LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

VHEMBE DISTRICT

GRADE 8

MATHEMATICS PAPER 2

2024 FINAL EXAMINATION

MEMORANDUM

Important Information

Marks: 60

This memorandum consists of 5 pages including the cover page.

This is a marking guideline. In instances where learners have used different but mathematically sound methods to solve the problems, they should be credited

Question Number		Expected Answer	Clarification	Marks	Total
1	1.1	C✓✓	Correct answer: 2 marks	2	**[10]**
	1.2	C✓✓	Correct answer: 2 marks	2	
	1.3	B✓✓	Correct answer: 2 marks	2	
	1.4	C✓✓	Correct answer: 2 marks	2	
	1.5	A✓✓	Correct answer: 2 marks	2	
2	2.1	x - 10° = 58°✓ [Vert. opp $\angle's$] ✓ ∴ x = 68°✓✓	Correct statement: 1 mark Correct statement: 1 mark Correct answer: 2 marks	4	**[10]**
	2.2	x = 72° ✓ [Alt $\angle's$ AB//CD] ✓ y = x = 72° ✓ [Cor $\angle's$ AB//CD] ✓ OR y = 72° [Vert Opp$\angle's$] z + 72° = 180° ✓ [$\angle's$ in a Stra] $\angle's$✓ OR x + z = 180° [Co int[$\angle's$ AD//CD] ∴ z = 106°	Correct statement for each angle: 1 mark Correct reason for each statement: 1 mark	6	
3	3.1	If a triangle is right-angled, then the square of the length of the hypotenuse is **equal to the sum of the squares of the lengths of the other two sides** ✓	Correct answer: 1 mark	1	**[12]**

	3.2	$z^2 = x^2 + y^2$ [Theorem of Pyth] ✓ $z^2 = 5^2 + 12^2$✓ $z^2 = 25 + 144$✓ $z^2 = 169$✓ z = 13✓	Pyth statement: 1 mark Correct substitution: 1 mark Correct squares: 1 mark Correct sum of squares: 1 mar Correct answer: 1 mark	5	
	3.3	$(Longest\ side)^2 = 10^2 = 100$✓ Sum of squares of other sides $= 8^2 + 6^2$✓ = 64 + 36 = 100✓ $(Longest\ side)^2$= sum of squares of other 2 sides✓ $10^2 = 8^2 + 6^2$✓ ∴ The triangle is a right angled triangle✓	Correct size of the longest side: 1 mark Sum of squares of the other two sides: 2 marks Comparison of the longest side and the other two sides: 2 marks Correct conclusion: 1 mark	6	
4	4.1	Trapezium ✓✓	Correct answer: 2 marks	2	**[14]**
	4.2	x + 56° + ∠ CMD = 180°✓ [$Interior\ \angle's$ of Δ]✓ But ∠ CMD = $\angle MDC = 56°$ [Isosceles Δ] ∴ x + 56° + 56° =180° ∴ x = 180° - 112° = 68✓° y + ∠ MBC + 112° = 180°✓ [$Interior\ \angle's$ of Δ]✓	Correct statement for x: 1 mark Correct reason for the statement: 1 mark Correct answer for x: 1 mark Correct statement for y: 1 mark	6	

		But y = ∠ MBC [Isosceles Δ] ∴ 2y + 112° = 180° ∴ y = 34°✓	Correct reason for the statement: 1 mark Correct answer for y: 1 mark		
	4.3.1	DA = CB = 4cm [Opp sides Parallelogram] ✓ AB = DC = 7cm [Opp sides Parallelogram] ✓	Correct answer DA: 1 mark Correct answer AB: 1 mark	2	
	4.3.2	∠B = $\angle D$ = 100° [Opp $\angle's$ Parallelogram] ✓ $\angle C$ = $\angle A$ = 80° [Opp $\angle's$ Parallelogram] ✓	Correct answer∠B : 1 mark Correct answer$\angle C$: 1 mark	2	
	4.4	Yes, Angles are of the same size✓	Correct statement: 1 mark Correct reason: 1 mark	2	
5	5.1	500mm^2✓	Correct answer: 1 mark	1	**[14]**
	5.2	A square has 4 equal sides ∴4s = 40 ✓ ∴ s = $\frac{40}{4}$ = 10 The length of one side is 10 cm✓	Correct method: 1 mark Correct answer: 1 mark	2	
	5.3	Length of the garden Perimeter = 23m + 23m + 57m + 57m = 160m Cost = 160 x 39,75 = R6 360			

	5.4	Area of the shaded part = Area (Bigger circle) – area (Small circle) = 3,14 (12^2) - 3,14 (5^2) = 3,14 x 144 – 3,14 x 25 = 452,16 – 78,5 = 373,66 The area of the shaded part is 373,66	Correct formula: 1 mark Correct substitution: 1 mark Correct answer: 2 marks	4	

Total marks: 60