Province of the EASTERN CAPE EDUCATION

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

NATIONAL SENIOR CERTIFICATE

GRADE 12

SEPTEMBER 2026

MATHEMATICAL LITERACY P2
MARKING GUIDELINE

MARKS: 150

Symbol	Explanation
MA	Method with accuracy
MCA	Method with consistent 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.
NPR	No penalty for correct rounding
NPU	No penalty for omitting unit, but wrong unit is penalised
AO	Answer only

This marking guideline consists of 12 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.
- Rounding is an independent mark.
- General principle of marking, if the candidate makes one mistake one mark is deducted.
- A conclusion mark can only be given if $\frac{1}{3}$ of the total marks for the sub-question have been awarded.
- No penalty for rounding (NPR) if the first decimal is correct.

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

QUESTION 1 [28 MARKS] **ANSWER ONLY FULL MARKS**

Ques.	Solution	Explanation	Level
1.1.1	A seating plan is a 2D scale diagram that shows the arrangement of seats within a specific venue. ✓✓A	2A correct definition. (2)	MP L1
1.1.2	Row E, Seat 14 ✓A ✓A	1A correct row 1A correct seat (2)	MP L1
1.1.3	3 seats ✓✓RT	2RT number of seats (2)	MP L1
1.1.4	Four / 4 ✓✓RT	2RT number of exits (2)	MP L1
1.1.5	South-west / SW ✓✓A	2A correct direction (2)	MP L1
1.1.6	$\frac{11}{71}$ ✓A ✓A	1A numerator 1A denominator (2)	MP L1
1.2.1	The diameter is a straight line passing from side to side through the centre of a circle. ✓✓A	2A correct definition (2)	M L1
1.2.2	150 kg ✓✓RT	2RT maximum weight (2)	M L1
1.2.3	Height = 1,65 x 1 000 ✓ C = 1 650 mm ✓A	1C multiply by 1 000 1A height in millimeters (2)	M L1
1.2.4	C ✓✓A	2A correct answer (2)	M L1
1.2.5	62,4 : 150 ✓✓A **Award ONLY 1 mark if ratio is switched**	2A correct ratio (2)	M L1
1.3.1	Y ✓✓A	2A correct answer (2)	M L1
1.3.2	X ✓✓A	2A correct answer (2)	M L1
1.3.3	Z ✓✓A	2A correct answer (2)	M L1
		[28]	

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QUESTION 2 [29 MARKS]

Ques.	Solution	Explanation	Level
2.1.1	Strip map / Strip chart ✓✓A	2A correct answer (2)	MP L1
2.1.2	Plettenberg Bay ✓RT Knysna ✓RT	1RT first town 1RT second town **(Accept any order)** (2)	MP L1
2.1.3	N1 OR N12 ✓✓A	2A correct road (2)	MP L1
2.1.4	✓RT Distance = 701 – 394 ✓RT = 307 km ✓CA	2RT correct values 1CA total distance (3)	MP L2
2.1.5	Time $= \frac{\text{Distance}}{\text{Speed}}$ 1,5 $= \frac{133\text{ km}}{\text{Speed}}$ ✓SF ∴ Speed $= \frac{133\text{ km}}{1,5}$ ✓MA = 88,666…km/h ✓CA ≈ 88,7 km/h ✓R	1SF substitution 1MA changing subject of the formula 1CA speed 1R rounding (4)	MP L2
2.1.6	✓MA Arrival time = 12:47 + 1:30 ✓RT = 14:17 ✓CA	1MA adding time 1RT correct traveling time 1CA answer (3)	MP L2
2.1.7	Probability = $\frac{2}{3}$ ✓A ✓A = 0,67 ✓R	1A numerator 1A denominator 1R rounding (3)	P L2
2.1.8	It has no scale, thus cannot make accurate measurents from it. ✓✓O **OR** You cannot use it to navigate spontaneous side trips, exploring nearby towns, or visiting attractions off the main road. ✓✓O **OR** It prevents accurate traveling timing because steep areas appear flat. ✓✓O (**Accept any relevant answer**)	2O first reason 2O second reason (4)	MP L4

