



education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 12

MATHEMATICAL LITERACY P2 JUNE 2025 MARKING GUIDELINES

MARKS: 100

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/a graph/document/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
NPR	No penalty for correct rounding
AO	Answer only

These marking guidelines consist of 9 pages.

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.
- NOTE: consistent accuracy (CA) does not apply in cases of a breakdown.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalize for every extra item presented.
- General principle of marking, if the candidate makes one mistake one mark is deducted.
- Rounding is an independent mark.
- In opinion type questions marks will only be awarded if relevant calculations are shown.

QUESTION 1 [20 MARKS] ANSWER ONLY FULL MARKS			
QUE	Solution	Explanation	T/L
1.1.1	Radius is the line drawn from the centre of a circle to a point on the circle.✓✓A OR Radius is the line joining the centre of a circle to a point on the circle.✓✓A OR Radius is half of a diameter.✓✓A	2A explanation (2)	M L1
1.1.2	Scale is the factor that relates the measurement on paper with the real measurement.✓✓A OR Scale is a ratio that gives the relationship between the measurement on paper and the real measurement.✓✓A	2A explanation (2)	MP L1
1.1.3	Probability is a chance/likelihood of an event to occur / happen.✓✓A	2A explanation (2)	P L1
1.2.1	B ✓✓A	2A answer (2)	M L1
1.2.2	D ✓✓A	2A answer (2)	M L1
1.2.3	F ✓✓A	2A answer (2)	M L1
1.2.4	G ✓✓A	2A answer (2)	M L1
1.3.1	Bar scale OR Linear scale OR Graphic scale.✓✓A	2A answer (2)	MP L1
1.3.2	5 ✓✓	2A answer (2)	MP L1
1.3.3	Pretoria✓A Johannesburg✓A OR Musina✓A Accept Weipe✓A	1A answer 1A answer (2)	MP L1
		[20]	

QUESTION 2 [28 MARKS]			
Ques	Solution	Explanation	T/L
2.1	Limpopo river✓✓A	2A answer (2)	MP L1
2.2	Probability = 0% ✓✓A	2A answer (2)	MP L2
2.3	NW✓✓A OR Northwest✓✓A	2A answer (2)	MP L2
2.4	Measured length = 1,8 cm ✓A 1,8 cm: 125 km✓MA 1,8 cm: 125 × 100 000 cm 1,8 cm: 12 500 000 cm✓C 1 : 6 944 444 ✓S ∴The claim is not valid.✓O OR Measured length = 18 mm ✓A 18 mm: 125 km✓MA 18 mm: 125 × 1 000 000 mm 18 mm: 125 000 000 mm✓C 1 : 6 944 444 ✓S ∴The claim is not valid. ✓O	1A measured distance 1MA correct ratio 1C conversion 1S simplification 1O opinion [Accept 1,7 cm to 1,9 cm OR 17 mm to 19 mm] (5)	MP L4
2.5.1	Time = $\frac{1\,852\text{ km}}{80\text{ km/h}}$ ✓SF = 23,15 hours✓S ✓A ✓A = 23 hours and 9 minutes	1SF substitution 1S simplification 1A hours 1A minutes (4)	MP L2
2.5.2	Total time for the trip = 23 hours 9 min + 48 min + 1 hour 30 min✓MCA = 25 hours 27 minutes✓CA Day of arrival is Saturday ✓CA= 24 hours Arrival time = 13:15 + 1:27✓MCA = 14: 42✓CA OR Total time for the trip 13:15 + 48 = 14:03✓MA 14:03 + 1:30 = 15:33✓MCA 15:33 + 23:09 = 38:42✓MCA Day of arrival = Saturday✓CA at 14:42✓CA	CA from Q2.5.1 1MCA adding correct values 1CA total 1CA day 1MCA addition 1CA arrival time OR 1MA adding time spent at border 1MCA adding time spent at Bulawayo 1MCA adding travelling time 1CA day 1CA arrival time (5)	MP L3
2.5.3	Stretch legs OR Bathroom break OR Refreshments OR Petrol OR Sight-seeing✓✓R	2R reason (2)	MP L4

