebenzisa iindlela ezingekho seSikweni zokulinganisa
		Qikelela, linganisa, landelelanisa aze athelekise ubude esebenzisa iimitha

Ibanga 3 Ikota 2: Ukuhlola 2

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala ukuya phambili nokubuya umva in 2, 4 or 3 ukuya ku- 500
	Izibalo	Dibanisa amanani ukuya kuma ku-400 esebenzisa enye yezi • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • wezela kwinani elingu- 10 Bhala isivakalisi samanani esebenzisa +, =
		Thabatha ku-400 okanye ngaphantsi koko esebenzisa enye yezi • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • wezela kwinani elingu- 10 Bhala isivakalisi samanani esebenzisa _, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani ngaokulandelelanisa • bala ngambini phakathi ko- 0 no 500 umz. 450, 448, 446, 444, __, __, 438, __, __, 432. • Bala ngezine phakathi ko- 0 no500 umz. 404, 408, 412 __, __, 424, __, 432, __, __, __, 448 • Bala ngantathu phakathi ko- 0 no500 umz. 403,406, 409, __, __,421, __, __,__, 433, 436.
	IIpateni zejiyometri	Kopa, yandisa, uchaze iipateni apho imilo ezahlukeneyonzisetyenzisiweyo ukuhlanganisa ze amaqela eemilo ahlanganiswe ngendlela efana twatse.

Ibanga 3 Ikota 2: Ukuhlola 3

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala uya phambili ngo-5, 50, 100 phakathi ko- 0 no 500
		Cazulula amanani aziidijithi ezintathu, amashumi imivo umz. 247 = 200 + 40 + 7
	Sombulula iingxaki	Sombulula ucacise iingxaki ezibandakanya ukwaba ngokulinganayo eziphelela ekwabelaneni ngamaqhezu
	Amaqhezu	Ukunakana usebenzise iziqingatha iikota, inye esibhozweni, inye kwezintathu njl kwimixholo eqhelekileyo .
		Ukunakana amaqhezu azotyiweyo.
		Bhala amaqhezu ngendlela yawo njl.
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela amanani ngokuwalandelelanisa • bala ngezihlanu phakathi ko- 0 – 500 umz. 105, 110, 115, __, __, __, 135, __, __, 150 • bala ngamashumi amahlanu phakathi ko- 0 – 1000 umz. 550, 600, 650, __, __, 800, __, __, __, 1 000,
ISITHUBA NESIMO	Indawo –bume nezalathiso	Landela izalathiso zokujikeleza apha esikolweni
		Nika izalathiso zokujikeleza apha esikolweni
UMLINGANISELO	Ubunzima	Qikelela, linganisa, athelekise, elandelelanisa erekhoda ubunzima esebenzisa imilinganiselo engekho sikwen. Umz; iibhloko nezitena bricks, njl.
		Landelelanisa izinto apho ubunzima bubhalwa ngeegram.

Ibanga 3 Ikota 3: Ukuhlola 1

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPARESHINI NOLWALAMANO	Ikhonsepthi yamanani	Bala imifanekiso yezinto ezihlanganisiweyo ukuya kuma ku-750 (umz. Zihlanganiswe ngoo- 20, 25, 50, okanye 100)
		Thelekisa ulandelelanise amanani ukuya kuma ku-750.
		Funda ubhale iisimboli zamanani ukuya kuma ku- 1 00
	Sombulula iingxaki	Sombulula iingxaki zezibalo zamagama kumxholo obandakanye ukuphinda-phinda ukuya kuma ku- 75 esebenzisa enye yezi • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • ukuwezela kwinani elingu- 10 anike ingcaciso ngezisombululo zeengxaki zezibalo
	Izibalo	Uyakwazi ukuphindaphinda ngo-2, 5, 10 Ukuya kuphela kwitotali engu- 99 esebenzisa enye yezi • izixhobo • imizobo • umgca mananii Bhala isivakalisi samanani esebenzisa x, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani Iipateni	Gqibezela ukubala ngokulandelelanisa ukuya phambili nokubuya umva • nganye nganye phakathi ko- 0 no 750 umz. 665, 666, 667, __, __, __, 671, __, ____, ____, 675__, __, 678 • ngamashumi phakathi ko- 0 no 750 umz. 650, 660, 670, __, __, 700, __, __.730, __, __, 760 • ngamakhulu phakathi ko- 0 no 1 000 umz. 0, 100, 200, __, __, 500, __, __.800, __, 1 000

