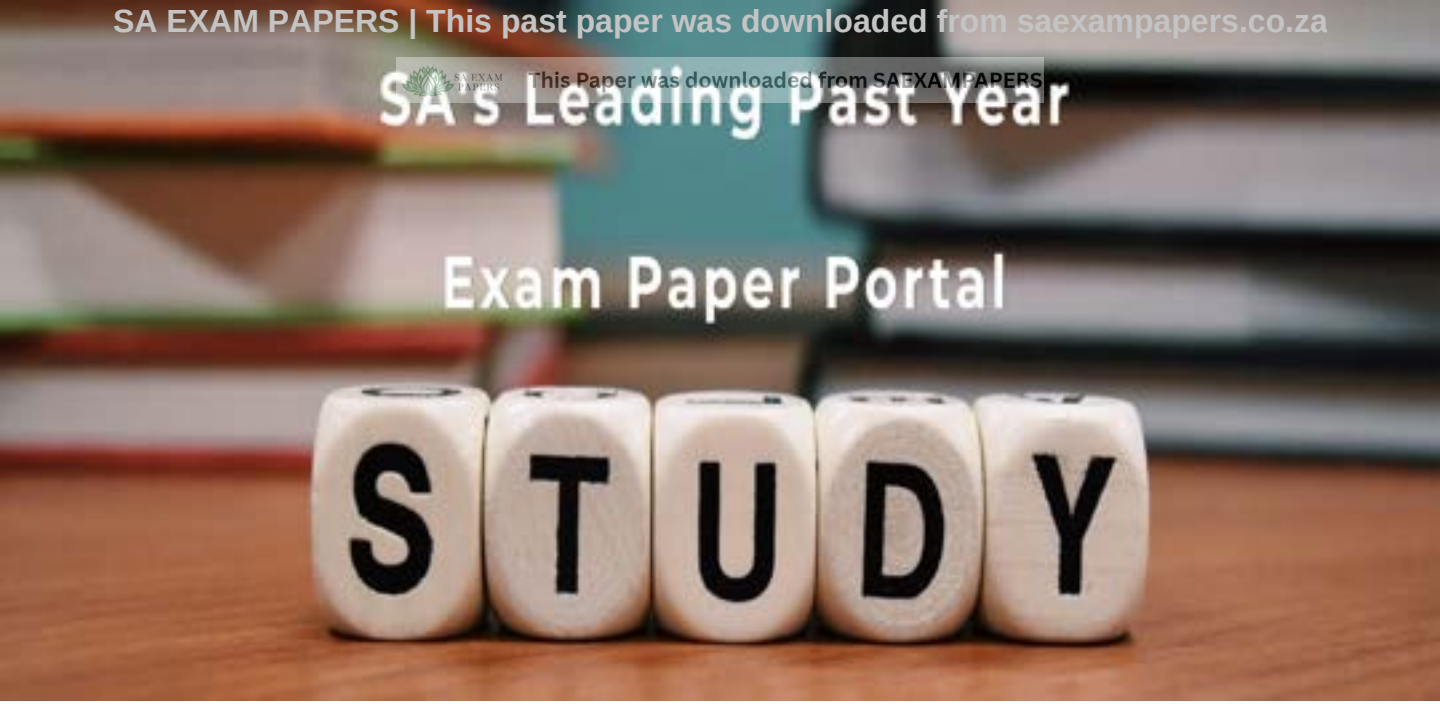

GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

PREPARATORY EXAMINATION

2025

MARKING GUIDELINES

MATHEMATICAL LITERACY (PAPER 2) (10602)

10 pages

CODES	EXPLANATION
MA	Method with accuracy/Metode met akkuraatheid
MCA	Method with consistent accuracy/Metode met konsekwente akkuraatheid
CA	Consistent accuracy/Konsekwente akkuraatheid
A	Accuracy/Akkuraatheid
C	Conversion/Herleiding
S	Simplification/Vereenvoudiging
RT	Reading from a table/graph/document/diagram/Vereenvoudiging/Lees van 'n tabel/grafiek/diagram af
SF	Correct Substitution in a formula/Vervang 'n waarde in die formule
O	Opinion/Explanation/Opinie/Verduideliking
P	Penalty e.g. for no unit, incorrect rounding off, etc./Penaliseer bv. vir geen eenheid, verkeerde afronding ens.
NPR	No penalty for correct rounding off/Geen penalisering vir afronding
NPU	No penalty for omitting unit, but wrong unit is penalized/Geen penalisering vir eenhede uitgelaat, maar verkeerde eenheid is penaliseerbaar
AO	Answer Only/Slegs antwoord

