



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

UMKHANYAKUDE DISTRICT

GRADE 8 MATHEMATICS P1

NOVEMBER 2023

TIME: 1H30

Stanmorephysics.com

MARKS: 60

INSTRUCTIONS:

1. Answer ALL questions, Show ALL calculations.
2. Remember to give reasons where applicable.
3. Make use of the calculators.
4. Write neat and legible
5. Correct your answer into TWO decimals.
6. Do not write with a pencil.
7. Number the answers correctly according to the numbering. used in this question paper.
8. This question paper consists of **6** questions.



Question 1: Multiple Choice Questions, Choose The Correct Answer, i.e 1.8 = F

1.1 Solve for x if $2x - 6 = 8$

- A. $x = 7$ B. $x = 4$ C. $x = 2$ D. $x = 3$ (2)

1.2 A car travels for 300 km at an average speed of 65 km/h. How long does it take the car to cover the distance?

- A. 4 hrs B. 3,2 hrs C. 4,6 hrs D. 6 hrs (2)

1.3 Calculate $\sqrt[3]{125} + \sqrt{81}$

- A. 2 B. 16 C. 14 D. 64 (2)

1.4 $2^y = 32$, then the value of y is:

- A. $y = 12$ B. $y = 64$ C. $y = 5$ D. $y = 7$ (2)

1.5 If $a = -1, b = -3$ and $c = 4$, the value of these expressions $3b^2 - c$

- A. = 4 B. = -12 C. = 16 D. = 23 (2)

[10]

QUESTION 2

2.1 Simplify the following expressions:

2.1.1 $2a(3a + b) - 3a(2a + 4b)$ (3)

If $a = -2, b = -4$ and $c = 6$, find the value of these expressions:

2.1.2 $\frac{abc}{b}$ (2)

2.1.3 Solve for x : $4^x = 64$ (2)

2.1.4 $3x - 1 = 8$ (3)

[10]



QUESTION 3: Calculate the following:

3.1 $-3 + 8 - 1 - 7 + 12 + 1$ (1)

3.2 Write 0,00125 in Scientific Notation (2)

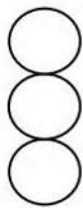
3.3 Increase 40 in the ratio 5:4. (2)

3.4 A recipe for 20 rolls requires/needs 5 tablespoons of butter. How many tablespoons of butter are needed for 30 rolls? (5)

[10]

QUESTION 4

4.1 Study the patterns below and answer the questions that follow.



Pattern 1



Pattern 2



Pattern 3

4.1.1 Write down the first five numbers in the sequence. (5)

4.1.2 Complete the table

Pattern Number	1	2	3	4	5	8	10	12	22
Number of dots									

(4)

4.1.3 Work out the rule (formula) to find the 22nd term. (4)

[13]

QUESTION 5

5.1 If $x = -3$ and $y = 4$, find the value of: $x(3x + 4y)$ (3)

5.2 Simplify the following expression:

5.2.1
$$\frac{6x^3 + 2x^2 + 4x}{2x} \quad (4)$$

5.2.2 Examine the polynomial $5 + 6y + 12x$

- (a).What type of polynomial is shown above ? (1)
- (b).What is the coefficient of x (1)
- (c).What is the coefficient of y (1)
- (d).What are the variable in the above polynomial? (1)
- (e).What is the constant term (1)
- (f).What is the degree of the expression (1)

[13]

QUESTION 6

6.1 Use the table below to plot the points on a Cartesian plane provided as **ANNEXTURE A** and draw the graph. (4)

x	-2	0	1
y	5	1	-1

[4]

TOTAL MARKS = 60

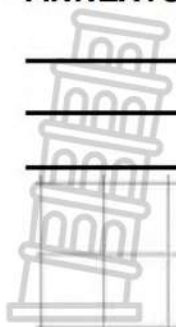


ANNEXTURE A SURNAME AND NAME:

GRADE AND CLASS:

SCHOOL NAME:

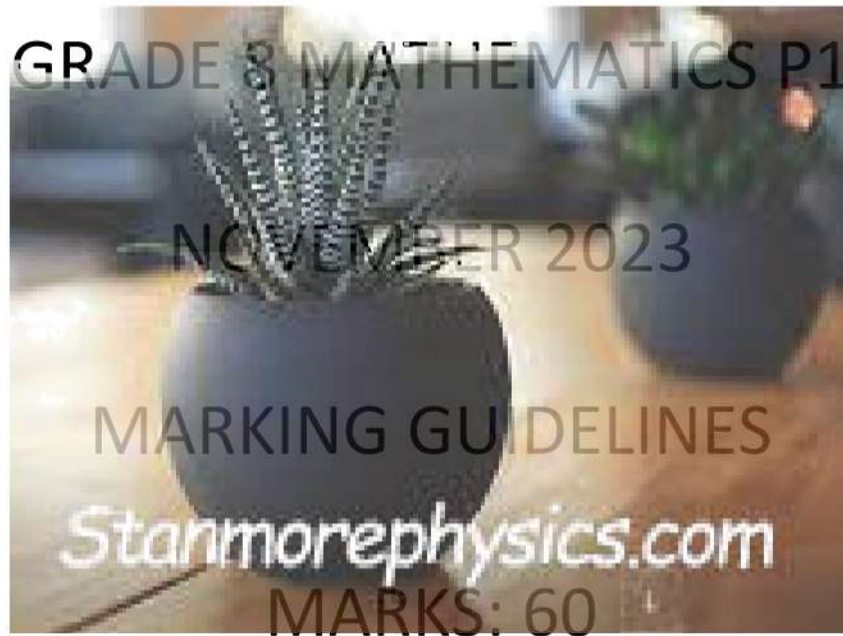
6.1





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This consists of 3 pages including the cover page