2.6.1	Livingstone island✓✓A	2A answer (2)	MP L1
2.6.2	Turn right at the entrance then turn left ✓A At the crossroad turn right✓A Walk along the footpath, pass the right junction✓A Turn left ✓A Then you will be facing point ⑨ OR Turn right at the entrance ✓A Pass toilets then turn left. ✓A Walk along the footpath then turn right at the T-Junction✓A Turn left ✓A Then you will be facing point ⑨	1A turn right and left 1A turn right 1A pass right junction 1A turn left OR 1A turn right a 1A turn left 1A pass right 1A turn left (4)	MP L2
		[28]	

QUESTION 3 [28 MARKS]			
Ques	Solution	Explanation	T/L
3.1.1	Perimeter is the total length around the borders of the silo. ✓✓R	2A answer (2)	M L1
3.1.2	$3\,000\text{ mm} = 3\text{ m}$ ✓C Volume = $s^2 \times h$ $= (2,3\text{ m})^2 \times 3\text{ m}$ ✓SF $= 15,87\text{ m}^3$ ✓S $= 16\text{ m}^3$ ✓R	1C conversion 1SF substitution 1S simplification 1R rounding (4)	M L2
3.1.3	$\text{Area} = 4s \times \text{height} + s^2$ $= 4 \times 2,3\text{ m} \times 3\text{ m} + (2,3\text{ m})^2$ ✓SF $= 27,6\text{ m}^2 + 5,29$ ✓S $= 32,89\text{ m}^2$ ✓S Total area for 3 silo covers = $3 \times 32,89\text{ m}^2$ ✓MCA $= 98,67\text{ m}^2$ ✓CA	1SF substitution 1S simplification 1S simplification 1MCA multiplying by 3 1CA answer (5)	M L3
3.1.4	To avoid damage ✓✓R OR to protect them from getting moist ✓✓R OR to protect from rusting ✓✓R Accept any relevant reason	2R reason (2)	M L4
3.2.1	$3\,962,5808\text{ gallons} = 3\,962,5808 \times 3,7854\text{ litres}$ ✓C $= 14\,999,95336\text{ litres}$ ✓S $= 15\,000\text{ litres}$ ✓R $= 15\text{ m}^3$ ✓C OR $962,5808\text{ gallons} = 3\,962,5808 \times 3,7854\text{ litres}$ ✓C $= 14\,999,95336\text{ litres}$ ✓S $= 14,99995336\text{ m}^3$ ✓C $= 15\text{ m}^3$ ✓R	1C conversion to litres 1S simplification 1R rounding 1C conversion to m^3 OR 1C conversion to litres 1S simplification 1C conversion to m^3 1R rounding (4)	M L2
3.2.2	$\text{Radius} = 2,3\text{ m} \div 2 = 1,15\text{ m}$ ✓A $15\text{ m}^3 = 3,142 \times (1,15\text{ m})^2 \times h$ ✓SF $h = \frac{15\text{ m}^3}{3,142 \times (1,15\text{ m})^2}$ ✓MA $h = 3,609852008\text{ m}$ ✓S	CA from Q3.2.1 1A radius 1SF substitution 1MA changing subject 1S simplification NPR (4)	M L3

