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** = $\frac{\textbf{discounted price}}{\textbf{original price}} \times 100\%$ = $\frac{\text{R50,00}}{\text{R149,99}} \times 100\%$ ✓A ✓M = 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 ✓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 $= \frac{2}{3} \times 450$ ✓M/A ✓A $= 300$	1MA ratio concept 1A denominator (2)	L1
2.1.2	Number of adults $= 450 - 300$ ✓M/A $= 150$ ✓CA	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 $= 5 \times 1{,}5\ \ell$ $= 7{,}5\ \ell$ ✓MA ✓M Number of litres of diluted juice = 7,5 ℓ + 1,5 ℓ = 9 ℓ ✓CA	1M/A ratio 1M adding 1CA simplification (3)	L2
2.1.3 (b)	5 ℓ = 5 000 mℓ ✓C Number servings of juice $= \frac{5\,000}{200}$ ✓M $= 25$ ✓CA	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** $= \frac{\text{R38,97}}{\text{R12,99}}$ ✓M = 3 ✓A ✓M **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 ✓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	2J explanation (2)	L1
3.1.2	2,5 cm on sketch = 2,5 cm × 20 ✓M = 50 cm ✓A	1M scale concept 1A solution (2)	L1
3.1.3	**Surface area of a rectangular prism** = 2(30 cm × 20 cm + 30 cm × 8 cm + 20 cm × 8 cm) ✓M ✓A = 2 (600 cm² + 240 cm² + 160 cm²) ✓A = 2 × 1 000 cm² = 2 000 cm² ✓CA ✓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