



Basic Education

KwaZulu-Natal Department of Basic Education
REPUBLIC OF SOUTH AFRICA

MATHEMATICAL LITERACY P1

JUNE 2016

MEMORANDUM

NATIONAL
SENIOR CERTIFICATE

GRADE 10

MARKS: 50

Codes	Explanation
M	Method
MA	Method with Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
J	Justification/Reason/Explain
SF	Substitution into a given formula
S	Simplification
RD	Reading from a table OR a graph OR a diagram OR a map OR a plan
O	Opinion
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding Off
NP	No penalty for rounding OR omitting units

This memorandum consists of 5 pages.

QUESTION 1 [14]			
Ques	Solution	Explanation	Level
1.1.1	Original price = R99,99 + R50,00 ✓M/A = R149,99 ✓A	1M/A adding correct values 1A solution Answer only full marks (2)	L1
1.1.2	Percentage discount = $\frac{\text{discounted price} - \text{original price}}{\text{original price}} \times 100\%$ = $\frac{R50,00}{R149,99} \times 100\%$ ✓A = 33,36% ✓CA	1M substitution 1CA values from 1.1.2 1CA simplification (3) Answer only full marks	L2
1.2.1	07:00 ✓✓RG	2RG answer only (2)	L1
1.2.2	30 km ✓✓RG	2RG answer only (2)	L1
1.2.3	60 km/h ✓✓✓RG OR Average speed = $\frac{30 \text{ km}}{0,5 \text{ h}}$ ✓RG = 60 km/h ✓CA	3RG answer only 1RG numerator 1RG denominator 1CA simplification (3)	L2
1.2.4	2 hours ✓✓RG	2RG answer only (2)	L2
		[14]	

QUESTION 2 [25]				
Ques	Solution	Explanation	Level	
2.1.1	Number of children = $\frac{2}{3} \times 450$ = 300	✓M/A 1MA ratio concept 1A denominator (2)	L1	
2.1.2	Number of adults = $450 - 300$ = 150	✓M/A 1MA correct values used 1CA solution Answer only full marks (2)	L1	
2.1.3 (a)	Number of litres of concentrated juice = 1,5 ℓ Amount of water = $5 \times 1,5 \ell$ = 7,5 ℓ Number of litres of diluted juice = $7,5 \ell + 1,5 \ell$ = 9 ℓ	✓MA 1M/A ratio 1M adding 1CA simplification (3)	L2	
2.1.3 (b)	5 ℓ = 5 000 ml ✓C Number servings of juice = $\frac{5\ 000}{200}$ = 25	✓C 1C conversion 1M dividing 1CA simplification (3)	L2	

Ques	Solution	Explanation	Level
2.2.1	24 March 2016 ✓✓	2A answer (2)	L1
2.2.2	A = $2 \times R42,99$ ✓MA = R85,98 ✓A B = $\frac{R38,97}{R12,99}$ ✓M = 3 ✓A C = $R89,99 + R85,98 + R39,99 + R59,99 + R38,97$ = R314,92 ✓CA	1M multiplication 1A simplification 1M division 1A simplification 1M addition 1CA simplification (6)	L1
2.2.3	✓M $31 - 24 = 7$ days ✓A	1M subtraction 1A answer (2)	L1
2.3.1	P(red) = $\frac{10}{10+12+18}$ ✓A = $\frac{10}{40} = \frac{1}{4}$ ✓A or 0,25 or 25%	1A numerator 1A denominator 1A simplified answer (3)	L3
2.3.2	P(white) = 0 OR zero ✓✓A	2A solution (2)	L2
		[25]	

QUESTION 3 [11]			
Ques	Solution	Explanation	Level
3.1.1	Every 1 cm on the diagram represents 20 cm in real life ✓✓A	2I explanation (2)	L1
3.1.2	2,5 cm on sketch = $2,5 \text{ cm} \times 20$ ✓M = 50 cm ✓A	1M scale concept 1A solution (2)	L1
3.1.3	Surface area of a rectangular prism ✓M ✓A = $2(30 \text{ cm} \times 20 \text{ cm} + 30 \text{ cm} \times 8 \text{ cm} + 20 \text{ cm} \times 8 \text{ cm})$ = $2(600 \text{ cm}^2 + 240 \text{ cm}^2 + 160 \text{ cm}^2)$ ✓A = $2 \times 1\,000 \text{ cm}^2$ ✓CA = $2\,000 \text{ cm}^2$ ✓A	1M substitution 1A correct values used 1A simplification 1CA solution 1A correct unit (5)	L2
3.2	Unit price = $\frac{R24,99}{8}$ ✓MA = R3,12 ✓A	1MA dividing 1A answer (2)	L1
		[11]	

TOTAL :50