QUESTION 1

- 1.1 = A ✓✓
- 1.2 = C ✓✓
- 1.3 = C ✓✓
- 1.4 = C ✓✓
- 1.5 = D ✓✓

[10]

QUESTION 2

<p>2.1.1 $6a^2 + 2ab - 6a^2 - 12ab$ = -10ab</p>	<ul style="list-style-type: none"> ✓ $6a^2$ ✓ -12ab ✓ answer
<p>2.1.2 $\frac{(-2)(-4)(6)}{-4}$ = 48 -4 = -12</p>	<ul style="list-style-type: none"> ✓ Substitution ✓ answer
<p>2.1.3 $4^x = 4^3$ X = 3</p>	<ul style="list-style-type: none"> ✓ 4^3 ✓ Answer
<p>2.1.4 $3x = 9$ X = 3</p>	<ul style="list-style-type: none"> ✓ 9 ✓ Divide by 3 both ✓ answer

[10]

QUESTION 3

<p>3.1 = 10</p>	<ul style="list-style-type: none"> ✓ answer
<p>3.2 $0,00125 = 1,25 \times 10^{-3}$</p>	<ul style="list-style-type: none"> ✓ 1,25 ✓ 10^{-3}
<p>3.3 $= 40 \times \frac{5}{4}$ = 50</p>	<ul style="list-style-type: none"> ✓ Substitution ✓ answer
<p>3.4</p> <p>$\frac{x}{30} = \frac{5}{20}$ ✓ 10 rolls = $5 \div 2 = 2,5$ ✓✓</p> <p>$20x = 30 \times 5$ ✓ OR $10 + 10 + 10$</p> <p>$20x = 150$ ✓ = $2,5 + 2,5 + 2,5$ ✓</p> <p>$x = 7,5$ ✓✓ = $7,5$ tablespoons ✓✓</p>	<ul style="list-style-type: none"> ✓ Substitution ✓ 30×5 ✓ $20x$ ✓ Divide by 20 ✓ answer

[10]

QUESTION 4

<p>4.1.1 3; 6; 9;12;15</p>	<ul style="list-style-type: none"> ✓ All 5 values (max) ✓ Mark each 1 mark
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4.1.2	Pattern Number	1	2	3	4	5	8	10	12	22	✓ 24 ✓ 30 ✓ 36 ✓ 66
	Number of dots	3	6	9	12	15	24✓	30✓	36✓	66✓	
4.1.3	$T_3 = 9 = 3(3)$ $T_n = 3n$ ✓ $T_{22} = 3(22)$ ✓ $= 66$ ✓										✓ 3n ✓ + 0 ✓ Substitution ✓ Answer

[13]

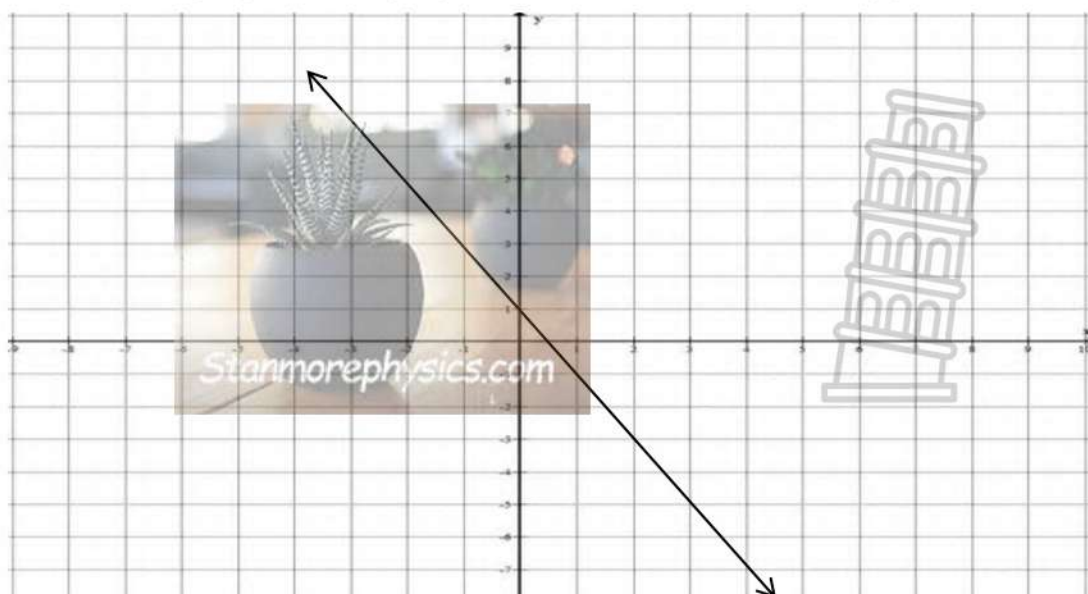
QUESTION 5

5.1	$= -3(3 \times -3 + 4 \times 4)$ $= -3(-9 + 16)$ $= -3(7)$ $= -21$	✓ (-9+16) ✓ 7 ✓ Answer
5.2.1	$= \frac{6x^3}{2x} + \frac{2x^2}{2x} + \frac{4x}{2x}$ $= 3x^2 + x + 2$	✓ Dividing by 2x ✓ 3x ² ✓ x ✓ 2
5.2.2	(a) tri-nominal ✓ (b) 12 ✓ (c) 6 ✓ (d) x and y ✓ (e) 5 ✓ (f) first degree ✓	✓ Tri-nomial ✓ 12 ✓ 6 ✓ X and y ✓ 5 ✓ First degree

[13]

QUESTION 6

6.1 (-2;5) ✓ (0;1) ✓ (1;-1) ✓ Shape ✓ (4)



TOTAL MARKS = 60