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2.2.1	Total return distance = (307 + 67) × 2 ✓ MA = 748 km **OR** Total return distance = (307 × 2) + (67 × 2) ✓ MA = 748 km	CA from 2.1.4 1MA adding correct distances 1MA multiply by 2 1MA return distance between Humansdorp and Mossel Bay 1MA return distance to Oudtshoorn (2)	MP L1
2.2.2	Fuel consumption = $\frac{45}{748}$ × 100 ✓ MA = 6,016042… ✓ CA ≈ 6 ℓ/ 100 km They are incorrect ✓ O **OR** 7,2 ℓ : 100 km ? 748 km $\frac{748\ ✓}{100}$ x $\frac{7,2\ ✓}{1}$ = 53, 856 ℓ ∴ No/ incorrect ✓	1MA divide correct values 1MA multiply by 100 1CA consumption 1O Opinion (4)	MP L4
		[29]	

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QUESTION 3 [28 MARKS]

Ques.	Solution	Explanation	Level
3.1.1	Width = $\frac{96,5}{100}$ ✓C = 0,965 m ✓CA	1C diving by 100 1CA answer in m NPR (2)	M L1
3.1.2	✓RT Weight = 23 kg – ($\frac{33}{100}$ × 23) ✓MA = 15,41 kg ✓CA **OR** ✓RT Weight = 23 kg × $\frac{67}{100}$ ✓MA = 15,41 kg ✓CA	1RT using 23 kg 1MA subtracting 33% 1CA maximum weight **OR** 1RT using 23 kg 1MA calculating 67% 1CA maximum weight (3)	M L2
3.1.3 (a)	Area = width × wall height = 0,965 m × 1,04 m ✓SF = 1,0036 m^2 × 2 ✓MA = 2,0072 m^2 ✓CA	**CA from 3.1.1** 1SF substitution 1MA multiply by 2 1CA answer (3)	M L2
3.1.3(b)	✓SF Surface area = (4,004 + 2,0072) – 0,4 ✓MA = 5,6112 m^2 × 2 ✓MCA = 11,2224 m^2 No. of liters = $\frac{11,2224}{3}$ × 2 ✓MCA = 7.4816 ℓ ✓CA No. of tins = $\frac{7,4816}{5}$ = 1,49632 tins ✓CA ≈ 2 tins ✓R **OR** Surface area = 11,2224 m^2 ✓SF ✓MA ✓MCA No. of litres = 3 m^2 : 2 ℓ = 11, 2224 m^2 : ? ✓MCA = $\frac{11,2224}{3}$ x 2 = 74816 ℓ ✓CA No. of tins = $\frac{7,4816}{5}$ = 1,49632 ≈ 2 tins ✓R	**CA from 3.1.3a** 1SF substitution 1MA subtracting 0,4 m 1MCA multiply by 2 1MCA using spread rate 1CA answer 1CA no of tins 1R rounding (7)	M L3
3.2.1	Capacity refers to the maximum amount of varnish the tin can hold. ✓✓A **OR** Capacity refers to the maximum amount of liquid a container can hold. ✓✓A	2A correct definition (2)	M L1

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3.2.2	Radius $= \frac{167}{2}$ ✓MA $= \frac{83,5\text{ mm}}{10}$ ✓C = 8,35 cm ✓CA	1MA diameter divide 2 1C convert to cm 1CA answer in cm (3)	M L2
3.2.3	Volume = 3,142 × radius^2 × height ✓C 5 000 = 3,142 × 8,35^2 × height ✓SF Height $= \frac{5\,000}{(3,142 \times 8,35^2)}$ ✓MA = 22,82395344 cm ✓CA ✓MCA ∴ Height of varnish in tin $= \frac{95}{100} \times 22,82395344$ cm = 21,68 cm ✓CA	**CA from 3.2.1** 1C converting 5ℓ to cm^3 1SF substitution 1MCA changing subject of formula 1CA height of tin 1MCA calculating 95% 1CA varnish height (6)	M L3
3.2.4	Room for Tinting and Mixing ✓✓O **OR** To allow expansion space when exposed to high temperatures during transport or storage. ✓✓O **OR** The gap prevents paint from welling up into the rim groove, which prevents a proper, airtight seal. ✓✓O **OR** It provides safety clearance so the user can open and carry the tin without spilling. ✓✓O **(Accept any relevnt answer)**	2O correct reason (2)	M L4
			[28]

