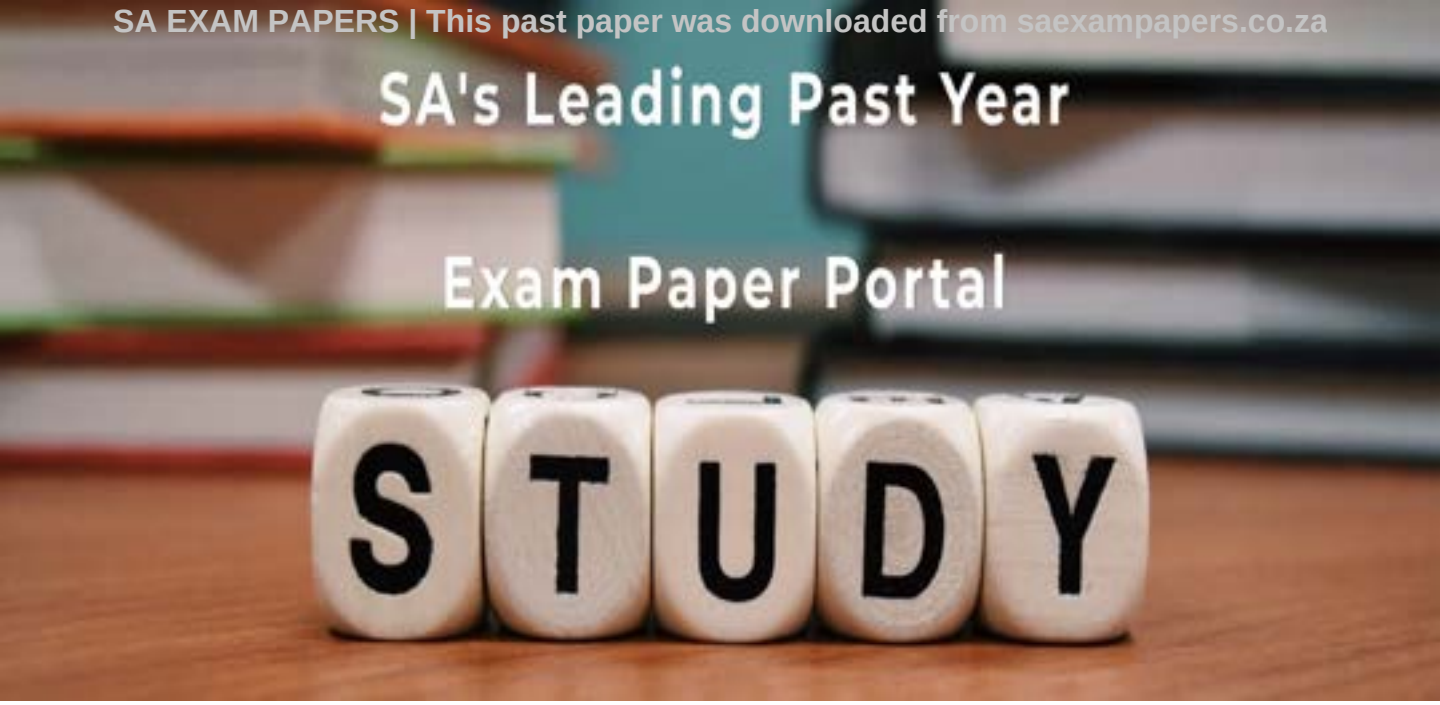

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GRADE 12

JUNE 2025

MATHEMATICAL LITERACY P2 MARKING GUIDELINE

MARKS: 100

Symbol	Explanation
M	Method
MA	Method with accuracy
CA	Consistent accuracy
RCA	Rounding consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
SF	Correct substitution in a formula
J	Justification
O	Opinion/Example/Definition/Explanation/Justification/Verification
RT/RG/RM	Reading from a table/graph/map
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding off or reason
NPR	No penalty rounding or omitting units
AO	Answer only, full marks

This marking guideline consists of 9 pages.

MARKING GUIDELINES

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 penalise for every extra incorrect item presented.

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

QUESTION 1 [20 MARKS] **ANSWER ONLY FULL MARKS**

Ques.	Solution	Explanation	Level
1.1.1	D7 ✓✓A **(Accept 7D)**	2A correct grid reference (2)	MP L1
1.1.2	Bar scale **OR** Linear scale **OR** Graphic scale ✓✓A	2A correct scale (2)	MP L1
1.1.3	4 : 3 ✓A 1 : 0,75 ✓A	1A correct ratio 1A unit ratio format (2)	MP L1
1.2.1	3 flowers ✓✓A	2A number of flowers (2)	M L1
1.2.2	Radius = $\frac{36\text{ cm}}{2}$ ✓M = 18 cm ✓A	1M divide by 2 1A radius (2)	M L1
1.2.3	Diameter ✓✓A	2A correct answer (2)	M L1
1.2.4	C **OR** Cylinder ✓✓A	2A correct shape (2)	M L1
1.2.5	Area is the amount of space occupied by a two-dimensional object. ✓✓A **OR** Area is the space that is covered by an object. ✓✓A	2A definition (2)	M L1
1.2.6	Perimeter = 3,142 × diameter = 3,142 × 25 ✓SF = 78,55 cm ✓A	1SF substitution 1A perimeter (2)	M L1
1.2.7	Height = $\frac{105}{10}$ ✓C = 10,5 cm ✓A	1C divide by 10 1A height in cm (2)	M L1
		[20]	

