



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

MOGALAKWENA DISTRICT

MATHEMATICS

COMMON ASSESSMENT

GRADE 09

12 SEPTEMBER 2023

MARKS: 50

DURATION: 1 HOUR 30 MINUTES

Instructions:

1. This paper consists of 8 pages including the cover page.
2. Read the questions carefully before answering.
3. Answer all questions.
4. Show all your calculations.
5. You may use an approved scientific calculator (non-programmable).
6. Use Annexure A to answer question 3.3.2 and submit with the answer sheet.

QUESTION 1(5 MARKS)



Four possible answers are provided for each of the questions below. Write the letter of the correct answer next to the question number.

- 1.1 Which of the following equations describes the relationship between x and y in the table below? 1

x	-3	-2	-1	0	1	2
y	-11	-9	-7	-5	-3	-1

A. $y = -2x - 5$

B. $y = 2x - 5$

C. $y = -2x + 5$

D. $y = 2x + 5$

- 1.2 Which of the following statements is False? 1

A. A rectangle is a parallelogram.

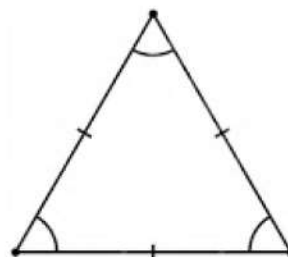
B. A square is a rhombus.

C. A square is a rectangle.

D. A kite is a parallelogram

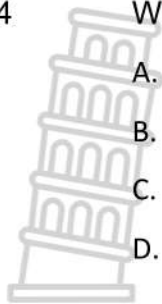
- 1.3 The name of this triangle below is? 1

- A. Isosceles triangle
B. Equilateral triangle
C. Right -Angled triangle
D. Scalene triangle



1.4 What is the size of $\hat{B}_1$ in the figure alongside?

1



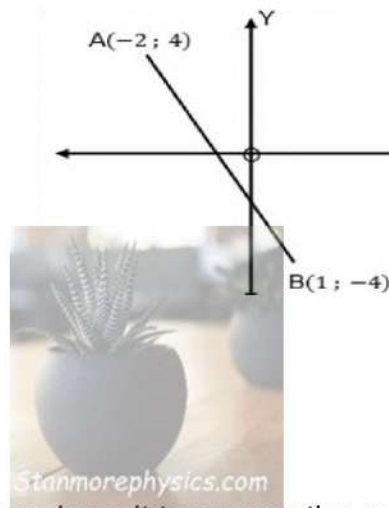
- A. 30°
- B. 60°
- C. 45°
- D. 90°



1.5 What is the gradient of the graph alongside?

1

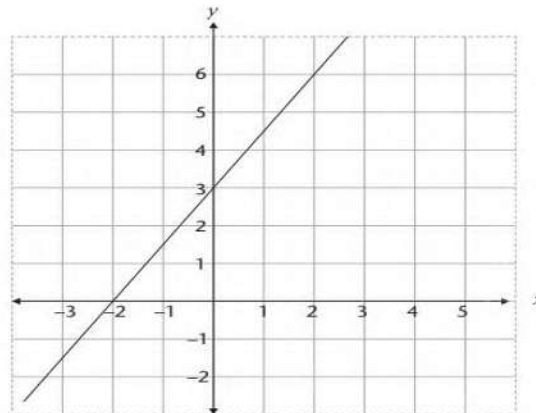
- A. $-\frac{3}{8}$
- B. $-\frac{8}{3}$
- C. $\frac{3}{8}$
- D. $\frac{8}{3}$



QUESTION 2 (7 MARKS)

