Province of the
EASTERN CAPE
EDUCATION

Iphondo leMpuma Kapa: Isebe leMfundo
Provinsie van die Oos Kaap: Departement van Onderwys
Porofonsie Ya Kapa Botjhabela: Lefapha la Thuto

NATIONAL SENIOR CERTIFICATE

GRADE 12

JUNE 2026

MATHEMATICAL LITERACY P2
MARKING GUIDELINE

MARKS: 100

Symbol	Explanation
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT	Reading from a table/graph/diagram
SF	Correct substitution in a formula
O	Opinion/Explanation/Reasoning
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding off/Reason
NPR	No penalty for correct rounding minimum two decimal places
AO	Answer only
MCA	Method with consistent accuracy
RCA	Rounding with consistent accuracy

This marking guideline consists of 10 pages.

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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 penalize for every extra incorrect item presented.
- Opinion mark is only granted when ONE THIRD of the response is correct.

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

QUESTION 1 [22 MARKS] **ANSWER ONLY FULL MARKS**

Ques.	Solution	Explanation	Level
1.1.1	Temperature = 250°F ✓✓RT	2RT correct temperature (2)	M L1
1.1.2	The Imperial System✓✓A	2A correct system (2)	M L1
1.2.1	Digital time/12hr format ✓✓A	2A correct time format (2)	M L1
1.2.2	A quarter to eight in the morning **OR** ✓✓A Forty five minutes past seven in the morning	2A time in words (2)	M L1
1.2.3	Time = 45 × 60✓C = 2 700 seconds✓A	1C conversion 1A answer in seconds (2)	M L1
1.3.1	B✓✓A	2A correct definition (2)	MP L1
1.3.2	F✓✓A	2A correct definition (2)	M L1
1.3.3	A✓✓A	2A correct definition (2)	MP L1
1.3.4	G✓✓A	2A correct definition (2)	MP L1
1.3.5	D ✓✓A	2A correct definition (2)	M L1
		[20]	

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QUESTION 2 [20 MARKS]

Ques.	Solution	Explanation	Level
2.1.1	Medicine Root Trail ✓✓RT	2RT correct trail (2)	MP L1
2.1.2	Roundtrip distance = $\frac{7.5}{0,6214}$ ✓M = 12,069 5 …✓CA ≈ 12,07 km ✓R	1M dividing by 0,6214 1CA distance 1R rounding to two decimal places (3)	MP L2
2.1.3	Probability = 0 ✓✓A **OR** None ✓✓A	2A correct answer (2)	P L2
2.1.4	Map distance = 5,4 cm ✓ Straight one way distance = $\frac{5,4}{2,4} \times 1$ ✓MCA = 2,25 km Return distance = 2,25 x 2 ✓MCA = 4,5 km ✓CA **OR** Straight one way distance = $\frac{5,4}{2,4} \times 1$ ✓A ✓MCA = 2,25 km ✓MCA One way from given distance = $\frac{12,07}{2}$ = 6,03 km ✓CA **OR** Straight one way distance = $\frac{7,5}{2}$ ✓M = 3,75 miles ✓CA One way from given distance = $\frac{3,75}{0,6214} \times 1$ ✓C = 6,03 km ✓CA Hein is incorrect as the trail does not follow a straight line.✓O **OR** Hein is incorrect as the straight line does not take into account the terrain. ✓O	1A scale line 2,4 cm Accept (2,3cm to 2,5cm) 1MCA divide correct distance multiplied by 1 1MCA multiply by 2 for return distance 1CA actual distance 1O opinion 1MCA divide by 2 for one way distance CA Answer 1MCA convert correct distance multiplied by 1 1CA actual distance 1O opinion (5)	MP L4
2.2.1	Hein and his friends were walking faster from 09:00 to 09:30. ✓✓CA	2CA correct explanation (2)	MP L2