3.2.3	Total area to be painted = $3 \times 34,33 \text{ m}^2 \checkmark \text{MA}$ $= 102,99 \text{ m}^2 \checkmark \text{A}$ First coat paint = $\frac{102,99 \text{ m}^2}{9 \text{ m}^2/\text{litre}} \checkmark \text{MCA}$ $= 11,443333333 \text{ litres} \checkmark \text{CA}$ Subsequent coat paint = $\frac{102,99 \text{ m}^2}{12 \text{ m}^2/\text{litre}}$ $= 8,5825 \text{ litres} \checkmark \text{S}$ Total paint = $11,443333333 \text{ litres} + 8,5825 \text{ litres}$ $= 20,026 \text{ litres} \checkmark \text{CA OR } 21 \text{ litres} \checkmark \text{CA}$ $\therefore$ The claim is valid. $\checkmark \text{O}$ OR First coat paint = $\frac{34,33 \text{ m}^2}{9 \text{ m}^2/\text{litre}} \checkmark \text{MA}$ $= 3,814444444 \text{ litres} \checkmark \text{S}$ Subsequent coat paint = $\frac{34,33 \text{ m}^2}{12 \text{ m}^2/\text{litre}}$ $= 2,860833333 \text{ litres} \checkmark \text{S}$ 1 silo paint = $3,814444444 \text{ litres} + 2,860833333 \text{ litres}$ $= 6,675277777 \text{ litres} \checkmark \text{CA}$ Total paint = $3 \times 6,675277777 \text{ litres} \checkmark \text{MCA}$ $= 20,02583333 \text{ litres} \checkmark \text{CA}$ $\therefore$ The claim is valid. $\checkmark \text{O}$ OR First coat paint = $\frac{34,33 \text{ m}^2}{9 \text{ m}^2/\text{litre}} \checkmark \text{MA}$ $= 3,814444444 \text{ litres} \checkmark \text{S}$ Subsequent coat paint = $\frac{34,33 \text{ m}^2}{12 \text{ m}^2/\text{litre}}$ $= 2,860833333 \text{ litres} \checkmark \text{S}$ 1 silo paint = $3,814444444 \text{ litres} + 2,860833333 \text{ litres}$ $= 7 \text{ litres} \checkmark \text{CA}$ Total paint = $3 \times 7 \text{ litres} \checkmark \text{MCA}$ $= 21 \text{ litres} \checkmark \text{CA}$ $\therefore$ The claim is valid. $\checkmark \text{O}$	1MA multiplying by 3 1A total area 1MCA dividing 1CA simplification 1S simplification 1CA total paint 1O opinion OR 1MA dividing 1S simplification 1S simplification 1CA paint for 1 silo 1MCA multiplying by 3 1CA total paint 1O opinion OR 1MA dividing 1S simplification 1S simplification 1CA paint for 1 silo 1MCA multiplying by 3 1CA total paint 1O opinion	M L4 (7) [28]
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QUESTION 4 [24 MARKS]			
Ques	Solution	Explanation	T/L
4.1	Body Mass Index✓✓A	2A answer (2)	M L1
4.2	$4 + 3 + 2 = 9$ ✓A Supper calories = $\frac{2}{9} \times 2\,500$ ✓MCA $= 555,55$ ✓S $= 560$ ✓R OR $4 + 3 + 2 = 9$ ✓A Unit calory = $\frac{2\,500}{9}$ ✓CA $= 277,78$ Supper calories = $277,78 \times 2$ ✓MCA $= 555,555$ $= 560$ ✓R	1A adding values 1MCA multiplying $\frac{2}{9}$ 1S simplification 1R rounding OR 1A adding values 1CA unit calory 1MCA multiplying by 2 1R rounding (4)	M L3
4.3	$\checkmark$ RT Maximum daily calory intake = $2\,500 - 500$ ✓MA $= 2\,000$ calories✓CA	1RT correct male calories 1MA subtracting 500 1CA answer (3)	M L2
4.4	$170\text{ cm} = 1,7\text{ m}$ ✓C $BMI = \frac{\text{mass in kg}}{(\text{height in m})^2}$ $23,1\text{ kg/m}^2 = \frac{\text{mass}}{(1,7\text{ m})^2}$ ✓SF Mass = $23,1\text{ kg/m}^2 \times (1,7\text{ m})^2$ ✓MA $= 66,759\text{ kg}$ ✓A	1C conversion 1SF substitution 1MA changing subject 1A answer NPR (4)	M L3
4.5	$450^\circ = (1,8 \times ^\circ\text{C}) + 32^\circ$ ✓SF $^\circ\text{C} = (450^\circ - 32^\circ) \div 1,8$ ✓MA $^\circ\text{C} = 232,222^\circ$ $^\circ\text{C} = 230^\circ$ ✓AR $\therefore$ Mac converted correctly.✓O	1SF substitution 1MA changing subject 1AR rounded answer 1O opinion (4)	M L4
4.6.1	Street map✓✓A	2A answer (2)	MP L1
4.6.2	Francis Baard Street✓✓A	2A answer (2)	MP L2

4.6.3	Farenden Street; Arcadia Street ✓ A Beckett Street, Park Street ✓ A Farenden Street ✓ A	1A first two correct streets 1A second two correct streets 1A last correct street (3)	MP L2
		[24]	
		TOTAL:	100