Ibanga 3 Ikota 3: Ukuhlola 2

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala ukuya phambili nokubuya umva ngoo- 2s, 20s, 4s, 3s to 750
		Cazulula inani elineedijithi ezintathu ukuya ku-750 ngamakhulu, amashumi kunye nemivo umz. 648 = 600 + 40 + 8
	Izibalo	Uyakwazi ukuphindaphinda ngo-3, 4 Ukuya kuphela kwitotali engu- 99 esebenzisa enye yezi • izixhobo • imizobo • umgca mananii • ukuphinda phinda kabini Bhala isivakalisi samanani esebenzisa, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani Iipateni	Gqibezela inani ngaokulandelelanisa • ebala ngambini phakathi ko- 0 no 750 umz. 750, 749, 748, __, __, 445, __, __, 742. • ebala ngoo 20phakathi ko- 0 no 1000 umz. 800, 820, 840, 860, __, __, 920, __, __, 980 • ebala ngezine phakathi ko- 0 no 750 umz.704, 708, 712 __, __, 724, __, 732, __, __, __, 748 • ukubala ngezi-3 phakathi ko- 0 no 750 umz. 630,633, 639, 641, __, __,650, __, __,__, 661
	IIpateni zejiyometri	Kopa,andisa uze uchaze ipateni yejiyometri apho imilo enye ibonakala rhoqo kodwa inani lemilo nganye lisanda okanye lincipha rhoqo.
ISITHUBA NESIMO	Imilo ezinokwa kheka kuka-2-D	Anakane aze athiye izangqa, oonxantathu, izikwere and iingxande
		Zoba izangqa, izikwere, iingxande, oonxantathu
INDLELA YOKUSEBENZA NGOLWAZI OLUQOKELELWEYO	Ulwazi	Yakha igrafu yezitena ephepheni xa unikwe ulwazi

Ibanga 3 Ikota 3: Ukuhlola 3

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala uya phambili ngo-5s, 50s, 25s to 750
	Sombulula iingxaki	Sombulula acacise izisombululo kwiingxaki ezibandakanya ukwaba ngokulinganayo okukhokelela ekusetyenzisweni kwamaqhezu.
	Amaqhezu	Ukunakana nokusebenzisa isiqingatha iikota, isibhozo eshumini, isithathu eshumini, isithandathu eshumini, isihlanu kwimixholo abayiqhelileyo.
		Ukunakana amaqhezu kwimizobo.
		Ukunakana ukuba iziqingatha ezibini zinika into epheleleyo.
		Bhala amaqhezu eziqingatha ezithathu eshumini.
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani elandelelanisa • ukubala ngezihlanu phakathi ko- 0 – 750 umz. 705, 710, 715, __, __, __, 735, __, __, 750 • Ukubala ngamashumi amahlanu phakathi ko- 0 – 1000 umz.1 000, 950, 800, __, __, 650, __, __, __, 450, • Ukubala ngoo-25 phakathi ko- 0 – 1000 umz.525, 550, 575, __, __, 650, __, __, __, 750
ISITHUBA NESIMO	Indawo-bume	Landela izalathiso ukusuka kwenye indawo uye kwenye kwimephu engekho seSikweni.
UMLINGANISELO	Ixesha	Xela ixesha kwiwotshi yamanani esebenzisa iiyure nemizuzu
		Sebenzisa ikhalenda ukubala ubude bexesha ngeentsuku okanye iiveki.

Ibanga 3 Ikota **4: Ukuhlola 1**

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala imifanekiso yezinto ezihlanganisiweyo ukuya kuma kwi-1 000
		Landelelanisa uthelekise amanani ukuya ku 999
	Sombulula iingxaki	Sombulula iingxaki zezibalo zamagama kumxholo obandakanya ukuhlanganisa nokwabelana ngokulinganayo ukuya kuma ku-100 ezinika iimpendulo ezinentsalela. esebenzisa enye yezi ; • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • Sondeza ku- 10 Aze acacise iimpendulo zakhe kwizibalo zakhe.
	Izibalo	Yahlula amanani ukuya kuma ku- 99 ngo- 2, 4, 5, 10, 3
	Imali	Sombulula iingxaki zemali ezibandakanya iitotali kunye netshintshi ngeerandi neesenti.
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani ubala ngokulandelelanisa usiya phambili ubuya umva. • Nganye nganye phakathi ko- 0 no - 1000 umz. 889, 890, 891,, __, __, __, 895 __, ___, ___, 889__, __, 892 • ngamashumi phakathi ko- 0 no 1000 umz. 1000, 990, 980 __, __, 950, __, __.920, __, __, 890
UMLINGANISELO	Ixesha	Sebenzisa iwotshi ukubala ubude bexesha njengoko zidlula iiyure nemizuzu.

