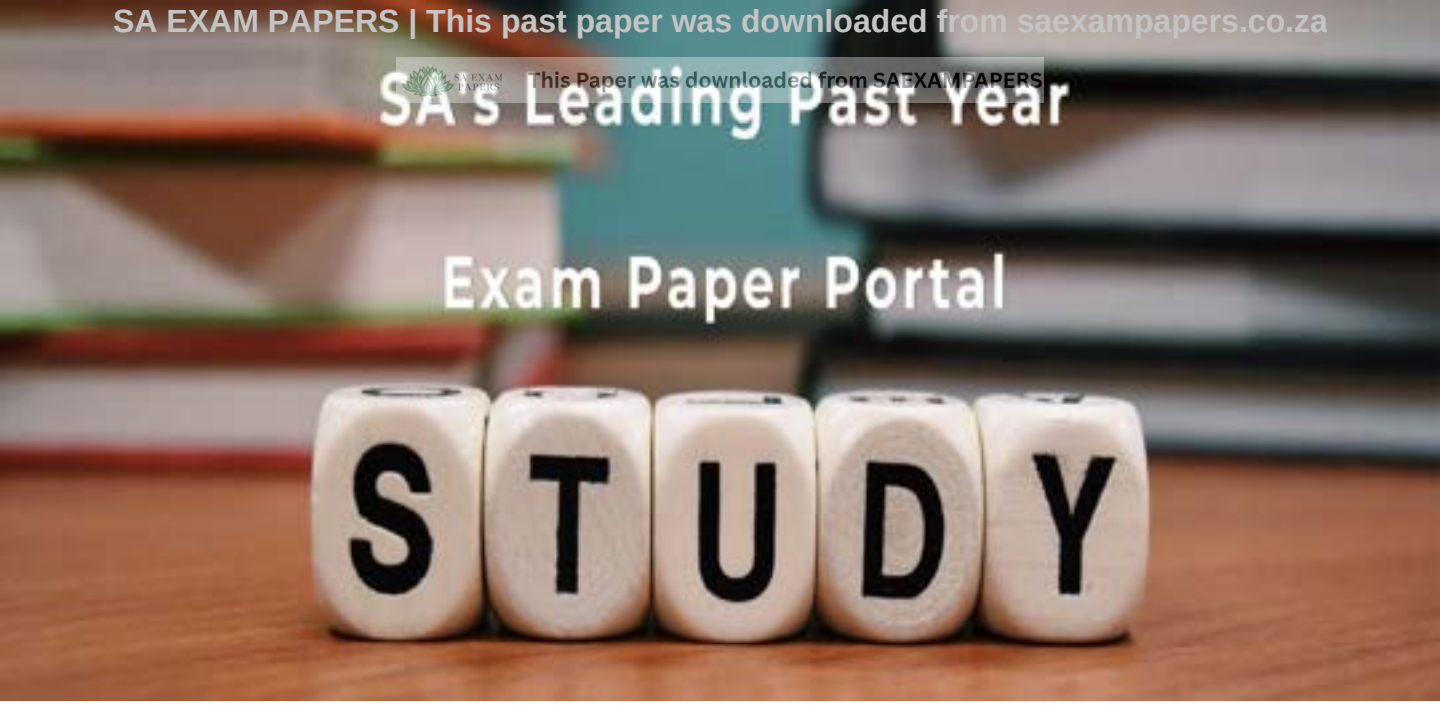

education

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 = $\frac{1\,852\ km}{80\ km/h}$✓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 mm = 3 m✓C Volume = $s^2 \times h$ = $(2,3\ m)^2 \times 3\ m$✓SF = $15,87\ m^3$ ✓S = $16\ m^3$ ✓R	1C conversion 1SF substitution 1S simplification 1R rounding (4)	M L2
3.1.3	Area = 4s × height + $\mathbf{s^2}$ = $4 \times 2,3\ m \times 3\ m + (2,3\ m)^2$ ✓SF = $27,6\ m^2 + 5,29$✓S = $32,89\ m^2$✓S Total area for 3 silo covers = $3 \times 32,89\ m^2$ ✓MCA = $98,67\ m^2$ ✓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 gallons = 3 962,5808 × 3,7854 litres✓C = 14 999,95336 litres✓S = 15 000 litres✓R = $15\ m^3$ ✓C **OR** 962,5808 gallons = 3 962,5808 × 3,7854 litres✓C = 14 999,95336 litres✓S = $14,99995336\ m^3$ ✓C = $15\ m^3$ ✓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	Radius = 2,3 m ÷ 2 = 1,15 m✓A $15\ m^3 = 3,142 \times (1,15\ m)^2 \times h$✓SF h = $\frac{15\ m^3}{3,142 \times (1,15\ m)^2}$✓MA h = 3,609852008 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 × 34,33 m^2 ✓MA = 102,99 m^2 ✓A First coat paint = $\frac{102{,}99\ m^2}{9\ m^2/litre}$✓MCA = 11,443333333 litres✓CA Subsequent coat paint = $\frac{102{,}99\ m^2}{12m^2/litre}$ = 8,5825 litres✓S Total paint = 11,4433333333 litres + 8,5825 litres = 20,026 litres✓CA **OR** 21 litres✓CA ∴ The claim is valid.✓O **OR** First coat paint = $\frac{34{,}33\ m^2}{9m^2/litre}$✓MA = 3,814444444 litres✓S Subsequent coat paint = $\frac{34{,}33\ m^2}{12m^2/litre}$ = 2,860833333 litres✓S 1 silo paint = 3,814444444 litres + 2,860833333 litres = 6,675277777 litres✓CA Total paint = 3 × 6,675277777 litres ✓MCA = 20,02583333 litres ✓CA ∴ The claim is valid.✓O **OR** First coat paint = $\frac{34{,}33\ m^2}{9m^2/litre}$✓MA = 3,814444444 litres✓S Subsequent coat paint = $\frac{34{,}33\ m^2}{12m^2/litre}$ = 2,860833333 litres✓S 1 silo paint = 3,814444444 litres + 2,860833333 litres = 7 litres✓CA Total paint = 3 × 7 litres ✓MCA = 21 litres ✓CA ∴ The claim is valid.✓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 (7)	M L4
		[28]	

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 = $\frac{2}{9}$ × 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 × 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	✓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 cm = 1,7 m✓C BMI = $\frac{\text{mass in kg}}{(\text{height in m})^2}$ 23,1 kg/m^2 = $\frac{mass}{(1{,}7\ m)^2}$✓SF Mass = 23,1 kg/m^2 × (1,7 m)^2 ✓MA = 66,759 kg✓A	1C conversion 1SF substitution 1MA changing subject 1A answer **NPR** (4)	M L3
4.5	450° = (1,8 × ℃) + 32°✓SF ℃ = (450° - 32°) ÷ 1,8✓MA ℃ = 232,222° ℃ = 230°✓AR ∴ 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**