

Hoërskool Johan Jurgens

Mathematical Literacy – Grade 11

Examination – Paper 2

November 2025



Examiner: M. Myburgh

Time: 2 hours

Moderator: M. Botha

Marks: 100

### MARKING GUIDELINES

**MARKS: 100**

SYMBOL	EXPLANATION
<b>M</b>	Method
<b>MA</b>	Method with accuracy
<b>CA</b>	Consistent accuracy
<b>A</b>	Accuracy
<b>C</b>	Conversion
<b>S</b>	Simplification
<b>J</b>	Justification
<b>RT</b>	Reading from a table/graph/map/diagram
<b>SF</b>	Correct substitution in a formula
<b>O</b>	Opinion/Explanation/Reasoning
<b>P</b>	Penalty, e.g. for no units, incorrect rounding off, etc.
<b>R</b>	Rounding off
<b>NPR</b>	No penalty for rounding
<b>AO</b>	Answer only
<b>MCA</b>	Method with constant accuracy

**These marking guidelines consist of 7 pages.**

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

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

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

3.2.3	$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \div 1,8$ $\checkmark \text{ SF}$ $= (320 - 32) \div 1,8$ $\checkmark \text{ M}$ $= 288 \div 1,8$ $= 160 ^{\circ}\text{C} \checkmark \text{ CA}$	1SF substitution 1M $268 \div 1,8$ 1CA correct rounding	(3)	L2
3.2.4	Starting time      09h03 + 55 min $\checkmark \text{ M}$ Finishing time      09h58 $\checkmark \text{ A}$	1M adding time 1A correct answer	(2)	L2
3.2.5	Convert min to hrs $\checkmark \text{ M}$ $75 \text{ min} \div 60 = 1,25 \text{ hours} \checkmark \text{ A}$	1M conversion ratio 1A correct answer	(2)	L1
3.3.1	Radius = $86 \text{ mm} \div 2 = 43 \text{ mm} \checkmark \text{ A}$ Convert: $43 \text{ mm} \div 10 = 4,3 \text{ mm} \checkmark \text{ C}$ Volume of one can = $3,142 \times 4,3 \times 4,3 \times \text{height} \checkmark \text{ SF}$ $546,10 \text{ cm}^3 = 58,09558 \text{ cm}^2 \times \text{height}$ Height = $546,10 \text{ cm}^3 \div 58,09558 \text{ cm}^2$ $= 9,4 \text{ cm} \checkmark \text{ CA}$	1A radius value 1C conversion 1SF correct values 1CA height value	(4)	L3
3.3.2	$\checkmark \text{ M}$ Height of label = $80\% \times 9,4 \text{ cm}$ $= 7,52 \text{ cm} \checkmark \text{ A}$ Difference = $9,4 - 7,52$ $= 1,88 \text{ cm} \checkmark \text{ M}$ The salespersons statement is invalid. $\checkmark \text{ J}$	<b>CA value from Q 3.3.1</b> 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	<p>1 mm represents 100 mm</p> <p>Length of wall</p> <p>✓ M  <math>114 \text{ mm} = 114 \times 100</math> ✓ M  <math>= 11\,400 \text{ mm} \div 1\,000</math> ✓ M  <math>= 11,4 \text{ m}</math> ✓ CA</p> <p>Width of wall</p> <p>✓ M  <math>77 \text{ mm} = 77 \times 100</math>  <math>= 7\,700 \div 1\,000</math> ✓ M  <math>= 7,7 \text{ m}</math> ✓ CA</p>	<p>1M for measurement</p> <p>1MA using conversion factor                      1M conversion to m                      1CA for 11,4 m</p> <p>1M for measurement                      1M conversion to m                      1CA 7,7 m</p>	(7)	L4
4.1.4	<p>✓ MA  <math>\text{Width} = 19,38 \text{ m}^2 \div 10,2 \text{ m}</math>  <math>= 1,9 \text{ m}</math> ✓ A</p> <p>Times lesser = <math>10,2 \div 1,9 \text{ m}</math> ✓ MA  <math>= 5,37</math> times</p> <p>Mr Ngoben's statement is invalid. ✓</p>	<p>1MA <math>19,38 \div 10,2</math>                      1A correct answer</p> <p>1MA divide by correct values</p> <p>1J correct justification</p>	(4)	L4

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

**TOTAL: 100**