Ibanga 3 Ikota **4: Ukuhlola 2**

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI II-OPAREYSHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala ukuya phambili nokubuya umvain 2s, 4s, 3s to 1 000
		Funda ubhale iisimboli zamanani ukuya kuma kwi-1 000
	Izibalo	Dibanisa amanani ukuya kuma ku999 esebenzisa enye yezi • ukwakha nokwakha amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • wezela kwinani elingu- 10 Bhala isivakalisi samanani esebenzisa +, =
		Thabatha amanani ukusuka ku- 999 okanye ngaphantsi koko esebenzisa enye yezindlela • ukwakha nokucazulula amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini • wezela kwinani elingu- 10 Bhala isivakalisi samanani esebenzisa -, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani ngaokulandelelanisa • bala ngambini phakathi ko- 0 no1 000 umz. 1000, 998, 996, __, __, 990, __, __, 984 • bala ngane phakathi ko- 0 no1 000 umz. 840, 844, 852 __, __, 864, __, 872, __, __, __, 894 • bala ngatathu phakathi ko- 0 no 1 000 umz. 960,963, 966, 969, 971, __, __,980, __, __,__, 691
ISITHUBA NESIMO	Ulingano macala	Ukunakana baze bazobe umgca obonisa ukulingana macala kwi milo zejiyometri nezo zingekho kwiimo ze 2-D jiyometri .
UKUSEBENZA NGOLWAZI OLUQOKELELWEYO	Ulwazi	Phendula imibuzo ngolwazi olukwigrafu yemifanekiso

Ibanga 3 Ikota **4: Ukuhlola 3**

INKALO YOMXHOLO	UMXHOLO	UMLINGANISELO WOKUHLOLA
AMANANI IIOPARESHINI NOLWALAMANO	Ikhonsepthi yamanani	Ubala uya phambili ngo-5, 50, 25 phakathi ko- 0 no 1 000
	Sombulula iingxaki	Sombulula izibalo zamagama kumxholo obandakanya ukuphinda phinda okukhokelela kuphindaphindo oluneempendulo eziphela ngo- 50 esebenzisa enye yezi • izixhobo • imizobo • ukwakha nokwakha amanani • umgca mananii • Ukuphinda phinda kabini nokuhlula kabini anike ingcaciso ngezisombululo zeengxaki zezibalo
	Izibalo	Uyakwazi ukuphindaphinda ngo-3 ukuya ku- 99 esebenzisa enye yezi • izixhobo • imizobo • umgca mananii • ukuphinda phinda kabini Bhala isivakalisi samanani esebenzisa, =
IIPATENI, II-FANKSHINI NEALJIBRA	Inani lipateni	Gqibezela inani ngokulandelelanisa • Bala ngezihlanu phakathi ko- 0 – 1000 umz. 1 000, 995, 990, 985, __, __, __, 965, __, __, 950 • Bala ngamashumi amahlanu phakathi ko- 0 – 1000 umz.600, 650, 700, __, __, 850, __, __, __, • Bala ngama-25 phakathi ko- 0 – 1000 umz.1 000, 975, 950, __, __, 875, __, __, __, 775
ISITHUBA NESIMO	3-D	Anakane aze athiye • imilo zebhola (into engqukuva eqinileyo) • iimilo zebhokisi(iprizimu) • iisilinda • iiphiramidi • ikhowuni
		Hlela izinto ngokouba zimthebelele na nokuba zingqukuva.
		Chonga izinto ezikwimilo ye 2-D ezenza imiphezulu emthebelele kwizinto ezi-3-D izinto ezixelwe ngentla
UMLINGANISELO	Umthamo	Funda umyinge ngokweelitha kwimifanekiso ebonisa iijagi zokulinganisa.
		Ufunda umyinge ngeemililitha kwimifanekiso kwimifanekiso eneejagi.