Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 11

NOVEMBER 2023

MATHEMATICAL LITERACY P2 MARKING GUIDELINE

MARKS: 100

Symbol	Explanation
M	Method
MA	Method with accuracy
CA	Consistent accuracy
RCA	Rounding consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
SF	Correct substitution in a formula
J	Justification
O	Opinion/Example/Definition/Explanation/Justification/Verification
RT/RG/RM	Reading from a table/graph/map
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding off
NPR	No penalty rounding or omitting units
AO	Answer only, full marks

This marking guideline consists of 9 pages.

MARKING GUIDELINES

NOTE:

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled version).
- Consistent Accuracy (CA) applies in ALL aspects of the marking guidelines; however, it stops at the second calculation error.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra incorrect item presented.

LET WEL:

- *As 'n kandidaat 'n vraag TWEE keer beantwoord merk slegs die EERSTE poging.*
- *As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, merk die doodgetrekte (gekanselleerde) poging.*
- *Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyn toegepas, maar dit hou by die tweede berekeningsfout op.*
- *Wanneer 'n kandidaat aflees van 'n grafiek, tabel, uitlegplan en kaart en ekstra antwoorde gee, penaliseer vir elke ekstra item.*

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KEY TO TOPIC SYMBOL:
F = Finance; M = Measurement; MP = Maps, plans and other representations; P= Probability

QUESTION 1 [23]

Quest	Solution	Explanation	Level
1.1.1	3,142 × 450 ✓ M = 1 413,9 mm ✓ A	1M multiply by 450 1A correct answer (2)	M L1
1.1.2	Option B: 290 ÷ 200 m ✓ M = R1,45 per metre ✓ MA	 1M divide by 200 m 1MA answer (2)	M L1
1.1.3	R290 : R390 ✓M 29 : 39 ✓ A	1M correct order 1A correct simplified values (2)	M L1
1.1.4	Radius = 450 mm ÷ 10 ✓ C = 45 cm ÷ 2 ✓ M = 22,5 cm ✓ A	1C divide by 10 1M finding the radius 1A correct answer (3)	M L1
1.2.1	N2; N3; N6; N10 ✓ ✓A **(Any TWO)**	2A correct national roads (2)	MP L1
1.2.2	Strip Chart / Map ✓ ✓ A	2A name (2)	MP L1
1.2.3	✓ RT ✓ C Distance = 964 km × 1000 = 964 000 m ✓ A	1RT correct values 1C conversion 1A 964 000 m (3)	MP L1

1.2.4 (a)	Port St. Johns **OR** Port Edward ✓ ✓A	2 A town (2)	MP L1
1.2.4 (b)	✓A Distance = 201 + 36 ✓ M = 237 km ✓ A	1A correct distances 1M Addition 1A 237 km (3)	MP L1
1.2.5	R617; R101; R56 ; R61 ✓ ✓RM **(Accept any two answers)**	2RM correct provincial roads (2)	MP L1
		[23]	

QUESTION 2 [18]			
Quest.	**Solution**	**Explanation**	**Level**
2.1.1	Bar Scale ✓✓ RM	2RM correct answer (2)	MP L1
2.1.2	South West ✓✓ RM	2RM correct direction (2)	MP L2
2.1.3	✓M 2 cm : 250 km ✓M 9,6 cm : $\frac{9,6 \times 250}{2}$ ≈ 1 200 km ✓ CA Mr. Antonie is incorrect ✓ J	1M measured value 1M multiply by 250 and divide by 2 1CA correct answer 1J correct justification (4)	MP L3
2.2.1	Average Speed $= \frac{1\,635}{17,25}$ ✓ MA = 94,782 ✓A = 94,78 km / hr ✓R	1MA divide by17,25 1A correct answer 1R correct rounding (3)	M L2
2.2.2 (a)	1 litre = 12,5 km No. of litres $= \frac{1\,635}{12,5} \times 1$ ✓MA = 130,8 ✓A 0,80 litre = 10 km No of litres $= \frac{1\,635}{10} \times 0,80$ ✓MA = 130,8 ✓A Mr Amos statement is incorrect. ✓J	1MA dividing by 12,5 1A correct answer 1MA dividing by 10 1A correct answer 1J correct deduction (5)	MP L4
2.2.2 (b)	Cost = 130,8 × R24,75 ✓M = R3 237,30 ✓A	1M multiply by 130,8 1A correct answer (2)	M L2
		[18]	

