NATIONAL
SENIOR CERTIFICATE

GRADE 12

JUNE 2022

MATHEMATICAL LITERACY P2
MARKING GUIDELINE

MARKS: 100

Symbol	Explanation
M	Method
M/A	Method with Accuracy
MCA	Method with Consistent Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RM	Reading from a table OR Reading from a graph OR Read from map
F	Choosing the correct formula
SF	Substitution in a formula
J	Justification
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding Off OR Reason
AO	Answer only
NPR	No penalty for rounding

This marking guideline consists of 7 pages.

QUESTION 1 [20]

Ques.	Solutions	Explanations	Level
1.1.1	Mozambique ✓✓	2RT correct country (2)	L1 Maps
1.1.2	3 ✓✓	2A no of tented camps (2)	L1 Maps
1.1.3	9 ✓✓	2A correct number (2)	LI Maps
1.1.4	Main camp ✓✓	2A type of camp (2)	L1 Maps
1.2.1	260 ÷ 10 ✓ 26 cm ✓	1C dividing by 10 1A answer (2)	L1 Meas.
1.2.2	150 – 40 ✓ 110 mm ÷ 1 000 ✓ 0,11 m ✓	1MA subtraction 1C dividing by 1 000 1A answer (3)	LI Meas.
1.2.3	100 : 150 ✓✓ 2 : 3 ✓	1RT correct values 1M ratio concept 1S simplification (3)	LI Meas.
1.3.1	14 x 2 + 3 ✓ 31✓	1MA multiplication and addition 1A answer (2)	L1 Meas
1.3.2	6 ✓✓	2A (2)	L1 Probl.
		[20]	

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QUESTION 2 [32]

Ques.	Solutions	Explanations	Level
2.1.1	Distance = 1 029 km ✓ 1 029 x 1 000 ✓ 1 029 000 m ✓	1RT correct distance 1C conversion 1CA answer (3)	L2 Maps
2.1.2	Cape Town to Johannesburg = 1 402 km ✓ Johannesburg to Bloemfontein = 417 km ✓ Total = 1 402 + 417 = 1 819 km ✓ Cape Town to Nelspruit = 1 779 km ✓ Difference = 1 819 – 1 779 = 40 km ✓ Valid ✓	1RT distance CT to Johannesburg 1RT distance to Bloem 1CA total distance 1RT Nelspruit 1CA difference 1O valid (6)	L4 Maps
2.1.3	Distance = 1 393 km ✓ Distance = Speed x Time 1 393 = 105 x T ✓ T = 1 393/105 ✓ T = 13,2666 hrs = 0,2666 x 60 ✓ = 16 min T = 13hrs 16 min + 2 hrs 30min ✓ = 15hrs 46min ✓	1RT correct distance 1A substitution 1S simplification 1C hours to minutes 1M adding times 1CA answer (6)	L3 Maps
2.2.1	Bar scale ✓✓	1A type of scale (2)	L1 Maps
2.2.2	Scale 1,2 cm = 5 km ✓ 4,3 cm = 5 x 4,3 ✓ $= \frac{21,5}{1,2}$ ✓ = 17,916666 x 1 000 = 1 7 917 m ✓	1A measuring the scale Accept 1,1 cm–1,3 cm 1A measuring the map Accept 4,1 cm–4,4 cm 1S simplification 1CA distance in metres (4)	L3 Maps

2.2.3	South East ✓✓	2A direction (2)	L2 Maps
2.2.4	2 850 = 870 $\frac{870}{2\,850}$ ✓ 0,30526 x 100 ✓ 30,526 ✓ = 30,53 cm ✓	1MA dividing by 2 850 1C to cm 1CA answer 1R rounding to two decimals (4)	L2 Maps

2.2.5	Fuel consumed:
	
	 10 km = 1litre
	 1 km = $\frac{1}{10}$ litre
	
	 Therefore 929 km will require: $929 \times \frac{1}{10}$ litre ✓M
	
	        = 929 ÷ 10
	        = 92,9 litre ✓ A
	
	 Cost of return journey = 2 (92,9 × R16,98) ✓ M
	        = 2 (R1 577,442)
	        = R3 154, 884 ✓ S
	        = R3 154, 88 ✓ CA
		1M Determine litres
		