KEY TO TOPIC SYMBOLS:

M = Measurement; MP = Maps, Plans and other representations; P = Probability

QUESTION 1	Answer Only: Full Marks			
	Explanation	**Awarding of marks**	**Marks**	**T&L**
1.1.1	Seating plan ✓✓A **OR** Layout plan ✓✓	2 A identifying the type of plan **Accept Floor plan**	2	MP L1 E
1.1.2	✓RT ✓RT 7 January at 17:00	1RT correct date 1RT correct time P if only month is given without the date	2	MP L1 E
1.1.3	✓A No, Seat not available ✓A	1A No 1 A identifying that the seat is already booked	2	MP L1 E
1.1.4	C ✓✓A	2A identifying the correct fraction	2	P L1 E
1.1.5	62 ✓✓A	2A determining the correct number of seats available	2	MP L1 E
1.2.1	13:24 – 7:24 ✓MA 6 hours ✓A	1MA subtracting the correct values 1 A answer	2	M L1 E
1.2.2	SA 281 ✓✓A	2A identifying the flight number Accept 281	2	MP L1 E
1.2.3	12 hour format ✓✓A	2A correct time format	2	M L1 E
1.2.4	14:00 + 11h15 ✓MA = 1:15 ✓A	1MA adding 11h15 1A time in 24 hour format **Accept 01:15**	2	M L1 D
1.2.5	A ✓✓A	2A answer	2	M L1 M
1.3.1	¼ × 250 mℓ ✓MA = 62,5 mℓ ✓A **OR** $\frac{250}{4}$ = 62,5 mℓ	1MA multiplying the amount needed with 250 1A answer	2	M L1 E
1.3.2	C ✓✓A	2A answer	2	M L1 E

1.3.3	Step 1 = C ✓A Step 2 = D ✓A Step 3 = B ✓A	3A identifying the correct pictures	3	M L1 E
1.4.1	Chance of choosing a spesific cookie from the differcnt type of cookies given.✓✓a *(Accept any logical/sensible answer/definition)*	2A answer/defintion	2	P L1 E
1.4.2	20% ✓✓A	2A correct answer (as a percentage) **Accept B**	2	P L1 E
			[31]	
QUESTION 2				
2.1.1	Ruler ✓✓A	2A identifying a ruler as an instrument for measuring on a map in mm or cm **Accept tape measure.**	2	MP L1 E
2.1.2	4 Bedrooms ✓✓A	2A identifying the correct number of bedrooms	2	MP L1 E
2.1.3	2:5 ✓✓A	2A writing in correct ratio	2	MP L2 M
2.1.4	West ✓✓A **OR** Westerly ✓✓A	2A identifying the general direction	2	MP L2 E
2.1.5	10 mm:3 m ✓A 10 mm:3 000 mm ✓C 1:300	1A writing the correct ratio 1C conversion	2	MP L2 E
2.1.6	10 cm x 300 ✓MCA 3000 cm ✓CA $= \frac{3000\ cm}{100}$ ✓C = 30 m ✓CA	**CA from 2.1.5** 1MCA multiplying with scale 1 CA answer in cm 1C conversion 1CA answer in m	4	MP L2 E
2.1.7	B ✓✓A **OR** 4 bedrooms✓✓A	2A identifying that it is the boundary of the bedrooms	2	MP L2 E

2.1.8	12,6×8,4 ✓MA 105,84 m^2 ✓A $60/_{105,84}^{\checkmark M} \times 100$ ✓MA 56,689% 55% ✓R	1MA multiplying to determine the area 1A area 1M dividing the area of the appartment with the area of land calculated 1MA multiplying with 100 concept of percentage 1R percentage rounded to the nearest 5 %	5	M L2 M
2.2.1	Route map ✓✓A **OR** Street map ✓✓A	2A identifying it is a route map **Accept large scale map**	2	MP L1 E
2.2.2	Lake ✓A Reservoir ✓A	2 A identifying the water bodies on the map **(Accept):** **Pond** **Hudson river** **Harlem Lake**	2	MP L1 E
2.2.3	W110th street ✓✓A	2A identifying the street name **Accept 110 street**	2	MP L2 E

