Bergvliet High School

GRADE 9

Mathematics Paper 2

NOVEMBER 2025

MARKING GUIDELINES

MARKS : 75

COGNITIVE DISTRIBUTION FOR ASSESSMENT:

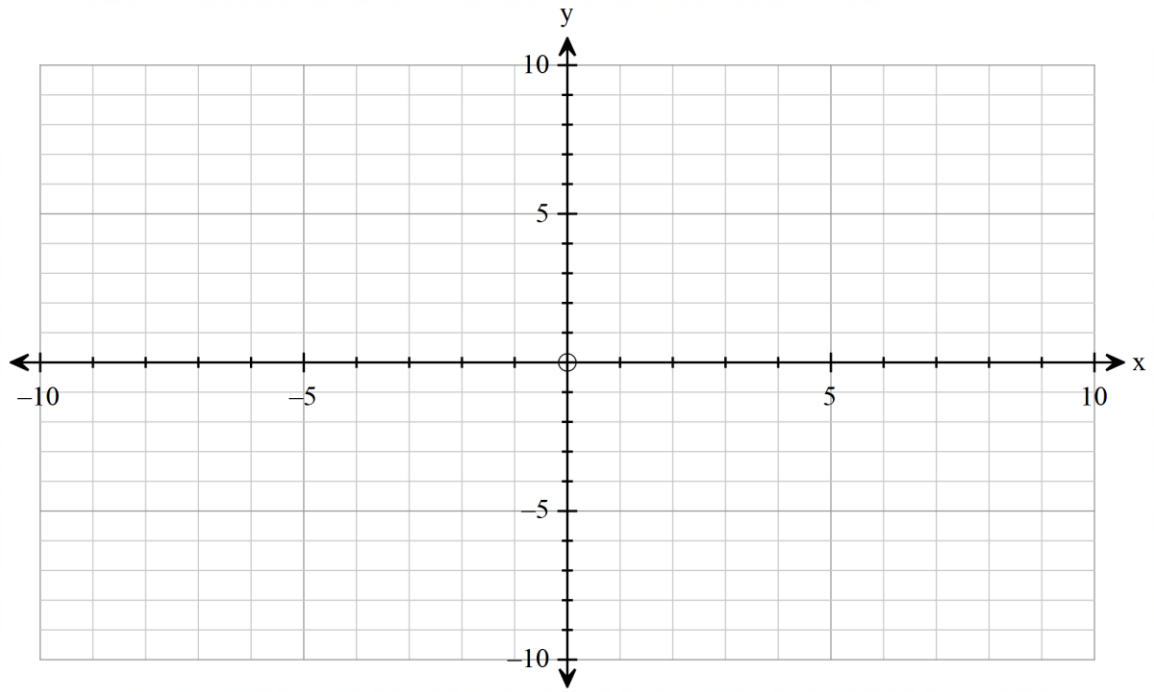
	Level 1	Level 2	Level 3	Level 4
Expected:	25%	45%	20%	10%
Actual:	23%	40%	23%	15%

Symbol	Explanation
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT	Reading from a table/graph/document/diagram
SF	Correct substitution in a formula
O	Opinion/Explanation
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding off
NPR	No penalty for rounding
NPU	No penalty for units
AO	Answer only
MCA	Method with consistent accuracy

This marking guidelines consists of 6 pages

Q	SOLUTION	EXPLANATION	
1.1.1	<table><tr><td>Number</td><td>Tally</td><td>Frequency</td></tr><tr><td>1</td><td></td><td>4</td></tr><tr><td>2</td><td></td><td>5 ✓</td></tr><tr><td>3</td><td></td><td>7</td></tr><tr><td>4</td><td></td><td>3 ✓</td></tr><tr><td>5</td><td></td><td>3</td></tr><tr><td>6</td><td></td><td>2 ✓</td></tr><tr><td>Total</td><td></td><td>24</td></tr></table>	1 mark allocated for 2 correct rows (3)	L1
1.1.2	1/6 OR 0.17 ✓✓	2AO correct answer (2)	L1
1.1.3	(4+7+3)/24 OR 7/12 OR 14/24 ✓✓	2AO correct answer (2)	L1
1.2.1	12+82+36+55+78+90+27+55+60+86 = 581✓ 581 ÷ 10 ✓ 58.1 ✓	1 mark adding all the amounts 1 mark for dividing by the correct total number 1 mark for the answer (3)	L2
1.2.2	90 – 12 ✓= 78% ✓	1 mark for subtracting the highest from the lowest 1 mark for the correct percentage mark (2)	L2
1.2.3	55 % ✓	1 mark for the correct answer (1)	L1
1.2.4	12, 27, 36, 55, 55, 60, 78, 82, 86, 90 55 + 60 =115✓ 115 ÷ 2 ✓ 57.5 % ✓	1 mark for identifying the middle 2 numbers/median 1 mark for dividing by 2 1 mark for the correct answer (3)	L2
		[16]	

Q	SOLUTION	EXPLANATION	
2.1	A'(2,-3) ✓✓	1 mark for the correct x value 1 mark for the correct y value (2)	L1
2.2	B'(2,-4) ✓✓	1 mark for the correct x value 1 mark for the correct y value (2)	L1
2.3	C'(0,4) ✓ D'(-4,0) E'(4,0)	1 mark for all 3 co-ordinates 1 mark for plotting CDE on the graph 1 mark for plotting the enlarged triangle (3)	L2