		 1A correct answer
		
		 1M using 929 km
		
		 1S simplifying
		 CA correct answer (5)
			L3 Maps

		[32]	

QUESTION 3 [29]

Ques.	Solutions	Explanations	Level
3.1.1	274 +15,25 + 15,25 ✓✓ = 304,5 cm ✓ **OR** 274 + 2(15,25) ✓ 274 + 30,5 ✓ = 304,5 cm ✓ (3)	1RT all values correct 1MA adding overhang 1CA answer	L1 Meas.
3.1.2	274 – 152,5 ✓ 121,5 x 10 ✓ 1 215 mm ✓ **OR** (274 x 10) – (152,5 x 10) ✓ = 2 740 – 1 525 ✓ = 1 215 mm ✓ (3)	1MA subtraction 1C to mm 1CA answer	L2 Meas.
3.1.3	10:08 + 1:58 ✓ 11:66 ✓ 12:06 ✓ (3)	1MA adding time 1S simplification 1A correct time	L2 Meas.
3.1.4	76 + 15,25 ✓ = 91,25 152,5 – 91,25 ✓ = 61,25 ✓ Not valid ✓ (4)	1MA addition 1MA subtraction 1A answer 1O not valid	L4 Meas.
3.2.1	100 +40 + 40 + 60 + 20 + 60 + 60 +120+20 +40 ✓✓ = 560 cm ✓	1A all values correct 1MA adding all values 1A answer (3)	L1 Meas.

3.2.2	Area = Length x Width
	
	FIGURE 1 = 100 x 40
	             = 4 000 cm^2 ✓
	FIGURE 2 = 20 x 60
	             = 1 200 cm^2 ✓
	FIGURE 3 = 120 x 40
	             = 4 800 cm^2 ✓
	
	Total area = 4 000 + 1 200 + 4 800
	             = 10 000 / 10 000 ✓
	             = 1 m^2 ✓
		1A area 1
		1A area 2
		1A area 3
		1MA total area
		
		1CA area in square metres
		
		(5)
			L2
			Meas.

3.2.3	Area to paint = 1 x 2 x 2 ✓
	
	       = 4 m^2 ✓
	
	Litres needed = $\dfrac{4}{6,2}$ ✓
	
	       = 0,645 ✓
	
	       = 0,65 m^2 ✓
		1 MA multiplying by coats and no. of shapes
		
		1 CA area to be painted
		
		1 S simplification
		
		1 CA no of litres
		
		1 R rounding (5)
			L3
			Meas.

3.2.4	0,65 x 1 000 ✓ = 650 mℓ ✓ Valid ✓	1 MCA multiplying by 1 000 1 CA simplification 1 O verification (3)	L4 Meas.
		[29]	

QUESTION 4 [19]

Ques.	Solutions	Explanations	Level
4.1.1	$\frac{17}{255}$ x 100 ✓✓ = 6,67% ✓	1A numerator 1A denominator 1CA percentage NPR (3)	L2 Prob
4.1.2	D44 ✓✓	1A letter 1A number (2)	LI Maps
4.1.3	D = 29 ✓ E = 32 ✓ H = 41 ✓ Total = 29 + 32 +41 = 102 ✓	3A all rows 1 mark for each row 1A correct total (4)	L2 Maps
4.2.1	29,9 ✓✓	2RT correct amount (2)	L1 Meas.
4.2.2	(height)^2 x BMI = Weight 1,7 x 1,7 x BMI = 95 ✓ 2,89 x BMI = 95 BMI = 95/2,89 ✓ = 32,87 ✓ Obese / High health risk. Not valid ✓	1SF substitution 1S simplification 1CA 1O verification (4)	L4 Meas.
4.2.3	Exercise ✓✓ Eat healthy food ✓✓ **OR** Any other relevant answer.	2A 2A 2 for each suggestion (4)	L4 Meas.
		[19]	
		TOTAL: 100	