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QUESTION 4 [33 MARKS]

Ques.	Solution	Explanation	Level
4.1.1	A floor plan shows the design and dimensions of the inside of a building, from a top view. ✓✓A A layout plan is a top-down drawing that shows how a large area or space is arranged. ✓✓A	2A first explanation 2A second explanation (4)	MP L1
4.1.2	6 doors ✓✓A	2A correct answer (2)	MP L2
4.1.3	$\frac{2}{3}$ ✓A ✓A	1A numerator 1A denominator (2)	MP L2
4.1.4	Length of house = 138 + 130 + 120 ✓MA = 388 inches ✓CA = 388 × 0,0254 ✓C = 9,8552 m ✓CA	1MA adding correct values 1CA answer 1C multiply with 0,0254 1CA length in m (4)	M L2
4.2.	a) ceramic (C) ✓A b) rectangle (R) ✓A c) marble, rectangle (MR) ✓A	1A correct answer 1A correct answer 1A correct answer (3)	P L2
4.3.1	Dimensions: Living room: 130 × 0,0254 = 3,302 m 100 × 0,0254 = 2,54 m ✓C Tile: $\frac{850}{1000}$ = 0,85 m ✓RT $\frac{650}{1000}$ = 0,65 m ✓C No of tiles: = $\frac{3,302}{0,85} \times \frac{2,54}{0,65}$ ✓SF ✓MCA = 3,885 × 3,908 ✓S = 4 × 4 ✓R = 16 tiles ✓CA ∴ The statement is INVALID ✓O	1C both dimensions in m 1RT correct tile dimensions 1C both dimensions in m 1SF substitution 1MCA multiplying correct values 1S multiply correct values 1R rounding up to 4 tiles 1CA no of tiles 1O opinion (9)	M L4

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4.3.2	No. of tiles = 16 + 50 ✓MA = 66 No. of boxes = $\frac{66}{4}$ ✓MCA = 16,5 ✓CA ≈ 17 boxes ✓R	**CA from 4.3.1** 1MA adding 1 tile 1MCA divide by 4 1CA no of boxes 1R rounding (4)	M L2
4.3.3	Time taken to tile the living room = $\frac{40}{10} \times 16$ tiles ✓MA = 64 minutes ✓CA = 1 h 04 min ✓C Finishing time = 09:20 + 1h 4 min + 1h 22 min ✓MCA = 11:46 ✓CA **OR** Time taken: 40 min : 10 tiles time : 16 tiles $\frac{16}{10} \times 40 = 64$ minutes ✓MA ✓CA $\frac{64}{60} = 1$ hr 04 min ✓C Finishing time = 09:20 + 1hr 4 min + 1h:22 min ✓MCA = 11:46 ✓CA	**CA from 4.3.1** 1MA multiply and divide correct values 1CA time in minutes 1C time in hours and min 1MCA adding time 1CA finishing time (5)	M L3
			[33]

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QUESTION 5 [32 MARKS]