2.2.2	Distance between cars and hiking trail = $\frac{250}{1\,000} \times 2$ ✓C ✓M ✓CA = 0,5 km Distance walked on the day = 0,5 km + 12,07 km = 12,57 km ✓CA **OR** $\frac{250}{1\,000} = 0{,}25\ km$ ✓C (0,25 km × 2) + 12,07 km = 12,57 km ✓CA ✓M ✓CA ✓MCA	**CA from 2.1.2** 1C conversion 1M multiply by 2 1CA answer 1CA distance walked 1C conversion 1MCA multiply by 2 1M addition 1CA distance walked (4)	MP L3
2.3.1	Cost per person = R4 025 × 3 nights ✓RT = R12 075 ✓MCA ∴ $\frac{R12\,075}{5}$ ✓M = R2 415 per person ✓CA **OR** ✓RT ✓MCA ✓RT ✓CA Cost per person = $\frac{R4025\ X\ 3}{5} = R2415$ per person	1RT find 3nights 1MCA multiply correct values 1M divide cost by 5 1CA cost per person (4)	F L2
2.3.2	Cheaper ✓✓O **OR** Less crowd ✓✓O **OR** Better availably ✓✓O **OR** Less stress and congestion ✓✓O (**Accept any other relevant explanation**)	2O first reason (2)	MP L4
		[24]	

QUESTION 3 [27 MARKS]			
Ques.	**Solution**	**Explanation**	**Level**
3.1.1	Radius = $\frac{70}{2}$ ✓M = 35 cm ✓CA	1M dividing 70 cm by 2 1CA correct radius **(CA ONLY if 110 cm used)** (2)	M L1
3.1.2	Distance of one rotation = 2 × 3,142 × 35 ✓SF = 219,94 cm ✓CA ∴ 23,7 km × 100 000 = 2 370 000 cm ✓C Number of .wheel rotations = $\frac{2\ 370\ 000}{219,94}$ ✓M = 10 775,66609 ✓CA ≈ 10 776 rotations ✓R **OR** Distance of one rotation = 2 × 3,142 × 35 ✓SF = 219,94 cm ✓CA ∴ $\frac{219,94}{100\ 000}$ = 0,0021994 km ✓C No. of wheel rotations = $\frac{23,7}{0,0021994}$ ✓M = 10 775,66609 ✓CA ≈ 10 776 rotations ✓R	**CA from 3.1.1** 1SF substitution 1CA distance in cm 1C distance in cm 1M dividing correct values 1CA answer 1R rounding **OR** 1SF substitution 1CA distance in cm 1C distance in km 1M dividing correct values 1CA answer 1R rounding (6)	M L3
3.1.3	Handlebar = 185 cm – (70 × 2) ✓ = 45 cm ✓A	1MA Correct values 1A Answer (2)	M L1
3.1.4	Volume = 3,142 × (4 cm)^2 × 22 cm ✓SF = 1 106 cm^3 ✓CA But 1 cm^3 = 1 mℓ Thus 1 160 ÷ 1 000 ✓C = 1,106 litre ✓CA ∴ It is enough ✓O	1SF substitution 1CA distance in cm^3 1C conversion to litres 1CA answer 1O opinion (5)	M L4
3.1.5	°F = (1,8 × °C) + 32° 90 = (1,8 × °C) + 32° ✓SF °C = $\frac{90-32}{1,8}$ ✓M = 32,22 °C ✓CA	1SF substitution 1M changing subject of formula 1CA answer in °C (3)	M L2
3.1.6	Probability (green) = $\frac{4}{17}$ ✓A ✓A	1A numerator 1A denominator (2)	P L2

3.2.1	Ratio = 51 : 34 ✓A = 3 : 2 ✓A	1A correct ratio 1A simplified format (2)	M L1
3.2.2	✓M Diameter of small cog = $\frac{2}{3}$ × 7,2 cm × 2 ✓M = 9,6 cm ✓CA	**CA from 3.2.1** 1M multiply radius with correct fraction 1MCA multiply by 2 1CA answer (3)	M L2
		[25]	

QUESTION 4 [31 MARKS]