QUESTION 3 [32]			
Quest	**Solution**	**Explanation**	**Level**
3.1.1	Mass of cake = 900 ÷ 1 000 ✓M = 0,9 kg ✓A	1M divide by 1000 1A correct answer (2)	M L1
3.1.2	Mass of one slice = $\frac{900}{12}$ ✓ M = 75 g ✓ A	1M divide by 12 1A correct answer (2)	M L2
3.1.3	Calories of one slice of cake = $\frac{75}{100} \times 400$ ✓✓ M = 300 calories ✓A	1M multiply by 75 1M divide by 100 1A correct answer (3)	M L2
3.1.4	Convert min to hrs ✓M 75 min ÷ 60 = 1,25 hrs ✓ A	1M conversion ratio 1A correct answer (2)	M L1
3.1.5	90 guests = 90 slices ✓M Number of Cakes = 90 ÷ 12 ✓M = 7,5 cakes ✓CA ≈ 8 cakes ✓R	1M number of slices 1M divide by 12 1CA number of cakes 1A correct rounding (4)	M L1
3.2.1	Cups = $8 \times \frac{3}{4}$ ✓M = 6 cups ✓A	1M multiplication 1A correct answer (2)	M L2
3.2.2	Cocoa = 8 × 90 g ✓M Required Amount = 720 g ÷ 240 g = 3 ✓M ✓M Cost = 3 × R 62,75 = R188,25 ✓A	1M total grams 1M amount 1M multiplication 1A correct cost (4)	M L3

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3.2.3	°C = (°F − 32) ÷ 1,8 ✓SF = (320 − 32) ÷ 1,8 ✓M = 288 ÷ 1,8 = 160 °C ✓ CA	1SF substitution 1M 268 ÷ 1,8 1CA correct rounding (3)	M L2
3.2.4	Starting time 09h 03 + 55 min ✓M Finishing time = 09h 58 ✓ A	1M adding time 1A correct answer (2)	M L2
3.3.1	Radius = 86 mm ÷ 2 = 43 mm ✓ A Convert: 43 mm ÷ 10 = 4,3 cm ✓ C Volume of one can = 3,142 × 4,3 × 4,3 × height ✓SF 546,10 cm^3 = 58,09558 cm^2 × height Height = 546,10 cm^3 ÷ 58,09558 cm^2 = 9,4 cm ✓CA	1A radius value 1C conversion 1SF correct values 1CA height value (4)	M L3
3.3.2	✓M Height of label = 80% × 9,4 cm = 7,52 cm ✓A Difference = 9,4 − 7,52 = 1,88 cm ✓M His statement is invalid ✓J	**CA value from Q 3.3.1** 1M calculating 80% of 9,4 1A for 7,52 cm 1M difference value of 1,88 cm 1J justification (4)	M L3
			[32]

QUESTION 4 [27]			
Quest	**Solution**	**Explanation**	**Level**
4.1.1	Shows a building's plan as seen from above. It is a 2-dimensional view of the building. ✓✓ A	2A correct explanation (2)	MP L1
4.1.2	One window ✓✓ A	2A correct answer (2)	MP L2
4.1.3	1 mm represents 100 mm Length of wall ✓ M 114 mm = 114 × 100 ✓ M = 11 400 mm ÷ 1 000 ✓ M = 11,4 m ✓ CA Width of Wall ✓ M 77 mm = 77 × 100 = 7 700 ÷ 1 000 ✓ M = 7,7 m ✓ CA	1M for measurement 1MA using conversion factor 1M conversion to m 1CA for 11,4 m 1M for measurement 1M conversion to m 1CA 7,7 m (7)	MP L4
4.1.4	✓ MA Width = 19,38 m^2 ÷ 10,2 m = 1,9 m ✓ A Times lesser = 10,2 ÷ 1,9 m ✓ MA = 5,37 times Mrs Smith's statement is invalid. ✓ J	1MA 19,38 ÷ 10,2 1A correct answer 1MA divide by correct values 1J correct justification (4)	M L4
4.2.1	Area Circle = $\pi \times r^2$ = 3,142 × 1,65 × 1,65 ✓ SF = 8,55 cm^2 ✓ A Area square = side × side = 0,9 × 0,9 = 0,81 cm^2 ✓ A Area of coin = 8,55 – 0,81 ✓ M = 7,74 cm^2 = 7,7 cm^2 ✓ A	1SF correct radius 1A correct answer 1A correct answer 1M subtraction 1A correct rounded off (5)	M L3
4.2.2	Mass of coin = 1,47 × 19,30 ✓ M = 28,371 grams ≈ 28,4 g ✓ A	1M correct values 1A correct answer (2)	M L2

4.3.1	Probability gold coin $= \frac{12}{16}$ ✓ A ✓ A $= 0,75$ ✓ A	1A numerator 1A denominator 1A correct answer (3)	P L2
4.3.2	The probability of selecting a gold coin has a much greater chance of happening than not happening. ✓✓ O **OR** Very likely to select a gold coin. ✓✓ O **(Accept any relevant answer.)**	2O correct reasoning 2O correct reasoning (2)	P L4
		[27]	
		TOTAL: 100	

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