Ques.	Solution	Explanation	Level
5.1.1	Numerical scale / Number scale / Ratio scale ✓✓A	2A correct answer (2)	MP L1
5.1.2	Actual distance = $\frac{56,86}{0,621371}$ ✓C = 91,50732815 km Map distance = $\frac{91,50732815}{4\ 575\ 000}$ ✓MA = 0,0000200016 km ✓CA = 2,00016…cm ≈ 2 cm ✓C **OR** Map : Real 1 : 45 77000 ? : 56,86 miles ∴ $\frac{56,86}{45\ 77\ 000}$ = 1,242298 x 10^{-5} 1 KM : 0,621371 ? KM : 1,242298 x 10^{-5} ∴ $\frac{1,242298\ x\ 10^{-5}}{0,621371}$ = 1,999286 x 10^{-5}✓ 1,999286 x 10^{-5} x 100 000 ✓ 1,999 cm ∴ 2 cm ✓	1C divide by 0,621371 1MA divide by scale 1CA map distance 1C convert to cm (4)	MP L3
5.1.3	Duration in minutes: 2 h 6 min = (2 × 60) + 6 = 126 minutes ✓MA Measured distance (Angers to Orleans) = 2 cm ✓A Measured distance (Orleans to Dijon) = 2,8 cm ✓A ∴2 cm = 126 minutes 2,8 cm = ?… minutes Duration in minutes = $\frac{2,8}{2}$ × 126✓MCA = 176,4 minutes ÷ 60 ✓C = 2,94 hours = 2 hours 56 minutes✓CA ∴ Incorrect ✓O **OR** 2h 6 min: 2 cm ✓A 2h 46; ….. Thus: 126 min: 2 cm ✓C ✓MCA 226 min: …. Map distance to Dijon = $\frac{228}{126}$ × 2 ✓MCA = 1,79 cm ✓CA Distance to Dijon: 2,8 cm ✓A ∴ Incorrect ✓O	1MA duration in minutes 1A distance between Angers and Orleans 1A distance between Orleans and Dijon 1MCA multiply correct fraction with 126 min 1C convert time 1CA time in hours and min 1O opinion **Accept 2,7–2,9cm** 1A Measurement to Orleans 1MCA set up ratio 1C Conversion to minutes 1MCA use of ratio 1CA Answer 1A distance to Dijon 1O opinion	MP L4

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	OR Measure A to O = 2 cm ✓A O to D = 2,8 cm ✓A ∴ 2h 6 min = 126 min ✓MA ∴ $\frac{2,8}{2}$ x 126 = 176, 4 min ✓MCA $\frac{176,4}{60}$ = 2,94 hrs ✓C ∴ 2h 56 min ✓C ∴ Incorrect ✓O	(7)	
5.1.4	New price = € 157× 1,10 ✓MA = € 172,70 ✓CA In Rand 172,70 × 18,20 = R3143,14 ✓C Thus not enough set aside ✓O	1MA increase by correct percentage 1CA answer 1C convert to Rand 1O opinion (4)	F L4
5.2.1	✓ MA B = 115,73 – 57,63 = 58,1 m = $\frac{58.1}{325} = \frac{581}{3250}$ ✓MCA = 0,179 ✓S	1MA subtracting correct values MCA correct fraction 1S simplification (3)	M L2
5.2.2	✓RT ✓MA Outer width = 74,24 × 1,59 = 118,0416 m ✓CA **OR** ✓RT Outer width = 74,24 + (74,24 × $\frac{59}{100}$) ✓MA = 118,0416 ✓CA	1RT 74,24 m 1MA multiply with 1,59 1CA answer **OR** 1RT 74,24 m 1MA adding 59% 1CA answer (3)	M L2
5.2.3	No. of months = (Mar 2026 – Mar 1889) + (April – September) ✓MA = 137 years + 6 months ✓MCA = (137 × 12) + 6 ✓MA = 1 650 months ✓CA ✓MA	1MA subtracting years 1MCA multiply years by 12 1MA adding 6 months 1CA no of months (4)	M L3

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5.2.4	Total mass of poles = 18 038 × 450 kg = 8 117 100 kg Total mass per metre = $\frac{8\ 117\ 100}{325}$ ✓ MCA ✓ RT = 24 975,69231 kg/m ✓CA ≈ 24,976 ton/m ✓C **OR** Total poles per metre = $\frac{18038}{325}$ ✓ MCA ✓ RT = 55,5015 pole/m Mass: 55,5015 × 450 kg ✓ MCA = 24 975,692kg ✓ CA ≈ 24,976 ton/m ✓ C ✓MA **OR** 18038 : 325 m 1 pole : ? m $\frac{1}{18038}$ x 325 = 0,01082 m ∴ 1 pole : 0,01082 450 kg : 0,01082 m 1 ∴$\frac{1}{0,01082}$ x 450 = 24,975, 69 ton/m	1MA multiply correct values 1RT correct height of 325 1MCA divide with height 1CA answer 1C conversion to ton **OR** 1RT correct height of 325 1MA divide with height 1MCA multiply correct values 1CA answer 1C conversion to ton (5)	M L3
			[32]
		TOTAL:	**150**

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