



education

Department:

Education

PROVINCE OF KWAZULU-NATAL

ZULULAND DISTRICT: GENERAL EDUCATION AND TRAINING (GET)

Helping Our Schools Transform Little People into Future Giants

GRADE 08

MATHEMATICS

SEPTEMBER TEST

2024

Marks : 60

Duration : 1,5 hours

Read the following instructions carefully before answering the questions:

1. This question paper consists of **7 pages** including the cover page.
2. This question paper consists of **FIVE** questions. Answer **ALL** questions.
3. Clearly show **ALL** calculations that you have used in determining your answer.
4. Answer Questions 2 – 5 in the spaces provided.
5. Answer only will not necessarily be awarded full marks.
6. An approved scientific calculator (non-programmable and non-graphical) may be used, unless stated otherwise.
7. Write neatly and legibly.

Name & Surname	
Class (e.g. 8A)	
School Name	
Circuit	

Section A**Question 1****[05]**

Four options are provided as answers to the following questions. **Circle** the letter corresponding to correct answer.

1.1. $2(5x - 3) =$ (1)

A $10x + 6$

B $7x + 1$

C $10x - 6$

D $7x - 1$

1.2. If $x - 8 = 11$, then $x = \dots$ (1)

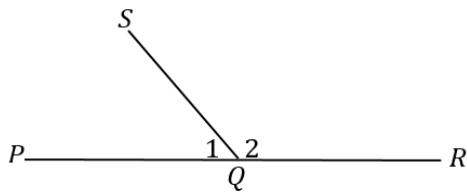
A 3

B 19

C -19

D -3

1.3. Consider the figure below and choose the **CORRECT** statement. (1)



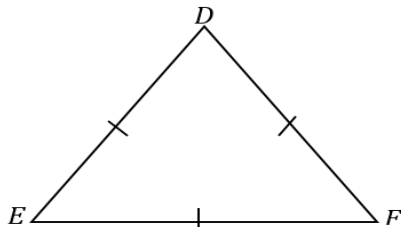
A $\widehat{Q_1} = \widehat{Q_2}$

B $PR = QS$

C $\widehat{Q_2} = 90^\circ$

D $\widehat{Q_1} + \widehat{Q_2} = 180^\circ$

1.4. Which statement is **NOT** correct regarding the triangle below? (1)



A $\hat{E} = 90^\circ$

B All sides are equal

C $\hat{D} = 60^\circ$

D All angles are equal

1.5. A quadrilateral with one pair of parallel sides is called a (1)

- A Kite
- B Square
- C Trapezium
- D Rhombus

Section B

Question 2

[13]

2.1. Simplify, without using a calculator.

2.1.1. $4(x - 1) + 5$ (2)

2.1.2. $x(3x - 1) - 2(x^2 - x + 7)$ (4)

2.1.3. $(9p)^0 + p - 2(p + 1)$ (4)

2.2. Determine numerical value of $5y^2 - 6y + 1$, if $y = -2$ (3)

Question 3**[12]**

3.1. Use the equation : $y = -3x - 1$ to find the value of t in the table below (3)

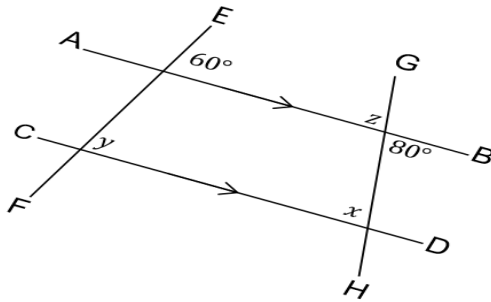
x	-1	t	3
y	2	-7	-10

3.2. Solve for x , without using a calculator

3.2.1. $5x - 7 = 13$ (2)