Ques.	Solution	Explanation	Level
4.1.1	Width = 2,46 ft ×$^{\checkmark C}$ 30,5 cm = 75,03 cm + 4 cm$^{\checkmark M}$ = 79,03 ✓CA Length= 110 cm +4 cm = 114 cm ✓CA ∴ Area of a canvas = 114 cm × 75,03 cm ✓SF = 9009,42 cm^2 ✓CA	1C conversion to cm 1M Adding 4 1CA width 1CA length 1SF substitution 1CA area (6)	M L3
4.1.2	Area of the canvas = $\frac{9009{,}42\ cm^2}{10000}$ ✓C = 0,900942 m^2 Area of canvas to be painted: = 0,900942 m^2 – (0,15 m^2 × 2) – 0,24 m^2 ✓MCA = 0,360942 m^2 ✓CA **OR** Convert to cm²: 0,15 × 10 000 = 1500 cm^2 ✓C 0,24 × 10 000 = 2 400 cm^2 ✓MCA 9009,42 – (1 500 × 2) – 2 400 = 3609,42 cm^2 ✓CA	**CA from 4.1.1** 1 C conversion 1MCA Subtract correct values 1CA answer 1 C conversion of both sides 1MCA subtract correct values 1CA answer (3)	M L2
4.1.3	No. of bottlecaps needed: = largest circle + middle circle + smallest circle = 68 + $\frac{68}{2}^{\checkmark M}$ + $\frac{34}{2}^{\checkmark M}$ = 119 bottlecaps ✓CA	1M no of bottlecaps for middle circle 1M bottlecaps for smallest circle 1CA no. of bottlecaps (3)	M L2
4.2.1	South East ✓✓A	2A correct direction (2)	MP L1
4.2.2	82 mm: 246 km ✓RT 1 mm : 3 km ✓S 1 mm : 3 × 1 000 000 ✓C 1: 3 000 000 ✓CA **OR** 82 mm: 246 km ✓RT 82 mm : 246 × 1 000 000 ✓C 82 mm : 246 000 000 ✓S 1: 3 000 000 ✓CA	1RT Correct values in correct ratio 1S Simplification 1C converting to the same units 1CA Unit ratio (4)	MP L3

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4.2.3	Speed $= \frac{\text{Distance}}{\text{Time}}$ 105 km/h $= \frac{246\text{ km}}{\text{Time}}$ ✓SF Time $= \frac{246\text{ km}}{105\text{ km/h}}$ ✓M = 2,3429 h ✓CA ∴ 0,3429… × 60 ✓C = 20,57142… ≈ 21 minutes ∴ Time = 2 hours 21 minutes ✓CA	1SF substitution 1M changing subject of the formula 1CA answer 1C conversion to minutes 1CA time in hours and minutes (5)	MP L3
4.2.4	Arrival time = 13:50 + 02:21 (travelling time) ✓M = 16:11 ✓CA	**CA from 4.2.1** 1M adding travel time 1CA arrival time (2)	M L2
4.2.5	No. of litres of petrol = $\frac{246}{100} \times 7{,}5$ ✓MCA = 18,45 ℓ ✓CA Amount of petrol = 18,45 ℓ × 1,20 = 22,14 ℓ ✓CA Thus she is incorrect ✓O **OR** No. of litres of petrol = $\frac{246}{100} \times 7{,}5$ ✓MCA = 18,45 ℓ ✓CA Amount of petrol = 18,45 ℓ × $\frac{120}{100}$ = 22,14 ℓ ✓CA Thus she is incorrect ✓O **OR** No. of litres of petrol: ✓MCA = $\frac{246}{100} \times 1{,}2 \times 7{,}5$ ✓CA = 22,14 ℓ ✓CA Thus she is incorrect ✓O	1MCA consumption rate 1CA no. of liters of petrol 1CA increase by 20% 1 O Opinion	MP L4

	OR No. of litres of petrol = $\frac{246}{100} \times 7,5$ ✓MCA = 18,45ℓ Increase in petrol = 18,45 ℓ × $\frac{20}{100}$ = 3,69 ℓ ✓CA Amount of petrol = 18,45 ℓ + 6,69 ℓ = 22,14 ℓ ✓CA Thus she is incorrect ✓O	(4)	
4.2.6	Traffic congestion. ✓✓O **OR** The conditions of the road she will travel on. ✓✓O **OR** The condition of her vehicle. ✓✓O **OR** Weather conditions. ✓✓O (**Accept any other relevant explanation**)	2O reason (2)	MP L4
		[31]	
		[100]	

