



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

VHEMBE EAST DISTRICT

SENIOR PHASE

GRADE 9

MATHEMATICS PAPER 1

MEMORANDUM

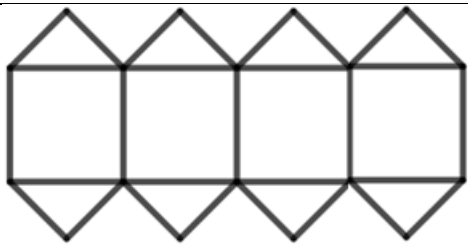
TERM 4 FINAL EXAMINATION

16 NOVEMBER 2023

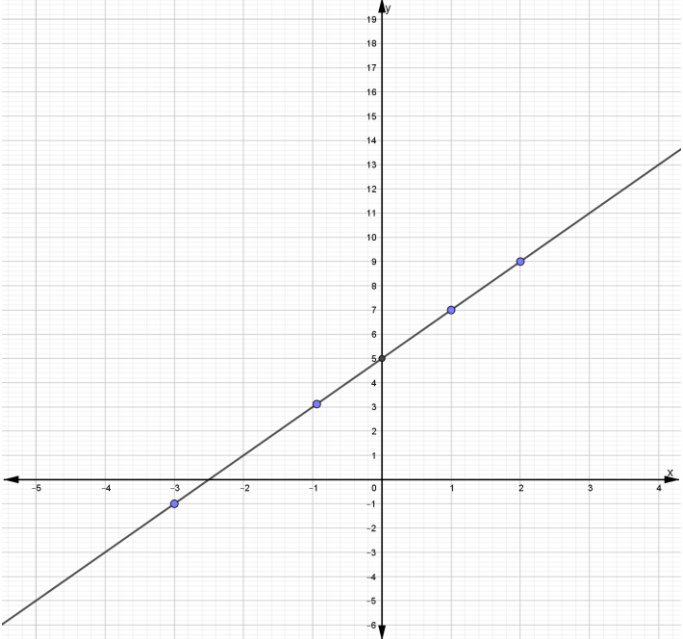
MARKS: 75

This memorandum consists of 5 pages including the cover page.

No.	Mathematical Calculations	Clarification on mark allocations	Total marks
QUESTION 1			[10]
1.1	C	✓	1
1.2	C	✓	1
1.3	C	✓	1
1.4	C	✓	1
1.5	B	✓	1
1.6	B	✓	1
1.7	B	✓	1
1.8	D	✓	1
1.9	D	✓	1
1.10	D	✓	1
QUESTION 2			[24]
2.1.	$R74,00 \div 4 = R18,5$ each packet ✓ $\therefore R18,5 \times 6 = R 111,00$ ✓	✓ Method ✓ Answer only Note: Award full marks for answer only.	2
2.2	$60 = 2 \times 2 \times 3 \times 5$ ✓ $80 = 2 \times 2 \times 2 \times 2 \times 5$ ✓ $\text{LCM} = 2 \times 2 \times 2 \times 2 \times 3 \times 5 = 240$ ✓ $\text{HCF} = 2 \times 2 \times 5 = 20$ ✓	✓ factors of 60 ✓ Factors of 80 ✓ 240 ✓ 20 Note: Accept any correct method.	4
2.3	$A = P \left(1 + \frac{i}{100}\right)^n$ ✓ $15\ 000 \checkmark = P \left(1 + \frac{6,5}{100}\right)^5$ ✓ $15000 \left(1 + \frac{6,5}{100}\right)^{-5} = P$ $\therefore P = 10\ 948,21$ ✓	✓ Correct formula ✓ ✓ Substitution ✓ Answer Note: Accept any correct method.	4
2.4.1	$4 \times [20 + (-5)]$ $= 4 \times (20 - 5)$ $= 4 \times 15$ ✓ $= 60$ ✓	✓ Method ✓ Answer Accept any correct method.	2
2.4.2	$10 \times (-4) + 25 \div (-5)$ $= -40 - 5$ ✓ $= -45$ ✓	✓ Method ✓ Answer Accept any correct method.	2
2.4.3	$2^5 - (-2)^3$	✓ -2^3 or 8	2

