basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 10

MATHEMATICAL LITERACY P1

EXEMPLAR 2012

MEMORANDUM

MARKS: 75

Symbol	Explanation
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG	Reading from a table/Reading from a graph
SF	Correct substitution in a formula
O	Opinion/Example
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding off/Reason

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QUESTION 1 [15]			
Ques	**Solution**	**Explanation**	**Topic**
1.1	✓A ✓A $\frac{1}{3} \times 60 = 20$ minutes	1 A multiply 60 1 A answer (2)	M
1.2	80 g ✓A	1A reading from the table (1)	
1.3	1 tablespoon = 12,5 mℓ ✓A 12,5 mℓ margarine = 12,5 g ✓A ✓A ∴ Lindi added 12,5 g of margarine	1A tablespoon to mℓ 2A mℓ to g (3)	M
1.4	Amount of water used = 4 cups = 4 × 250 mℓ ✓M = 1 000 mℓ ✓A = 1 litre ✓C	1M multiplying 1A mℓ 1C conversion to litre (3)	M
1.5.1	2,5 kg = 2,5 × 1 000g ✓M = 2 500 g ✓C	1M multiplying 1C conversion to grams (2)	M
1.5.2	Number of times she can make porridge = $\frac{2\,500\text{ g}}{312{,}5\text{ g}}$ ✓M = 8 ✓CA	1M dividing 1CA simplification (2)	M
1.6	To simmer turn knob to 1. ✓A ✓A	2A answer [Accept values below 3 but more than 0] (2)	M

QUESTION 2 [15]			
Ques	**Solution**	**Explanation**	**Topic**
2.1	5 5 6 7 7 7 8 8 8 8 9 10 15 15 15 15 15 15 20 23 23 ✓✓A	2A arranging (2)	D
2.2	Mode is R15 ✓✓A	2A answer (2)	D
2.3	R23 ✓✓A	2A answer (2)	F
2.4	Median = R9 ✓A✓A	2A answer (2)	D
2.5	Mean = $\frac{5+5+6+7+7+7+8+8+8+8+9+10+15+15}{21}$ ✓M ✓A $+\frac{15+15+15+15+20+23+23}{21}$ $= \frac{R244}{21}$ ✓CA $= R11,62$ $\approx R12$ ✓CA	1M adding 1A number of entries 1CA sum 1CA rounded off answer (4)	D
2.6	Probability (R7) = $\frac{\textbf{number of learners getting R7}}{\textbf{total number of learners}}$ $= \frac{3}{21}$ ✓A ✓A $= \frac{1}{7}$ ✓CA	1A numerator 1A denominator 1CA simplified answer (3)	P

QUESTION 3 [20]			
Ques	**Solution**	**Explanation**	**Topic**
3.1.1	Total number of items = 26 ✓A✓A	2A answer (2)	F
3.1.2	Unit price = $\frac{R32,97}{3}$ ✓M = R10,99 ✓A	1M dividing 1A simplification (2)	F
3.1.3	Total amount = R324,85 ✓A ✓A	2A answer (2)	F
3.1.4	Change = R400 – R324,85 ✓M = R75,15 ✓CA	1M subtracting from R400 1CA answer (2)	F
3.1.5	Mangoes ✓A✓A	2A answer (2)	F
3.1.6	R38,92 ✓A	2A answer (2)	F
3.2.1	Bond repayment **OR** Rates **OR** School fees **OR** Car instalment (any one) ✓A✓A	2A answer (2)	F
3.2.2	✓M ✓A **A**: 12% × R18 350 = R2 202	1M percentage 1A correct value used (2)	F
3.2.3	✓M **B:** R4 100 + R475 + R325 + R580 + R2 750 + R1 650 + R1 800 + R1 300 + R940 + R2 202 = R16 122 ✓CA	1M adding 1CA answer (2)	F
3.2.4	R18 350 – R16 122 ✓M = R2 228 ✓CA	1M subtracting 1CA answer (2)	F

QUESTION 4 [11]			
Ques	**Solution**	**Explanation**	**Topic**
4.1	2 ✓A ✓A	2A number of restaurants (2)	SM
4.2	38 ✓A ✓A	2A correct number (2)	SM
4.3.1	✓A ✓A 1 unit on the map is equivalent to 500 units in real life.	2A correct number (2)	SM
4.3.2	1 mm represents 500 mm on the ground 180 mm represents 180 mm × 500 ✓A = 90 000 mm ✓A = 90 m ✓C	1A using the scale 1A answer in centimetres 1C answer in metres (3)	S
4.4	Restaurant ✓A ✓A	2A correct shop (2)	M

QUESTION 5 [14]			
Ques	**Solution**	**Explanation**	**Topic**
5.1.1	Sprite and Granadilla Twist ✓A✓A (any valid cooldrink)	2A solution (2)	D
5.1.2	✓M % Fanta Orange sales = 100% – (12+55+9+7)% = 17% ✓CA	1M subtracting from 100 1CA answer (2)	D
5.1.3	Coca-Cola ✓A ✓A	2A solution (2)	D
5.1.4	55% **OR** 0,55 **OR** $\frac{55}{100}$ ✓A ✓A	2A solution (2)	D
5.2.1	Original price = R4 999 + R500 ✓M = R5 499 ✓A	1M adding 1A answer (2)	F
5.2.2	**Percentage discount =** $\frac{\textbf{amount saved}}{\textbf{original price}} \times \textbf{100\%}$ $= \frac{500}{5\ 499} \times 100\%$ ✓SF = 9,09% ✓A	1SF substitution 1A answer (2)	F
5.2.3	**Total amount paid = deposit + monthly payment × number of months** = R500 + (R263 × 24) ✓SF = R6 812 ✓A	1SF substitution 1A answer (2)	F

TOTAL: 75

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