2.3.1	Enlarged by a factor of 2 OR multiplied by 2	2 marks for correct explanation (2)	L2
2.4	2-(-2) = 4 units ✓✓	1 mark for subtracting the value 1 mark for the correct length OR 2 AO (2)	L2
2.5	$\frac{1}{2}b.h$ $\frac{1}{2}.(4)$ ✓.(2)✓ 4 units²✓	1 mark for substituting the correct base value 1 mark for substituting the correct height value 1 mark for the correct answer (3)	L2
		[14]	

Q	SOLUTION		EXPLANATION	
3.1	**Statement**	**Reason**	1 x 4 marks for every valid statement 1 x 4 marks for every valid reason provided (8)	L3
	a = 180 - 40˚ = 140˚✓	Co-interior angles = 180˚✓		
	b = 140˚✓	Vertically opposite angles =✓		
	c = 180 – 20 – 140 = 20˚✓	Angles on a str. Line = 180˚✓ OR Vertically opposite angles =		
	d = c = 20º✓	Isosceles triangle OR base angles = ✓		

3.2	<table><tr><th>Statement</th><th>Reason</th></tr><tr><td>$3x + 10$ $+ (2x - 10) + x$ $+ 2x = 360^0$ $8x = 360^0$ $x = \frac{360}{8}$ $x = 45^0$</td><td>Revolution = 360^0</td></tr></table>	1 mark for valid reason 1 mark for simplification 1 mark for dividing by 8 1 mark for the correct answer (4)	L3
3.3	<table><tr><th>Statement</th><th>Reason</th></tr><tr><td>EIG = DEI = 30^0 EDI + DIE = 180-30^0 =150^0✓ EDI = DIE = 150/2 = 75^0✓ GIH = 180 – 75 – 30 = 75✓ IH = GH ∴ GIH = IGH = 75^0✓ ∴ H = 180 - 75 – 75 H = 30^0✓</td><td>Alt. angles = Sum of the angles of a triangle = 180 Isosceles triangle/ base angles of triangle = Angles on a str. Line = 180^0 Isosceles triangle/ base angles of triangle = Sum of the angles of a triangle = 180</td></tr></table>	1 x 5 marks for each statement with the corresponding reason (5)	L4
3.4	<table><tr><th>Statement</th><th>Reason</th></tr><tr><td>HKN = 180 – 120 = 60^0✓ KNM = 180-60 = 120 KNL = 180–120 = 60✓ LKN = 180 – 60 – 60 = 60✓ ∴ KNL is a equilateral triangle</td><td>Co-interior angles = 180 Co-interior angles = 180✓ Str.line = 180✓ Sum of the angles of a triangle = 180✓</td></tr></table>	1 mark for calculating HKN / KNM angle 1 mark for the reason supporting KNM/HKN angle 1 x 2marks for each valid statement 1 x2 marks for each valid reason (6)	L4
		[12]	

Q	SOLUTION	EXPLANATION	
4.1.1	Parallelogram✓	1 mark for the correct answer (1)	L1
4.1.2	AB||DC ✓ AD||BC ✓	1 x 2 marks for each pair of parallel lines stated (2)	L1
4.1.3	Trapezium✓✓	2 marks for the answer (2)	L1
4.1.4	$13^2 - 12^2 = CE^2$ ✓ pythagoras 169 – 144 =CE^2 25 = CE^2 5 = CE✓ Area = base x perpendicular height = $(20 - 5)\ x\ 12$✓ = 15✓ x 12 = 180 cm^2✓	1 mark for substitution into pythag equation 1 mark for CE length 1 mark for correct base value 1 mark for correct height value 1 mark for the final answer in cm^2 (5)	L2
4.2.1	$circumference = 2\pi r$ $157.08 = 2\pi r$✓ $\frac{157.08}{2\pi} = r$✓✓ 25 cm = radius	1 mark for correct substitution in circumference formula 2 marks for manipulation of the formula (3)	L2
4.2.2	Area $\triangle$ AOB $= \frac{1}{2} \times 25^2$ $= 312{,}5\ \text{cm}^2$✓ ∴ area of shaded part = area of circle – area of $\triangle$ AOB $= \frac{1}{4}$✓$\times\ \pi \times 25^2$✓$-312{,}5$✓ $= 178{,}4\ \text{cm}^2$✓	1 mark for the area of the triangle value 1 mark for identifying that we only calculating ¼ of a circle 1 for the correct substitution into the formula of area of circle 1 mark for subtracting the triangle area from the circle area 1 mark for the final answer (5)	L3
4.3	$TSA = s^2 + 2\text{h}.\ b$ $= 12^2 + 2(11\ x\ 12)$✓ $= 144 + 2(132)$ $= 144 + 264$✓✓ $= 408cm^2$✓	1 mark for substituting into the correct formula 1 mark for the simplification (264) 1 mark for adding the 2 values 1 mark for the final answer (4)	L2
		[22] **TOTAL: 75**	

TAXONOMY TABLE

Bloom's Taxonomy Percentage Breakdown

Bloom's Level	Cognitive Skill	Total Marks	% of Paper	Interpretation
Level 1: Remember	Recall facts/definitions	17	**22.67%**	Low-order recall present but not dominant
Level 2: Understand	Interpret/explain concepts	30	**40%**	Some conceptual reasoning
Level 3: Apply	Perform calculations/use formulas	17	**22.67%**	Application-level questions require learners to use information, methods, concepts, theories, or skills in new or concrete situations. Instead of just recalling facts (Level 1) or explaining ideas (Level 2), learners must apply what they know to solve a problem, perform a task, or demonstrate a process.
Level 4: Analyse & Evaluate	Compare, interpret, examine relationships. Justify decisions/choices	11	**14.66%**	Moderate higher-order reasoning