	$= 2^5 + 2^3 \checkmark$ $= 32 + 8$ $= 40 \checkmark$	✓ answer	
2.4.4	$\frac{\sqrt[3]{-125} \times \sqrt{64}}{\sqrt{100} \times \sqrt[3]{-64}}$ $= \frac{-5 \times 8}{10 \times -4} \checkmark$ $= \frac{40}{40}$ $= 1 \checkmark$	✓✓ Simplification ✓ Answer	3
2.5.1.	$3^2 \times 3^5$ $= 3^{2+5}$ $= 3^7 \checkmark$ $= 2187 \checkmark$	✓ Adding exponents ✓ Answer	2
2.5.2.	$5^2 \times 2^0 - 3^1 \div 6 + (-2)^3$ $= 25 \times 1 - \frac{1}{2} - 8 \checkmark$ $= \frac{33}{2} \text{ or } 16\frac{1}{2} \checkmark$	✓ Method ✓ Answer	2
QUESTION 3			[12]
3.1.1	26✓; 37✓	✓ 26 ✓ 37	2
3.1.2.	Add two more than was added to the previous term ✓✓	✓✓ Answer	2
3.2.1	 PATTERN 4	✓✓ Correct pattern	2
3.2.2	$a = 29 \checkmark$ and $b = 71 \checkmark$	✓ $a = 29$ ✓ $b = 71$	2
3.3	$a = 8 \checkmark$; $b = 14 \checkmark$; $c = -2 \checkmark$ and $d = -3 \checkmark$	✓ $a = 8$ ✓ $b = 14$ ✓ $c = -2$ ✓ $d = -3$	4
QUESTION 4			[12]
4.1.1.	$2(x + y) = 2x + 2y \checkmark$	✓ Answer	1
4.1.2.	$(x + 2)(x + 2) = x^2 + 4x + 4 \checkmark \checkmark$	✓✓ Answer	2

4.1.3.	$(x - y)^2 = x^2 - xy + y^2 \checkmark \checkmark$	$\checkmark \checkmark$ Answer	2
4.1.4.	$\frac{4x^3 - 6x^2 + 2}{2x}$ $= \frac{4x^3}{2x} - \frac{6x^2}{2x} + \frac{2}{2x} \checkmark$ $2x^2 - 3x + \frac{1}{x} \checkmark$	$\checkmark$ Method $\checkmark$ Answer	2
4.2.1	$3a + 3b + 3c = 3(a + b + c) \checkmark$	$\checkmark$ Answer	1
4.2.2	$x^2 - y^2 = (x - y) \checkmark (x + y) \checkmark$	$\checkmark (x - y)$ $\checkmark (x + y)$	2
4.2.3	$x^2 + 8x + 15 = (x + 5) \checkmark (x + 3) \checkmark$	$\checkmark (x + 5)$ $\checkmark (x + 3)$	2
QUESTION 5 [8]			
5.1	$x^3 + 24 = -3 \checkmark$	$\checkmark$ Answer	1
5.2	$x = 8 \checkmark$	$\checkmark$ Answer	1
5.3.1	$2x - 3 = 11$ $2x = 14 \checkmark$ $x = \frac{14}{2}$ $x = 7 \checkmark$	$\checkmark$ Method $\checkmark$ Answer	2
5.3.2	$x^2 + 3x + 2 = 0$ $(x + 1)(x + 2) = 0$ $x = -1 \checkmark \text{ or } x = -2 \checkmark$	$\checkmark$ Method $\checkmark$ Answer	2
5.3.3	$\frac{x^2 + 4x + 4}{x + 2} = 0$ $\frac{(x + 2)(x + 2)}{x + 2} = 0 \checkmark$ $x + 2 = 0$ $x = -2 \checkmark$	$\checkmark (x + 2)(x + 2)$ $\checkmark$ Answer	2
QUESTION 6 [9]			
6.1.1	$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{8 + 6}{-2 - 4} \checkmark = \frac{14}{-6} = -\frac{7}{3} \checkmark$	$\checkmark$ Substitution $\checkmark$ Answer	
6.1.2	$y - 8 = -\frac{7}{3}(x + 2) \checkmark$ $y = -\frac{7x}{3} + \frac{10}{3} \checkmark$	$\checkmark$ Method $\checkmark$ Answer	2
6.2.1	$a = 3 \checkmark$ and $b = 15 \checkmark$	$\checkmark a = 3$ $\checkmark b = 15$	2

6.2.2		✓Points correctly plotted ✓✓correct line drawn	2
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TOTAL = 75