



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## NATIONAL SENIOR CERTIFICATE

**GRADE 10**

**MATHEMATICAL LITERACY P1**

**EXEMPLAR 2012**

**MEMORANDUM**

**MARKS: 75**

<b>Symbol</b>	<b>Explanation</b>
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

**This memorandum consists of 6 pages.**

<b>QUESTION 1 [15]</b>			
<b>Ques</b>	<b>Solution</b>	<b>Explanation</b>	<b>Topic</b>
1.1	$\frac{1}{3} \times 60 = 20$ minutes ✓A ✓A	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 <sup>✓✓A</sup> 10 15 15 15 15 15 15 20 23 23	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	$\text{Mean} = \frac{5+5+6+7+7+7+8+8+8+8+9+10+15+15}{21} \checkmark A$ $+ \frac{15+15+15+15+20+23+23}{21}$ $= \frac{R244}{21} \checkmark CA$ $= R11,62$ $\approx R12 \checkmark CA$	1M adding 1A number of entries  1CA sum  1CA rounded off answer (4)	D
2.6	$\text{Probability (R7)} = \frac{\text{number of learners getting R7}}{\text{total number of learners}}$ $= \frac{3}{21} \checkmark A$ $= \frac{1}{7} \checkmark CA$	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 <b>OR</b> Rates <b>OR</b> School fees <b>OR</b> Car instalment (any one) ✓A✓A	2A answer (2)	F
3.2.2	A: $12\% \times R18\,350 = R2\,202$ ✓M ✓A	1M percentage 1A correct value used (2)	F
3.2.3	B: $R4\,100 + R475 + R325 + R580 + R2\,750$ $+ R1\,650 + R1\,800 + R1\,300 + R940 + R2\,202$ } = R16 122 ✓CA ✓M	1M adding 1CA answer (2)	F
3.2.4	$R18\,350 - R16\,122$ ✓M = R2 228 ✓CA	1M subtracting 1CA answer (2)	F

<b>QUESTION 4 [11]</b>			
<b>Ques</b>	<b>Solution</b>	<b>Explanation</b>	<b>Topic</b>
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 1 unit on the map is equivalent to 500 units in real life. ✓A	2A correct number (2)	SM
4.3.2	1 mm represents 500 mm on the ground 180 mm represents $180 \text{ mm} \times 500$ ✓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

<b>QUESTION 5 [14]</b>			
<b>Ques</b>	<b>Solution</b>	<b>Explanation</b>	<b>Topic</b>
5.1.1	Sprite and Granadilla Twist ✓A✓A (any valid cooldrink)	2A solution  (2)	D
5.1.2	% 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	<b>Percentage discount</b> = $\frac{\text{amount saved}}{\text{original price}} \times 100\%$  = $\frac{500}{5\ 499} \times 100\%$ ✓SF  = 9,09% ✓A	1SF substitution  1A answer  (2)	F
5.2.3	<b>Total amount paid</b> = <b>deposit + monthly payment × number of months</b>  = R500 + (R263 × 24) ✓SF = R6 812 ✓A	1SF substitution 1A answer  (2)	F

**TOTAL: 75**