FUNCTIONS AND RELATIONSHIPS

2.1 Consider the graph below and use it to answer the questions that follow:



2.1.1 Complete the following table by reading off the coordinates of points on the graph. (Write the values of A and B)

2

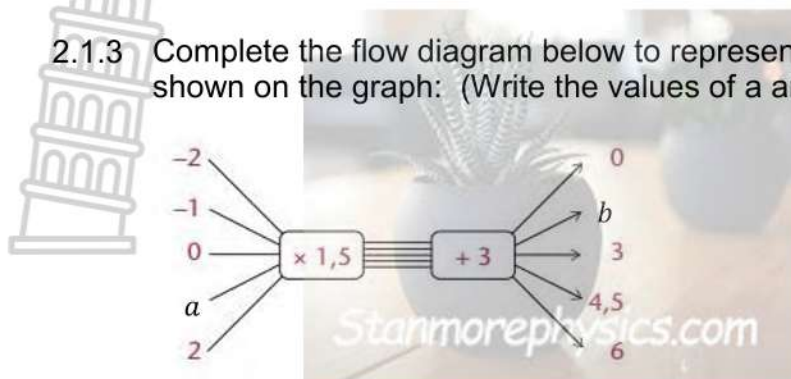
x	-3	-2	-1	0	1	2
y	-1,5	A	1,5	3	B	6

2.1.2 Write down an algebraic formulae for the graph, in the form $y = \dots$

2

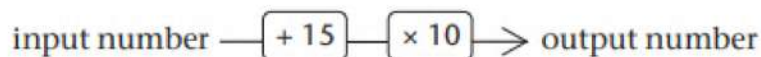
2.1.3 Complete the flow diagram below to represent the relationship shown on the graph: (Write the values of a and b)

2



2.2 Describe the relationship in the flow diagram below with a word formula.

1



QUESTION 3 (11 MARKS)

GRAPHS

3.1 Consider the following equation and answer the questions that follow:

$$3y + 6 = x$$

3.1.1 Write the given equation in standard form.

1

3.1.2 Determine the gradient and the y -intercept.

2

3.2 The following table represents a linear function:

x	-5	-4	-3	-2	-1	0	1	2	3	4	5
y	$-\frac{1}{2}$	0	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$

3.2.1 Study the number pattern and write the equation of the line.

2

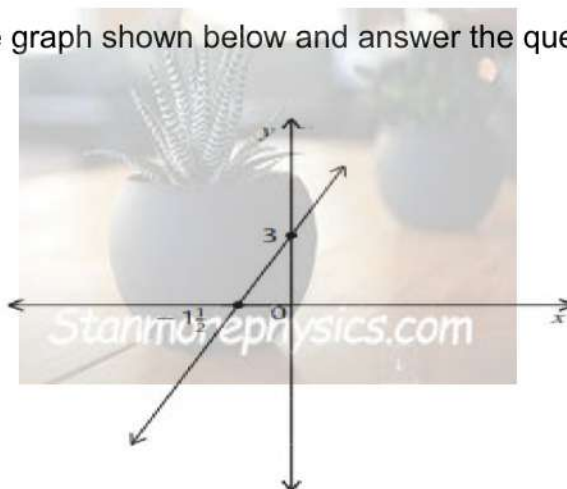
3.2.2 Use the provided grid and draw the line represented by this table on a system of axes, by plotting the sets of points. Show clearly where the line intersects the x -axis and the y -axis.

3

3.3



Consider the graph shown below and answer the questions that follow:



3.3.1 Write the coordinates of the y-intercept.

1

3.3.2 Determine the equation of the straight line if the gradient is 2.

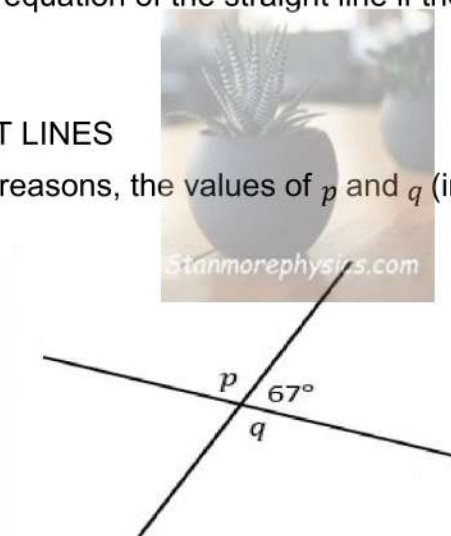
2

QUESTION 4(11 MARKS)