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GRADE 12 **JUNE 2026**

MATHEMATICAL LITERACY P2
MARKING GUIDELINE NOTES

Ques.	Solution	Explanation
1.1.1	Temperature = 250 °F ✓✓RT No unit is fine	2RT correct temperature (2)
1.2.2	✓A A quarter to eight in the morning ✓A **OR** Forty five minutes past seven in the morning	2A time in words (2)
2.1.1	Castle Trail	2RT correct trail (2)
2.1.2	Value × 0,6214 but rounds correctly	(1)
2.1.4	**Follow what the learner has done.** If learner indicates that Hein is correct ✓O If learner indicates that Hein is incorrect due to the fact that we do not measure in a straight line/ cannot measure as crow flies ✓O	CA from 2.1.2 **NB! 1/3 principal as per page 1 of MG**
2.2.2	ACCEPT FROM GRAPH: Distance walked on the day = 0,5 km + 12 km = 12,50 km ✓CA Adding only one 250m = 12,25km (3marks)	CA from 2.1.2 1C conversion 1MCA multiply by 2 1M Addition 1CA distance walked (4)
3.1.1	110/2 = 55cm	(1)
3.1.2	If use 70 from 3.1.1 (full marks) If use different value than in 3.1.1 Distance of one rotation = 2 × 3,142 × **70** = 439,88cm ✓CA ∴ 23,7 km × 100 000 = 2 370 000 cm ✓C No. of wheel rotations = $\frac{2\,370\,000}{439{,}88}$ ✓M = 5387,833 ✓CA ≈ 5388 rotations ✓R	CA from 3.1.1 1CA distance in cm 1C distance in cm 1M dividing correct values 1CA answer 1R rounding
3.1.5	ACCEPT: 32◦C ; 32,2 ◦C	
3.1.6	Probability (green) = $\frac{4}{17}$ ✓A ✓A Accept: 23,53% 0r 0,235	

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3.2.1	*Accept* $\frac{3}{2}$ ✓A✓A	1A correct ratio 1A simplified format (2)
3.2.2	✓M ✓MCA $(7{,}2 \div \frac{3}{2}) \times 2 = 9{,}6\text{cm}$ ✓CA OR ✓M ✓MCA $(7{,}2 \times 2) \div \frac{3}{2} = 9{,}6\text{cm}$ ✓CA ✓MCA x When $(7{,}2\times2) - \frac{3}{2}$ not accepted	CA from 3.2.1 1M multiply radius with correct fraction 1MCA multiply by 2 1CA answer (3)
4.1.1	**NOTE: If learner only adds 2 for both sides:** Width = 2,46 ft × 30,5 cm ✓C ✓CA = 75,03 cm + 2 cm = 77,03 Length= 110 cm + 2 cm = 112 cm ✓CA ∴ Area of a canvas = 112 cm × 77,03 cm ✓SF = 8627,36cm^{2}cm^2 ✓CA **IF NOT ADD SIDES:** Width = 2,46 ft × 30,5 cm ✓C = 75,03 cm Width: 75,03 Length: 110cm ✓SF Thus, 75,03 ×110 = 8253,3 cm^2 ✓CA	1C conversion to cm 1CA width 1CA length 1SF substitution 1CA area (5) 1C conversion to cm 1SF substitution 1CA area (3)
4.2.2	82 mm: 246 km ✓RT 8,2 cm : 24600 000 cm ✓C 1: 3 000 000 ✓CA ✓S	1RT Correct values in correct ratio 1S Simplification 1C converting to the same units 1CA Unit ratio (4)
4.2.3	ROUND TO 20MIN (-1)	
4.2.4	If add 2h 34min from above… Time: 16:24 = full marks	CA from 4.2.3
4.2.6	Stop and go ✓✓A OR Not stop along the way OR Do not exceed speed limits	

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