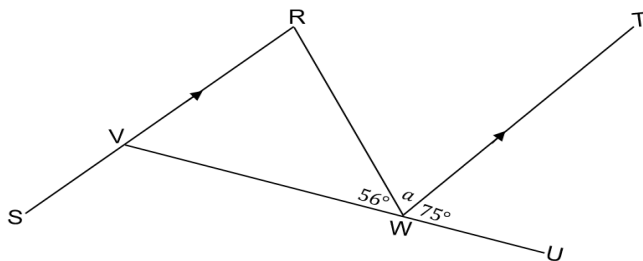
3.2.2. $\frac{2^x \times 2^{x+1}}{16} - 1 = 7$ (4)

3.2.3. $\frac{3^{x-5}}{3^{-3}} = 27$ (3)

Question 4**[13]**4.1. In the figure below, $AB \parallel CD$.Calculate the size of the following angles, **giving reasons**4.1.1. x (2)

4.1.2. y (2)

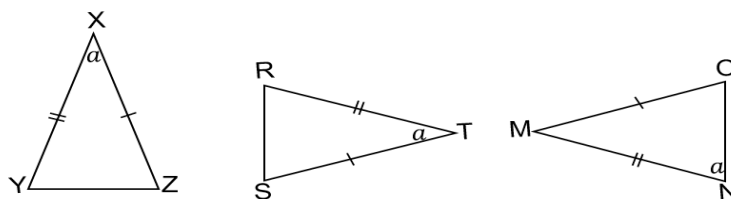
4.1.3. z (2)

4.2. In the diagram below, $RS \parallel TW$. Find the size of each of the following angles, **give reasons**4.2.1. a (3)

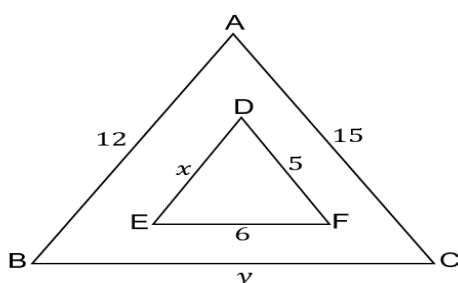
4.2.2. $\hat{S}VW$ (4)

Question 5**[17]**

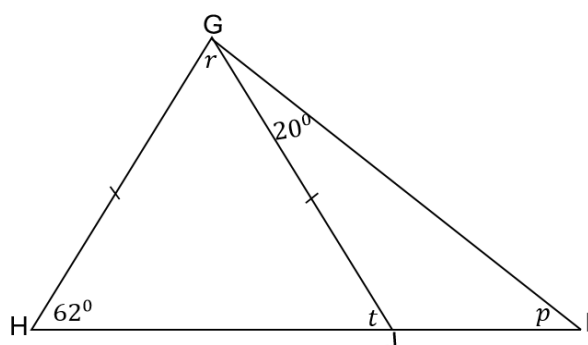
5.1. Which two triangles are congruent?

 $\Delta \underline{\hspace{2cm}} \equiv \Delta \underline{\hspace{2cm}}$

(2)

5.2. In the diagram below, $\triangle ABC \sim \triangle DEF$ Determine the length of x .

(2)

5.3. In the diagram below $GH = GJ$, $\hat{H} = 62^\circ$ and $\hat{IGJ} = 20^\circ$ 

Determine the value of :

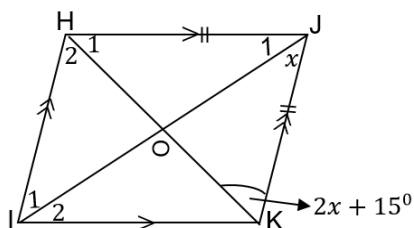
5.3.1. r

(4)

5.3.2. p

(2)

5.4. In the diagram below $HJ = JK$, $OJ = 6\text{ cm}$ and $\widehat{JKH} = 2x + 15^\circ$.



5.4.1. Calculate, with reasons the value of x

(4)

5.4.2. If the area of the above figure is 48 cm^2 . Calculate the length of HK .

(3)

You may use : $HK = \frac{2 \times \text{Area}}{IJ}$