education

Department of Education
FREE STATE PROVINCE

JUNE EXAMINATION

GRADE 12

MATHEMATICAL LITERACY P2

MARKING GUIDELINE

JUNE 2025

MARKS: 100

Symbol/*Simbool*	Explanation/*Verduideliking*
M	Method/*Metode*
M/A	Method with accuracy/*Metode van akkuraatheid*
CA	Consistent accuracy/*Volgehoue akkuraatheid*
A	Accuracy/*Akkuraatheid*
C	Conversion/*Herleiding*
S	Simplification/*Vereenvoudiging*
RT	Reading from a table/graph/diagram/*Lees vanaf tabel/grafiek/diagram*
SF	Correct substitution in a formula/*Korrekte vervanging in formule*
O	Opinion/Example/Definition/Explanation/*Opinie/Voorbeeld/Definisie/Verduideliking*
P	Penalty, e.g., for no units, incorrect rounding off, etc./*Penalisasie, bv. vir geen eenhede/verkeerde afronding ens.*
R	Rounding off/*afronding*
NPR	No penalty for rounding/*Geen penalisering vir afronding nie*
NPU	No penalty for the units/*Geen penalisering vir eenhede nie*
AO	Answer only, if correct, full marks/*Slegs antwoord, indien korrek, volpunte*
MCA	Method with consistent accuracy/*Metode met volgehoue akkuraatheid*

This marking guideline consists of 06 pages

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NOTE:

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If the 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 item presented.
- Rounding is an independent mark.
- General principal of marking: if the candidate makes one mistake, he/she loses one mark.
- A conclusion mark can only be given if relevant calculations precede it.

QUESTION 1[20 MARKS]		**ANSWER ONLY FULL MARKS**	
Item	**Solution**	**Explanation**	T/L
1.1.1	G ✓✓A	2A correct answer (2)	MP L1 E
1.1.2	I ✓✓A	2A correct answer (2)	M L1 E
1.1.3	A ✓✓A	2A correct answer (2)	M L1 E
1.1.4	H ✓✓A	2A correct answer (2)	MP L1 E
1.1.5	B ✓✓A	2A correct answer (2)	M L1 E
1.2.1	5 (five) ✓✓A	2A correct answer **(2)**	MP L1 E
1.2.2	13:00 OR 1 o'clock ✓✓A	2A correct answer **(2)**	MP L1 M
1.2.3	FALSE ✓✓A	2A correct answer **(2)**	MP L1 M
1.3.1	6 × 10 ✓A = 60 mm ✓A	1A multiply by 10 1A correct answer **(2)**	M L1 D
1.3.2	C ✓✓A	2A correct answer **(2)**	M L1 E

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QUESTION 2 [24 MARKS]			
2.1.1	Strip Map/ Chart ✓✓A	2A correct answer **(2)**	MP L1 E
2.1.2	✓RT Distance = 170 + 644 + 109 + 180 + 60 + 80 + 9 + 235 ✓MA = 1488 km✓CA	1RT correct values 1MA adding 1CA simplification (3)	MP L2 M
2.1.3	6 ✓✓A	2A correct answer (2)	MP L1 E
2.1.4	✓RT ✓RT Distance = 171 + 427 + 212 + 110 + 128 + 120 + 60 + 80 + 9 + 235✓MA = 1 552 km✓CA The statement is NOT VALID✓ O	2RT correct values 1MA adding 1CA simplification 1O (5)	MP L3 E
2.2.1	✓RT 3 : 6 ✓A 1 : 2 ✓A	1RT correct values 1A correct order 1A simplification (3)	MP L1 M
2.2.2	Hippo ✓✓A	2A correct answer (2)	MP L2 E
2.2.3	Measured distance = 72 mm Measure bar scale = 17mm✓A 17mm = 200m✓M 72mm = ? $= \frac{72 \times 200}{17}$✓M 847,0588235m✓CA ÷ 1000✓C $= 0{,}847km$✓CA Bar scale is not correct✓O	Use the measurement on the printed copy 1A measuring bar (±1 mm) 1M relating to bar scale 1M using the scale 1CA simplification 1C conversion 1CA answer 1O conclusion (7)	MP L4 D

