GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

JUNE EXAMINATION
GRADE 12

2024

MARKING GUIDELINES

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MATHEMATICAL LITERACY

(PAPER 2)

Codes	Explanation
M	Method
MA	Method with accuracy
MCA	Method with constant accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
D	Definition
J	Justification/Reason/Explain
S	Simplification
RT/RD/RG	Reading from a table/graph/diagram/map/plan
F	Choosing the correct formula
SF	Substitution in a formula
O	Opinion
P	Penalty, e.g. for no units, incorrect rounding-off, etc.
R	Rounding-off
NPR	No penalty for rounding-off **OR** omitting units.

KEY TO TOPIC SYMBOL:

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

6 pages

QUESTION 1

Q		Solution: Answer only = full marks.	Explanation	Marks	Level
1.1	1.1.1	B or Distance ✓✓**A**	2A correct answer	(2)	M1
	1.1.2	One hundred and twenty-three thousand four hundred and fifty-six ✓✓**A**	2A correct answer	(2)	M1
1.2	1.2.1	Amount of space in a bucket that can be filled with ginger drink. ✓✓**D** **OR** The amount of ginger drink that the bucket can hold.	2D correct answer	(2)	M1
	1.2.2	25 : 12,5 ✓**A** 2 : 1 ✓**CA**	1A correct order 1CA simplifying	(2)	M1
	1.2.3	$\frac{12.5}{5}$ ✓**MA** = 2,5 or 2 and a half teaspoons ✓**A**	1MA method 1A correct answer	(2)	M1
	1.2.4	$\frac{10\,000}{1000}$ ✓**MA** = 10 litres ✓**A**	1MA method 1A correct answer	(2)	M1
	1.2.5	$\frac{200}{40}$ ✓**MA** = 5kg ✓**A**	1MA method 1A correct answer	(2)	M1
1.3	1.3.1	N12 **OR** N17 **OR** N3 ✓✓**A**	2A correct answer	(2)	MP1
	1.3.2	SE ✓✓**A**	2A correct answer	(2)	MP1
	1.3.3	Regional map ✓✓**A**	2A correct answer	(2)	MP1
				[20]	

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QUESTION 2

Q		Solution	Explanation	Marks	Level
2.1	2.1.1	5 ✓✓**A**	2A correct answer	(2)	MP1
	2.1.2	Botswana ✓✓**A**	2A correct answer	(2)	MP1
	2.1.3	Bar scale /Linear scale/Graphic scale✓✓**A**	2A correct answer	(2)	MP1
	2.1.4	• Travel towards **North-East** ✓**A** • Use **N14** ✓**A** • Pass **4 towns** ✓**A** • **Enter Gauteng Province** ✓**A** • **Pretoria will be situated on the N1** ✓**A**	1A for North East 1A for N14 1A for passing 4 towns 1A for entering GP 1A mentioning destination	(5)	MP2
	2.1.5	Bar length = 2,5 cm ✓**A** Map length = 10,9 cm ✓**A** Actual distance = $\frac{10,9\ cm}{2,5\ cm}$✓ **MCA** × 100 km ✓**M** = 436 km ✓**CA** ∴ The claim is invalid ✓**O** ***(Measure on final printed copy.)***	1A measured bar length 1A measured map length 1MCA fraction 1M multiplying by 100 1CA answer 1O conclusion **Accept:** **Bar (2,4 cm – 2,6 cm)** **Map (10,6 cm – 11,2cm)**	(6)	MP4
2.2	2.2.1	Time = 17:45 −13: 30 − 10 min – 15 min ✓**M** = 3,83 h ✓**CA** Average speed = $\frac{Distance}{Time}$✓**M** Average speed = $\frac{436\ km}{3,83\ h}$✓**SF** = 113,838 *km/h* ✓CA ≈114 *km/h* ✓R	**CA distance from Q2.1.5** 1M subtracting correct values 1CA answer 1M changing subject of formula 1SF correct values 1CA answer 1R rounding to the nearest whole number	(6)	MP3
	2.2.2	• Traffic delays ✓✓**A** **or** • Heat might cause tiredness	2A correct answer **(Accept any sensible answer)**	(2)	MP4
				[25]	

