Hoërskool Johan Jurgens

Mathematical Literacy – Grade 11

Examination – Paper 2

November 2025

Examiner: M. Myburgh

Moderator: M. Botha

Time: 2 hours

Marks: 100

MARKING GUIDELINES

MARKS: 100

SYMBOL	EXPLANATION
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
J	Justification
RT	Reading from a table/graph/map/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 rounding
AO	Answer only
MCA	Method with constant accuracy

These marking guidelines consist of 7 pages.

QUESTION 1 [23 MARKS]				
Question	**Solution**	**Explanation**	**M**	**L**
1.1.1	3,142 × 550 ✓ M = 1 728,1 mm ✓ A	1M multiply by 550 1A correct answer	(2)	L1
1.1.2	Option B: 380 ÷ 400 m ✓ M = R0,95 per metre ✓ MA	1M divide by 400 m 1MA answer	(2)	L1
1.1.3	R250 : R380 ✓ M 25 : 38 ✓ A	1M correct order 1A correct simplified values	(2)	L1
1.1.4	Radius = 550 mm ÷ 10 ✓ C = 55 cm ÷ 2 ✓ M = 27,5 cm ✓ A	1C divide by 10 1M finding the radius 1A correct answer	(3)	L1
1.2.1	Strip Chart / Map ✓✓ A	2A name	(2)	L1
1.2.2	N1; N4; N11; N12 ✓✓A **(Any TWO)**	2A correct national roads	(2)	L1
1.2.3	✓ RT ✓ C Distance = 330 km ×1000 = 330 000 m ✓ A	1RT correct values 1C conversion 1A 330 000 m	(3)	L1
1.2.4.1	White River **or** Hazyview ✓✓ A	2A town	(2)	L1
1.2.4.2	✓ A Distance = 20 + 48 + 87 ✓ M = 155 km ✓ A	1A correct distances 1M addition 1A 155 km	(3)	L1
1.2.5	R36; R37; R40; R527; R531; R533; R536; R540; or R569 ✓✓ RM **(Accept any TWO answers)**	2 RM correct provincial roads	(2)	L1
			[23]	

QUESTION 2 [18 MARKS]

Question	Solution	Explanation	M	L
2.1.1	Bar Scale ✓✓ RM	2RM correct answer	(2)	
2.1.2	South West ✓✓ RM	2RM correct direction	(2)	L2
2.1.3	✓ M 2 cm : 250 km ✓ M 8,3 cm : $\frac{8,3 \times 250}{2}$ ≈ 1037 km ✓ CA John's statement is incorrect. ✓ J	1M measured value 1M multiply by 250 and divide by 2 1CA correct answer 1J correct justification	(4)	L3
2.2.1	Average speed = $\frac{1635}{17,25}$ ✓ MA = 94,782 ✓ A = 94,78 km/h ✓ R	1MA divide by 17,25 1A correct answer 1R correct rounding	(3)	L2
2.2.2.1	1 litre = 15 km No. of litres = $\frac{1635}{15}$ × 1 ✓ MA = 109 ✓ A 0.70 litre = 10 km No. of litres = $\frac{1635}{10}$ × 0.70 ✓ MA = 114,45 ✓ A Peter's claim is incorrect ✓ J	1MA dividing by 12,5 1A correct answer 1MA dividing by 10 1A correct answer 1J correct deduction	(5)	L4
2.2.2.2	Cost = 109 × R21,55 ✓ M = R2 348,95 ✓ A	1M multiply by 109 1A correct answer	(2)	L2
			[18]	

QUESTION 3 [32 MARKS]				
Question	**Solution**	**Explanation**	**M**	**L**
3.1.1	Mass of cake = 900 ÷ 1 000 ✓ M = 0,9 kg ✓ A	1M divide by 1000 1A correct answer	(2)	L1
3.1.2	Mass of one slice = $\frac{900}{12}$ ✓ M = 75 g ✓ A	1M divide by 12 1A correct answer	(2)	L2
3.1.3	Calories of one slice of cake = $\frac{75}{100}$ × 400 ✓✓ = 300 calories ✓ A	1M multiply by 75 1M divide by 100 1A correct answer	(3)	L2
3.1.4	105 guests = 105 slices ✓ M Number of cakes = 105 ÷ 12 ✓ M = 8.75 cakes ✓ CA ≈ 9 cakes ✓ R	1M number of slices 1M divide by 12 1CA number of cakes 1A correct rounding	(4)	L1
3.2.1	Cups = 9 × $\frac{3}{4}$ ✓ M = 6,75 cups / 6 $\frac{3}{4}$ cups ✓ A	1M multiplication 1A correct answer	(2)	L2
3.2.2	Cocoa = 9 × 90 g ✓ M Required amount = 810 g ÷ 270 g = 3 ✓ M ✓ M Cost = 3 × R62,75 = R188.25 ✓ A	1M total grams 1M amount 1M multiplication 1A correct cost	(4)	L3

