Hoërskool Johan Jurgens
Mathematics
Grade 8
November 2025
Paper 2
MARKING GUIDELINE

Examiner: Ms. C. Giezing
Moderator: Ms. M. Botha

Time: 1Hour 30minutes
Date: November 2025
Total: 60 marks

Question 1	**Answer**	**Mark Allocation**	**Cognitive levels**	**Level**
1.1.	B (< 3 and < 6) ✓	1 ✓ Answer	Knowledge	Moderate
1.2.	D (60º) ✓	1 ✓ Answer	Knowledge	Easy
1.3	A (Figures that are congruent are similar in all aspects) ✓	1 ✓ Answer	Knowledge	Easy
1.4	C ($2\sqrt{13}$) ✓	1 ✓ Answer	Routine Procedure	Easy
1.5	D (Perimeter = 20cm; Area = 28cm²) ✓	1 ✓ Answer	Knowledge	Easy
		[5]		
Question 2	**Answer**	**Mark Allocation**	**Cognitive Level**	**Level**
2.1.	$x + 130^0 + 95^0 = 360^0$ (< around .) ✓ $x = 360° - 225°$ ✓ $x = 135°$ ✓	3 ✓ **Correct statement and reason** ✓Calculation ✓Answer	Knowledge	Moderate
2.2	$2x + 66° + x = 180°$ (<'s str. Line) ✓ $3x = 180° - 66°$ ✓ $\frac{3x}{3} = \frac{114}{3}$ ✓ $x = 38°$ ✓	4 ✓ **Correct statement and reason** ✓ Calculation ✓ Devide ✓ Answer	Routine Procedure	Easy
2.3	2.3.1. <a = 86º (corr <'s) ✓ 2.3.2. <a + <b = 180º (co-in <'s) ✓ 86º + <b = 180º <b = 180º - 86º ✓ <b = 94º ✓ 2.3.3. <b = <c (Alt <'s) ✓ <c = 94º	6 ✓**Statement and reason** ✓ **Statement and reason** ✓ Calculation ✓ Answer ✓ **Statement and reason** ✓ Answer	Complex Procedure	Easy
		[13]		

Question 3	Answer	Mark Allocation	Cognitive Level	Level
3.1.1	$ABC \equiv PQR$ (hypotenuse; side; Right angle) ✓	1 ✓ **Statement and reason**	Knowledge	Moderate
3.1.2	$\frac{L}{M}: \frac{4}{2} = 2; \frac{6}{4} = \frac{3}{2}$ $\frac{L}{N}: \frac{4}{1\frac{1}{3}} = 3; \frac{6}{2} = 3$ M is not similar to L and N ✓	1 ✓Calculations	Knowledge	Easy
3.2	<c +136º = 180º (<on a str. Line) ✓ <c =180º - 136º <c = 44º ✓ <d +110º = 136º (ext < Δ) ✓ <d = 136º - 110º <d = 26º ✓ OR <d + <c +110º = 180º (In sum Δ) ✓ <d + 44º + 110º = 180º <d = 180º - 156º <d = 26º	4 ✓ **Statement and reason** ✓ Answer ✓ **Statement and reason** ✓ Answer	Routine Procedure	Moderate
3.3	$x + 2x + 60° =$ $180° \quad (Int\ sum\ of \Delta)$✓ $3x = 180° - 60°$ $\frac{3x}{3} = \frac{120°}{3}$ $x = 40°$ ✓ $x + y + x + 35° =$ $180°\ (Int\ sum\ of\ \Delta)$ ✓ $\therefore 40° + y + 40° + 35° = 180°$ $y = 180° - 115°$ $y = 65°$ ✓	4 ✓ **Statement and reason** ✓ Answer ✓ **Statement and reason** ✓ Answer	Routine Procedure	Difficult

3.4	$x = 28°$ ✓$(opp <' s\ of\ kite)$✓ $y + 28° + 215° + x =$ $360°\ (<' sof\ quad)$ ✓ $y + 273 = 360°$ $y = 360° - 273°$ $y = 77°$ ✓ $z = 50mm$ ✓ $(Adjacent\ sides\ of\ kite)$ ✓	6 ✓ **Statement and reason** ✓ Answer ✓ **Statement and reason** ✓ Answer ✓ **Statement and reason** ✓ Answer	Complex Procedure	Moderate
		[16]		
Question 4	**Answer**	**Mark Allocation**	**Cognitive Level**	**Level**
4.1	$x^2 + 3^2 = 5^2$✓ $x^2 + 9 = 25$ $x^2 = 25 - 9$ $\sqrt{x^2} = \sqrt{16}$ ✓ $x = 4$	2 ✓Number sentence ✓ Root calculation	Knowledge	Easy
4.2	EC² = 20² = 400 ED² + CD² = 12² + 16² = 144 + 256 = 400 ✓ ∴ EDC = right angle ✓	2 ✓ Calculations ✓ Stating EDC is right angle	Knowledge	Difficult
4.3	BC² = BA² + AC²✓ BC² = 8² + 6² BC² = 64 + 36 $\sqrt{BC^2} = \sqrt{100}$ ✓ BC = 10cm ✓	3 ✓ Statement ✓ Square root calculation ✓ Answer with unit	Routine Procedure	Easy
4.4	920cm = 920 ÷ 100 = 9,2m AB² + (9,2)² = (19,2)² ✓ AB² + 84,64 = 368,64 ✓ AB² = 368,64 – 84,64 $\sqrt{AB^2} = \sqrt{284}$ ✓ AB = 16,85m ✓	4 ✓ Statement ✓ Conversion ✓Square root calculations ✓ Answer with unit	Routine Procedure	Difficult
		[11]		

Question 5	Answer	Mark Allocation	Cognitive Level	Level
5.1	$A = \pi x^2$ ✓✓	2 ✓✓ Correct formula	Knowledge	Moderate
5.2	P= 4+10,8+4+3,2+7+7+3,2 ✓ P = 8cm+ 10,8cm+ 6,2cm+ 14cm P = 18,8cm + 20,2cm ✓ P = 39,2cm ✓	3 ✓ Statement ✓ Method ✓ Answer	Knowledge	Easy
5.3	$C = 2\pi r$ ✓ $C = 2\pi 6$ = 37,70cm ✓ $A = \pi r^2$ ✓ $A = \pi(6)^2$ = 113,10cm²	4 ✓ Correct Formula ✓ Answer ✓ Correct Formula ✓ Answer	Routine Procedure	Moderate
5.4	FJ = FK + KJ ✓ = 20mm + 10mm ✓ = 30mm ✓ Area = FJ x KG = 30mm x 40mm = 1200mm²	6 ✓Statement ✓ Method ✓ Answer & unit ✓Formula ✓ Method ✓ Answer & unit to the power of 2	Problem Solving	Easy
		[15]		

Knowledge	Routine Procedure	Complex Procedure	Problem Solving
16	27	18	6
25%	45%	20%	10%

Total: 60