2.2.4	6 miles × 1,609km ✓C = 9,654 km ✓A T= D/S $\frac{9{,}654km}{\frac{13km}{h}}$ ✓SF = 0,743hours ✓CA 0,743 × 60 ✓C = 44,57 min = 45 min ✓R **(Accept 44 min)** **OR** 6 miles × 1,609km ✓C = 9,654 km ✓A T= D/S $\frac{9{,}654km}{\frac{13km}{h}}$ ✓SF 0,74✓CA x 60✓C = 44,4 min = 44 min✓R **(Accept 45 min)**	1C converting miles to km. 1A answer in km 1SF substituting into formula 1 CA answer in hours 1C converting hours to min 1R rounding answer to nearest min	6	M L3 D
			[33]	

QUESTION 3				
3.1.1	Diameter is the length from one side of the medal to the other side of the medal passing through the centre of the medal. ✓✓A ***(Accept any relevant/sensible answer/definition)***	2A defining diameter in context	2	M L1 E
3.1.2	$C = \pi \times d$ 3,142 × 8,5cm ✓SF = 26,707 cm✓A Difference 26,707 – 17,281 ✓M = 9,426 cm ✓CA	1SF substitution into the formula 1A circumference 1 M subtracting the 2 circumferences calculated 1CA answer in cm	4	M L2 E
3.1.3	Area of the of the 1924 medal. A = 3,142 × $(2{,}75)^2$ ✓A = 23,761475 ✓A = 24 cm^2 ✓R Area of the 1900 medal. A = l × b = 5,9 cm × 4,1 cm ✓MA = 24,19 = 24 cm^2 ✓R	1A for correct radius 1A for area of the 1924 medal 1R rounded to the nearest whole number 1MA calculating the area of the 1900 medal 1R answer rounded to nearest whole number	5	M L2 D

3.1.4	529 g – 18 g ✓MA = 511 g – 6 g gold ✓MA 505 g silver ✓CA $\frac{505}{529} \times 100$ ✓MCA = 95,46% = 95,5% Yes, the organisers are correct. ✓J	1MA subtracting 18 g of Eiffel tower 1MA subtracting the 6 g of gold 1CA grams of silver 1MCA calculating percentage 1 J verifying that it is correct **NPR**	5	M L4 E
3.1.5	**Cost and Affordability:** Solid gold medals would be extremely expensive to produce, given the high cost of gold. Using gold-plating significantly reduces costs while maintaining prestige.✓✓O **Weight and Practicality:** A solid gold medal would be much heavier, making it impractical for athletes to wear and carry. Gold-plated medals are more manageable in weight whilst still appearing valuable.✓✓O *(Accept any reasonable answer related to the question)*	2O for first reason 2O for second reason	4	M L4 E
3.2.1	25 years ✓ 6 months ✓A	1A years 1A months	2	M L2 E
3.2.2	= 529 g – 18 g – 6 g✓MA = 505 g of silver ✓CA = 505 g × 4 ✓M = $\frac{2\ 020\ g}{1\ 000}$ ✓CA ✓C 2,02 kg	**CA from Q 3.1.4** 1MA deducting 18g and 6g 1 CA answer of silver 1M multiplying with 4 1 CA answer 1 C converting to kg	5	M L3
			[27]	