3.2.3	ºC = (ºF -32) ÷ 1,8 ✓ SF = (320 -32) ÷ 1,8 ✓ M = 288 ÷1,8 = 160 ºC ✓ CA	1SF substitution 1M 268 ÷ 1,8 1CA correct rounding	(3)	L2
3.2.4	Starting time 09h03 + 55 min ✓ M Finishing time 09h58 ✓ A	1M adding time 1A correct answer	(2)	L2
3.2.5	Convert min to hrs ✓ M 75 min ÷ 60 = 1,25 hours ✓ A	1M conversion ratio 1A correct answer	(2)	L1
3.3.1	Radius = 86 mm ÷ 2 = 43 mm ✓ A Convert: 43 mm ÷ 10 = 4,3 mm ✓ C Volume of one can = 3,142 × 4,3 ×4,3 × height ✓ SF 546,10 cm^3 = 58,09558 cm^2 × height Height = 546,10 cm^3 ÷ 58,09558 cm^2 = 9,4 cm ✓ CA	1A radius value 1C conversion 1SF correct values 1CA height value	(4)	L3
3.3.2	✓ M Height of label = 80% ×9,4 cm = 7,52 cm ✓ A Difference = 9,4 – 7,52 = 1,88 cm ✓ M The salespersons statement is invalid. ✓ J	**CA value from Q 3.3.1** 1M calculating 80% of 9,4 1A for 7,52 cm 1M difference value of 1,88 cm 1J justification	(4)	L3
			[32]	

QUESTION 4 [27 MARKS]

Question	Solution	Explanation	M	L
4.1.1	Shows a building's plan as seen from above. It is a two-dimensional view of the building. ✓✓ A	2A correct explanation	(2)	L1
4.1.2	One window ✓✓ A	2A correct answer	(2)	L2
4.1.3	1 mm represents 100 mm Length of wall ✓ M 114 mm = 114 × 100 ✓ M = 11 400 mm ÷ 1 000 ✓ M = 11,4 m ✓ CA Width of wall ✓ M 77 mm = 77 × 100 = 7 700 ÷ 1 000 ✓ M = 7,7 m ✓ CA	1M for measurement 1MA using conversion factor 1M conversion to m 1CA for 11,4 m 1M for measurement 1M conversion to m 1CA 7,7 m	(7)	L4
4.1.4	✓ MA Width = 19,38 m^2 ÷ 10,2 m = 1,9 m ✓ A Times lesser = 10,2 ÷ 1,9 m ✓ MA = 5,37 times Mr Ngobeni's statement is invalid. ✓	1MA 19,38 ÷ 10,2 1A correct answer 1MA divide by correct values 1J correct justification	(4)	L4

4.2.1	Area Circle = $\pi \times r^2$ = 3,142 × 1,65 × 1,65 ✓ SF = 8,55 cm^2 ✓ A Area square = side × side = 0,9 × 0,9 = 0,81 cm^2 ✓ A Area of coin = 8,55 – 0,81 ✓ M = 7,74 cm^2 = 7,7 cm^2 ✓ A	1SF correct radius 1A correct answer 1A correct answer 1M subtraction 1A correct rounded off	(5)	L3
4.2.2	Mass of coin = 1,47 × 19,30 ✓ M = 28,371 grams ≈ 28,4 g ✓ A	1M correct values 1A correct answer	(2)	L2
4.3.1	Probability gold coin = $\frac{12✓}{16✓}$ 2A = 0,75 ✓ A	1A numerator 1A denominator 1A correct answer	(3)	L2
4.3.2	The probability of selecting a gold coin has a much greater chance of happening than not happening. ✓✓ O **OR** Very likely to select a gold coin. ✓✓ O (Accept any relevant answer.)		(2)	L4
			[27]	

TOTAL: 100