GEOMETRY OF STRAIGHT LINES

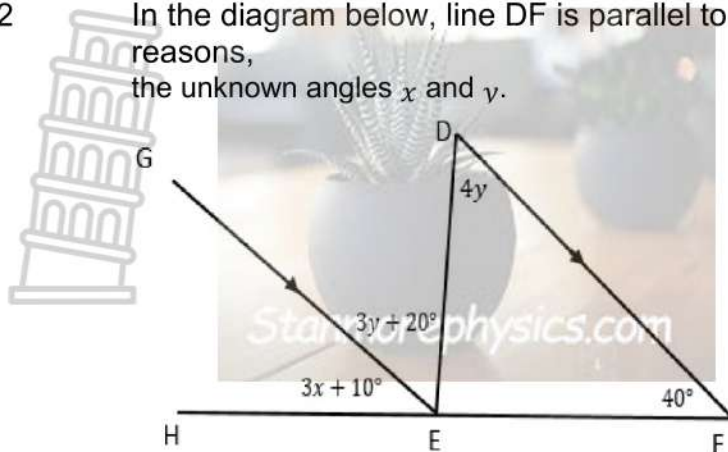
4.1 Determine, with reasons, the values of p and q (in that order) in the diagram below:

5



- 4.2 In the diagram below, line DF is parallel to GE. Calculate, with reasons, the unknown angles x and y .

6



QUESTION 5 (16 MARKS)

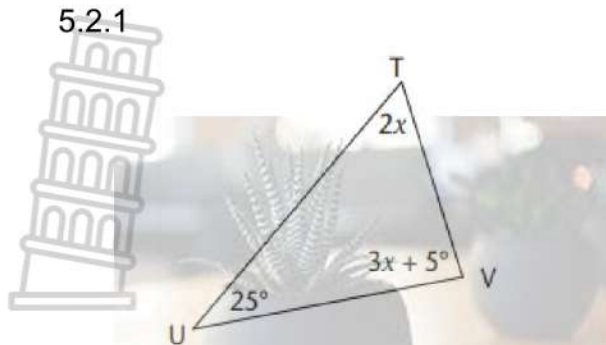
- 5.1 The following list gives the properties of three quadrilaterals A, B and C.

Give the special name of each shapes A, B and C.

- | | | |
|-------|--|---|
| 5.1.1 | Quadrilateral A: The opposite sides are equal and parallel. | 2 |
| 5.1.2 | Quadrilateral B: Two pairs of adjacent sides are equal. | 2 |
| 5.1.3 | Quadrilateral C: All of the angles are right angles. | 2 |
| 5.1.4 | What property must quadrilateral A also have to make it a rhombus? | 2 |
| 5.1.5 | What property must quadrilateral A also have to make it a rectangle? | 2 |
| 5.2 | Calculate, with reasons, the value of x in each case. | |

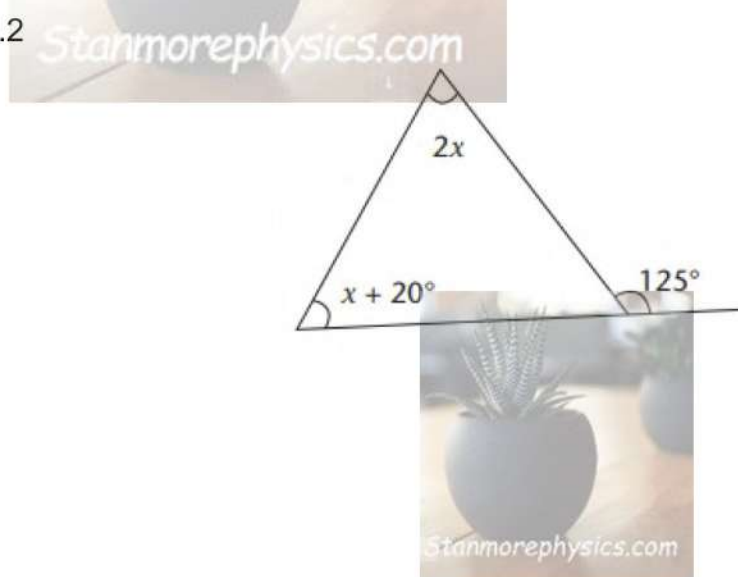
5.2.1

3



5.2.2

3



Annexure A

Name of learner:

Question 3.3.2