QUESTION 2 [26 MARKS]			
Ques.	**Solution**	**Explanation**	**Level**
2.1.1	A strip chart is easy to read and to understand. ✓✓A **OR** A strip chart is less cluttered than other maps. ✓✓A **(Accept any relevant answer)**	2A explanation (2)	MP L4
2.1.2	✓RT Distance = 490 km – 459 km ✓M = 31 km ✓CA	1RT total distance 1M subtraction 1CA answer (3)	MP L2
2.1.3	No. of litres of petrol in tank = $\frac{42}{2}$ = 21 litres ✓A Distance = $\frac{21}{5,6} \times 100$ ✓M = 375 km ✓CA	1A half a tank of petrol 1M dividing by 5,6 and multiply by 100 1CA total distance (3)	MP L3
2.1.4 (a)	191 km ✓✓RT	2RT correct distance (2)	MP L1
(b)	No. of litres of petrol used = $\frac{191}{100} \times 5,6$ ✓M = 10,696 litres ✓A No. of litres of petrol left in tank = 21 litres – 10,696 litres ✓M = 10,304 litres ✓CA **OR** Remaining distance = 375 km – 191 km ✓M = 184 km ✓A No. of litres of petrol used = $\frac{184}{100} \times 5,6$ ✓M = 10,304 litres ✓CA	**CA from 2.1.4 (a)** 1M dividing by 100 and multiply by 5,6 1A litres of petrol used 1M subtraction from 21*l* 1CA litres of petrol in tank **OR** 1M subtracting distances 1A remaining distance 1M dividing by 100 and multiply by 5,6 1CA litres of petrol used **NPR** (4)	MP L3
(c)	No. of litres of petrol bought = 42 litres – 10,304 litres ✓M = 31,696 litres ✓A **(Accept 31,7 litres OR 32 litres)**	**CA from 2.1.4 (b)** 1M subtraction 1A litres of petrol bought **NPR** (2)	MP L1

2.1.4 (d)	Petrol cost = 31,696 litres × \$1,12 ✓M = \$35,49952 ✓CA ≈ \$35 ✓R	**CA from 2.1.4 (c)** 1M multiply with cost 1CA cost of petrol 1R rounding to nearest dollar (3)	F L2
2.1.5	Time $= \frac{\text{Distance}}{\text{Speed}}$ ✓C 3,25 h $= \frac{299\text{ km}}{\text{speed}}$ ✓SF Speed $= \frac{299\text{ km}}{3{,}25\text{ h}}$ ✓M = 92 km/h ✓CA	1C converting time 1SF substitution 1M changing subject of formula 1CA simplification (4)	MP L3
2.1.6	Probability = $\frac{2}{3}$ ✓A ✓A × 100 = 66,666…% ≈ 66,67% ✓CA **(Accept 66,7% OR 67%)**	1A numerator 1A denominator 1CA answer as a % **NPR** (3)	P L2
		[26]	

QUESTION 3 [30 MARKS]			
Ques.	**Solution**	**Explanation**	**Level**
3.1.1	Radius = $\frac{0,6\text{ m}}{2}$ ✓M = 0,3 m Area of circle = 3,142 × radius^2 = 3,142 × 0,3^2 ✓SF = 0,28278 ≈ 0,28 m^2 ✓CA **(Accept 0,283 m^2)**	1M finding radius 1SF substitution 1CA area of circle **NPR** (3)	M L2
3.1.2	Area of garden = length × width = 15 m × 5 m✓SF = 75 m^2 ✓A Area of pond = side × side = 1,8 m × 1,8 m = 3,24 m^2✓A Area of circular stone tiles = 0,28 m^2 × 5 = 1,4 m^2✓A ∴ Area of grass needed = 75 m^2 – 3,24 m^2 – 1,4 m^2 = 70,36 m^2 ✓MA	1SF substitution 1A area of garden 1A area of pond **MCA from 3.1.1** 1A area of circular stone tiles 1MA subtraction and answer **NPR** (5)	M L3
3.1.3	✓R Cost of grass = 71 m^2 × R45,50 ✓M = R3 230,50 ✓CA ∴ Invalid/incorrect ✓O	1R number of whole m^2 1M multiply with R45,40 1CA total cost 1O opinion (4)	F L4
3.2.1	Depth of pond = $\frac{60\text{ cm}}{100}$ ✓C = 0,6 m Volume = side × side × depth = 1,8 m × 1,8 m × 0,6 m ✓SF = 1,944 m^3 ≈ 1,94 m^3 ✓CA	1C converting depth to m 1SF substitution 1CA volume of pond (3)	M L2