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QUESTION 3 [32 MARKS]			
3.1.1	$\text{BMI} = \frac{\text{Weight (in kg}}{[\text{height (in m)}]^2}$ $\frac{72\,000}{1000} = 72\text{ kg}$✓C $\text{BMI} = \frac{72\text{ kg}}{(1{,}79\text{m})^{\ 2}}$ ✓SF $\text{BMI} = 22{,}47\text{kg/m}^2$✓CA	1C conversion 1SF substitution 1CA simplification **NPR** (3)	M L2 D
3.1.2	Normal ✓✓2A	2A correct answer (2)	M L2 E
3.1.3	To minimize the risk of getting sick.✓✓2O Any other relevant answer.	2O relevant opinion (2)	M L4 M
3.2.1	Radius $= 48 \div 2$ $= 24$ cm✓A Area $= 3{,}142 \times 24^2$✓SF $= 1809{,}792\ cm^2$✓CA	1A radius 1SF substitution 1CA simplification (3)	M L2 M
3.2.2	✓C $V = 3{,}142 \times 91^2 \times 225{,}5$✓SF $= 5\,867\,262{,}401 cm^3$✓CA $= \frac{5\,867\,262{,}401}{1000}$✓C $= 5867{,}262401 litres$ $\approx 6000 litres$✓R	1C conversion 1SF substitution 1CA simplification 1C conversion 1R rounding (5)	M L3 E
3.2.3	R = 910 mm = 0,91 m ✓C D = 48 cm r = 24 cm✓A = 0,24 m h = 225,5 cm = 2,255 m SA = $3{,}142((0{,}91)^2 - (0{,}24)^2 + 2 \times 0{,}91 \times 2{,}255$ ✓SF $= 3{,}142(0{,}8281 - 0{,}0576 + 2 \times 0{,}91 \times 2{,}255)$ $= 15{,}32\text{ m}^2$ ✓CA 1 litre = 8m^2 $\frac{15{,}32}{8}$✓MCA $= 1{,}915$ litres . ≈ 2 litres✓R Cost for 5litre = 1(5litre) × R525 = R525 ✓MCA Cost for 1litre = R129 × 2 = R258 Total cost = R525 + R258 = R783✓CA	1C conversion 1A radius 1SF substitution 1CA simplification 1MCA dividing by 8 1R rounding 1MCA cost 1CA simplification (8)	M L3 D

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3.3.1	2 cups $= 120 \times 2$✓MA $= 240\ g$✓A	1MA multiplying by 2 1A simplification (2)	M L2 E
3.3.2	$356°F = (°C \times \frac{9}{5}) + 32$ ✓SF $324 = (°C \times \frac{9}{5})$ ✓S $°C = 180$✓CA	1SF correct substitution 1S simplification 1CA correct answer (3)	M L2 E
3.3.3	Time= 8:43 - 0: 30✓MA = 8: 13✓A	1MA adding 1A simplification (2)	M L2 E
3.3.4	0%✓✓A	2A correct answer (2)	P L1 E
QUESTION 4 [24 MARKS]			
4.1.1	C3✓✓A	2A correct direction (2)	MP L1 E
4.1.2	SE ✓✓A	2A correct answer (2)	MP L1 E
4.1.3 (a)	Certain✓✓A	2A correct choice (2)	P L1 E
4.1.3 (b)	Number Scale✓A One unit/cm/mm on the map equals 20 000 units/cm/mm in reality✓A	1A correct name of the scale 1A correct explanation (2)	MP L1 E
4.1.4	average speed $= \frac{\text{distance}}{\text{time}}$ $\frac{40\text{km}}{\text{h}} = \frac{2,9}{\text{time}}$✓SF $\text{time} = \frac{2.9}{40\text{km/h}}$✓M $= 0,0725\text{hours}$✓CA $= 0,0725 \times 60\text{minutes}$✓C $= 4,35$ minutes Arrival $= 9:15 + 4,35\text{minutes}$ $= 9\text{h}19,35\text{minutes}$✓CA The estimated time of arrival is correct✓O	1SF substitution 1M subject of the formula 1CA simplification 1C converting to minutes 1CA time of arrival 1O conclusion (6)	M L4 D
4.1.5 (a)	Circumference of the ball = 2 × π × radius $28 = 2 \times 3,142 \times \text{radius}$ ✓SF $\text{Radius} = \frac{28}{2 \times 3,142}$ ✓S $= 4,46$ inches ✓CA	1SF correct substitution 1S changing the subject 1CA answer (3)	M L2 D

4.1.5 (b)	1 ounce = 28,35 grams ? ounces = 450 grams 1 ball = 15,87 ounces✓MA 5 balls = 15,87 × 5✓MA = 79,37 ounces✓CA The bag will be able to carry 5 balls OR Weight of the bag = 79,37 ounces To g = 79,37 × 28,35 = 2250,14 grams✓MA 5 balls = 450 × 5✓MA = 2250 grams✓CA The bag will be able to carry 5 balls	1MA conversion to ounces 1MA multiplying by 5 1CA answer 1MA conversion to grams 1MA multiplying by 5 1CA answer (3)	M L2 D
4.2.1	Top View/Aerial View✓✓A	2A correct view (2)	MP L1 E
4.2.2	45 seats ✓✓A	2A correct number of seats ACCET: 46 (2)	MP L1 E

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