QUESTION 4				
4.1.1	A ✓✓A **OR** Show the New York City Marathon's height above sea level ✓✓A	2A answer	2	MP L1
4.1.2	50 m ✓✓A	2A answer	2	MP L1
4.1.3	$\frac{6}{0,622}$ ✓MA = 9,64630225 km ✓A = 9,6 km ✓R 10 km – 9,6 km = 0,4 km = 0,4 km × 1 000 ✓C = 400 m ✓CA	1MA dividing 1A answer 1R rounding to one decimal place 1C conversion multiplying with 1 000 1CA for answer in m. **NPR**	5	MP L3
4.2	26,2 miles = 42,2 km Adam 15 miles John 20 km Time 2,25 hours ADAM: ✓RT Speed= $\frac{15miles}{2,25hours}$ ✓MA 6,7 miles per hour $\frac{26,2}{6,7}$ ✓CA = 3,91 hours 3 hours 55 min ✓CA JOHN: ✓RT $Speed = \frac{20km}{2,25}$ ✓M 8,9 km/hour 42,2/8,9 ✓MCA 4,74 hours 4 hours 44 min ✓CA Adam will be the winner as his time is shorter. ✓J	 1RT identifying miles 1MA dividing hours 1CA miles divided by miles per hour 1CA hours and min/hours Accept 54 1RT identifying km 1M dividing by hours 1MCA km divided by km per hour 1CA hours and min/hours 1 J stating Adam will be the winner	9	M L4 D
4.3.1	$°C = (°F - 32) \times \frac{5}{9}$ $= (98,6 - 32) \times \frac{5}{9}$ ✓SF = 37°C ✓A	1SF substituting in given formula 1 A answer	2	M L2

4.3.2	$23,6 = \frac{Weight}{(1,7\ m)^2}$ ✓SF 23,6 = weight ÷ 2,89 ✓S Weight = 23,6 × 2,89 ✓MCA = 68,204 = 68,2 kg ✓CA	1SF substitute in formula 1S simplifying the length 1MCA multiplication of BMI with length 1CA answer **NPR**	4	M L3
4.3.3 (a)	Normal weight/normal weight status ✓✓A	2A classifying normal weight	2	M L1
4.3.3 (b)	Cindy must maintain her normal weight status.✓A Eat healthily and follow a training programme. ✓✓O Maintain eating habits for the year. Any reasonable answer.	**CA from Q 4.3.3 (a)** 1A advise her on her health status 2O for one tip to follow	3	M L4
			[29]	
QUESTION 5				
5.1.1	110 × 0,3048 ✓MA = 33,528 m ✓A	1MA Converting feet to m 1A Answer **NPR**	2	M L2 E
5.1.2	Scaled Taylor Swift: 1,75 : 33,528 ✓MA $\frac{1,75}{33,528} \times 0,50\ m$ ✓M 0,02609609759 m ✓CA 2,6 cm ✓C	**CA from Q 5.1.1** 1MA writing as ratio in real life 1 M Manipulating formula to get scaled Taylor Swift. 1CA answer in m 1 C converting to cm	4	M L3 E
5.1.3	= 10 m + 75 m ✓MA = 85 m ✓A	1MA adding the lengths walked 1 A answer **AO**	2	MP L2

5.1.4 A	Soccer field $\frac{3,91}{0,105}$ ✓MA **OR** $\frac{3\,910}{105}$ = 37,24✓S	1 MA calculation 1S simplification **NPR**		M L3 E
B	Athletics track $\frac{3,91}{0,4}$ ✓MA **OR** $\frac{3\,910}{400}$ 9,775✓S	1MA calculation 1S simplification **NPR**		
C	Half marathon $\frac{3,91}{21,1} \times 100$ ✓MA 18,53% ✓A	1MA calculting the percentage 1 A answer **NPR**	6	
5.2.1	Motorbike/Motorcycle ✓A It is easy to move on campus. ✓J **OR** Fuel is cheaper/Economical. ✓J Any relevant justification.	1A identifying motorbike 1J justifying the mode of transport as student	2	MP L4
5.2.2	Faster ✓A Safer ✓A Any relevant answer relate to a free way.	2A for providing two reasons	2	MP L4
5.2.3	Accident ✓RT High traffic volume ✓RT	1RT identifying accident 1RT identifying traffic	2	MP L1
5.2.4	D = S × T ✓SF 177 = S × 3,05 ✓C S = 177 ÷ 3,05 58,03 km/h ✓CA Yes, Bullet Bhuti is correct. ✓J	1SF substituting into formula 1C conversion of time 1CA answer in km/h 1J justifying the statement	4	M L4

5.3.1	Right ✓✓A	2A identifying correct side	2	MP L2
5.3.2	Parking available for students and lecturers. ✓✓O ***(Accept any relevant/sensible answer)***	2O justifying the available parking	2	MP L4
5.3.3	He will see Huis Republiek Dameskoshuis. ✓ ✓A	2A location **Accept Huis Republiek or Ladies Hostel**	2	MP L2
			[30]	
				TOTAL: 150