3.2.2	Capacity = 1,94 m^3 × 1 000 ✓C = 1 940 litres ∴ Water required in pond = 1 940 × 95% ✓M = 1 843 litres ✓CA ∴ Invalid/incorrect ✓O	**CA from 3.2.1** 1C conversion 1M multiply no. of litres by 95% 1CA no. of litres 1O opinion (4)	M L4
3.2.3	Maximum no. of goldfish = $\frac{1\,843}{240}$ × 2✓M ✓M = 15,358 … ≈ 15 goldfish ✓A	**CA from 3.2.2** 1M divide by 240 1M multiply by 2 1A number of goldfish (3)	M L2
3.2.4	Surface area of pond = (length × width) + 4 (length × depth) = (1,8 m × 1,8 m) + 4 (1,8 m × 0,6 m) ✓SF = 7,56 m^2 Surface area for 2 coats of paint = 7,56 m^2 × 2 ✓M = 15,12 m^2 ✓A No. of litres of paint = $\frac{15,12}{3}$ ✓M = 5,04 ≈ 6 litres ✓CA **OR** Surface area of pond = (length × width) + 4 (length × depth) = (1,8 m × 1,8 m) + 4 (1,8 m × 0,6 m) ✓SF = 7,56 m^2 No. of litres of paint = $\frac{7,56}{3}$ ✓M = 2,52 litres (one coat) ✓A ∴ No of litres of paint for 2 coats = 2,52 litres × 2 ✓M = 5,04 = 6 litres ✓CA	**CA from 3.2.1** 1SF substitution 1M multiply by 2 1A area to be painted 1M divide by spread rate 1CA no. of litres of paint **OR** 1SF substitution 1M divide by spread rate 1A no. of litres one coat 1M multiply by 2 1CA no. of litres of paint (5)	M L3
3.2.5	Water in litres = 2 hours × 60 ✓C = 120 minutes ∴ 120 minutes × 7 litres ✓M = 840 litres ✓CA	1C converting hours to minutes 1M multiply with 7ℓ 1CA no. of litres of water (3)	M L2
		[30]	

QUESTION 4 [24 MARKS]

Ques.	Solution	Explanation	Level
4.1.1	OR Tambo International Airport ✓A Dubai International Airport ✓A	1A first airport 1A second airport **(Accept any order)** (2)	M L1
4.1.2	7:35 pm ✓✓A	2A correct time (2)	M L1
4.1.3	Time in Johannesburg = 19 : 35 08 : 10 ✓M = 27 : 45 (the next day) ∴ 03 : 45 ✓A **OR** Time in Johannesburg = 05 : 45 - 02 : 00 ✓M = 03: 45 ✓A	1M adding flight duration to departure time 1A time in Johannesburg **OR** 1M subtraction 1A time in Johannesburg (2)	M L1
4.1.4	OR Tambo International Airport – Dubai International Airport: $= \frac{3\,994{,}13}{0{,}621371}$ ✓M = 6 431,771337 km ✓A Dubai International Airport – London Heathrow Airport: = 5 505 km Total Distance = 6 427,93114 km + 5 505 km ✓M = 11 932,9311 km ✓CA ∴ Kevin is correct ✓O	1M dividing by 0,621 1A distance in km 1M adding distances 1CA total travel distance 1O opinion (5)	M L4
4.1.5	Volume of a rectangular prism = length × width × height Height of hand luggage = $\frac{490}{10}$ ✓C = 49 cm ∴ Volume of hand luggage = 55 cm × 27 cm × 49 cm ✓SF = 72 765 cm^3 ✓CA	1C converting height 1SF substitution 1CA volume of hand luggage (3)	M L2
4.1.6	Probability = 0 **OR** None ✓✓A	2A probability (2)	P L2

4.2.1	No of e-toll gates = 15 ✓✓A	2A correct no. of e-toll gates (2)	MP L2
4.2.2	138 mm ✓✓A	2A distance in mm (2)	MP L2
4.2.3	No. of e-toll gates = 15 No. of tourist attractions = 15 ✓A Difference = 15 – 15 ✓M = 0 ✓CA ∴ Kevin's claim is valid/correct. ✓O	**CA from 4.2.1** 1A no. of tourist attractions 1M subtraction 1CA difference 1O opinion (4)	MP L4
		[24]	
		TOTAL: 100	