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QUESTION 3

Q		Answer	Explanation	Marks	Level
3.1	3.1.1	Cylinder ✓✓**A**	2A correct answer	(2)	M1
	3.1.2	°F = $(180 \times \frac{9}{5}) + 32$ ✓**SF** = 356 °F ✓**A**	1SF substituting 180 1A correct answer **NPU** **AO**	(2)	M2
	3.1.3	r = $\frac{20\ cm}{2}$ = 10 cm ✓**A** V = 3,142 × $(10)^2$ × 15✓**SF** = 4 713 cm^3 ✓**CA**✓**A**	1A correct radius answer 1SF values 1CA final answer 1A correct unit	(4)	M2
	3.1.4	**Top:** $\frac{200\ mm}{10}$ = 20 cm ✓**C** Area = 3,142 × (12.5^2 – 10^2) ✓**SF**✓**MA** = 3,142 × 56,25 ✓**S** = 176,7375 cm^2 ✓**CA** Side: Area = 2 × 3,142 × 12,5 × 20 ✓**SF** = 1571 cm^2 ✓**CA** Surface area =176,7375 cm^2+ 1 571 cm^2 = 1 747,7375 cm^2✓**CA** **OR** Surface area = $\pi r^2 + 2\pi rh$ = 3,142 × $12,5^2$ + 2 × 3,142 × 12,5 × 20 ✓✓**SF** = 2 061,9375 ✓**CA** Base area of the smaller cake: Radius $\frac{200\ mm}{10}$ = 20 cm ✓**C** Area = $\pi \times r^2$ Area = 3,142 × 10^2 ✓**SF** = 314,2 cm^2 ✓**CA** SA = 2 061,9375 − 314,2 = ✓**S** 1 747,7375 cm^2 ✓**CA**	1C conversion to cm 1MA squaring the radius 1SF correct values 1S for the difference 1CA answer 1SF correct values 1CA answer 1CA answer 2SF correct values 1CA answer 1C conversion 1SF correct values 1CA answer 1S difference 1 CA answer **NPR** **NPU**	(8)	M3

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3.2		Circumference = 2 × 3,142 × 10 ✓**SF** = 62,84 cm✓**A** = 62,84 cm + 2,2 cm✓**M** = 65,04 cm ✓**CA**	**CA radius from Q3.1.3** 1SF correct values 1A correct answer 1M for adding 2,2 cm 1CA answer	(4)	M2
3.3	3.3.1	22:10 ✓✓**A**	2A answer	(2)	M2
	3.3.2	22:10 – 19:48✓**MA** = 2 hours and 22 minutes✓**A** = 2,37 hours✓**C**	**CA from 3.3.1** 1MA subtracting values 1A answer 1C conversion to hours NPR	(3)	M2
	3.3.3	• Coal stove ✓✓**A** **OR** • Gas stove **OR** • Solar **OR** • Generator **OR** • Inverter	2A correct answer	(2)	M4
				[27]	

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QUESTION 4

Q		Answer	Explanation	Marks	Level
4.1	4.1.1	• Improve confidence ✓✓ **A**	2A correct answer **(Accept any sensible answer)**	(2)	M4
	4.1.2	14 – decreasing/downward slope✓**A** 16 – 17: constant✓**A** 17 – 23: Increasing/Uphill slope✓**A** 23 – 26: decreasing✓**A**	1A correct explanation 1A correct explanation 1A correct explanation 1A correct explanation	(4)	M4
	4.1.3	13 miles – 8 miles ✓**RT**= 5 miles✓**A** 5 miles = 5 × 5 280 ft ✓**M** = 26 400 ft✓**CA** 26 400 ft = 30,48 cm × 26 400✓**M** = 804 672 cm✓**CA** $= \frac{804\ 672\ \text{cm}}{100}$ = 8 046,72 m ✓**CA**	1RT correct values 1A answer in miles 1M multiplying by 5 280 1CA answer in ft 1M multiplying by 30,48 1CA answer in cm 1CA answer in m **NPU** **NPR**	(7)	M3

4.2	4.2.1	14 years✓✓**A**	2A correct age	(2)	M1
	4.2.2 (a)	$\frac{170\ cm}{100}$ =1,7 m ✓**C** BMI = $\frac{67}{1,7^2}$ ✓**SF** = 23,2 kg/m² ✓**A** BMI is between 75th and 85th percentile ✓**RG** He is healthy. ✓**RT** ∴ Claim is valid. ✓**O**	1C conversion to metres 1SF substitution of correct values 1A correct answer 1RG correct values 1RT status 1O conclusion **NPR**	(6)	M4
	(b)	Exercise. OR Go on healthy diet.✓✓**A**	2A correct answer (Accept any sensible answer)	(2)	M4
4.3	4.3.1	(i) C ✓**A** (ii) JC ✓**A**	1A correct answer 1A correct answer	(2)	P2
	4.3.2	$\frac{2}{6}$ ✓**A** ✓**A** = 0,33 ✓**CA**	1A denominator 1A numerator 1CA answer as a decimal. **NPR** **AO**	(3)	P2
				[28]	
				TOTAL: 100	

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Notes

1.1.	1.1.2.	Hundred and twenty-three thousand four hundred and fifty-six	2A correct answer
1.2.	1.2.5.	Accept: $40 \times 5kg = 200$	1MA method 1A correct answer
1.3.	1.3.3.	Accept: Street Map/Route Map/Provincial Map	2A correct answer
4.2.	4.2.1.	Accept: 13 – 14 years	2A correct age

