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MATHEMATICS TEST

GRADE 8 · TERM 3 · SEPTEMBER 2025

Algebraic Expressions · Equations · Geometry of Straight Lines · Triangles

TOTAL: 50 MARKS **TIME: 1 HOUR** **EXAMINER: MR SIMONS**

INSTRUCTIONS AND INFORMATION

1. This question paper consists of THREE questions.
2. Answer ALL the questions.
3. The question paper must be handed in separately. DO NOT attach it to your answer book.
4. Answers only will NOT necessarily be awarded full marks.
5. You may use an approved scientific calculator (non-programmable and non-graphical), unless stated otherwise.
6. If necessary, round off answers to TWO decimal places, unless stated otherwise.
7. Diagrams are NOT necessarily drawn to scale.
8. Write neatly and legibly.

QUESTION 1

1.1 Simplify the following:

1.1.1 $5x + 10y - 11x + 8y$ (2)

1.1.2 Subtract $4x - 5$ from $4 + 10x$. (2)

1.1.3 $\frac{22y^3 - 12y^2 + 6y}{2y}$ (3)

1.1.4 $\sqrt{28x^2 + 8x^2} + 3x$ (3)

1.1.5 Determine the value of $3x^2 + 2y^3 - 1$ if $x = -2$ and $y = 4$. (3)

1.2 Solve for x in the following equations:

1.2.1 $x + 10 = 18$ (1)

1.2.2 $\frac{2x + 6}{3} = 4$ (3)

1.2.3 $2^{x+2} = 64$ (3)

[20]

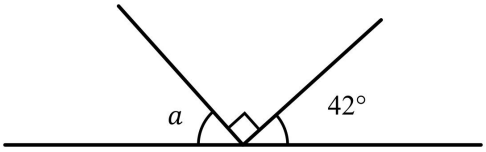
QUESTION 2

2.1 Write down the complement of 40°. (1)

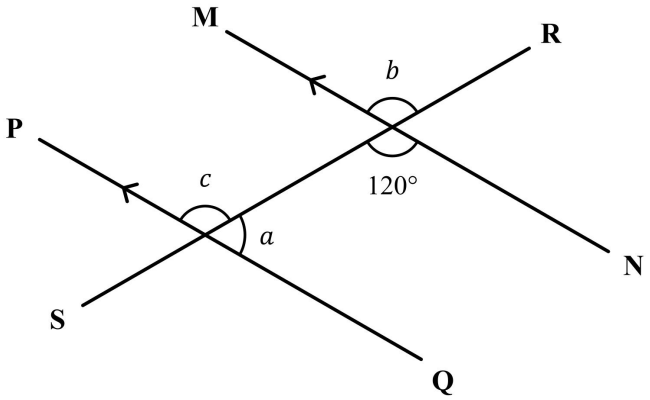
2.2 Determine the supplement of 75°. (1)

2.3 Calculate, with reasons, the unknown angles:

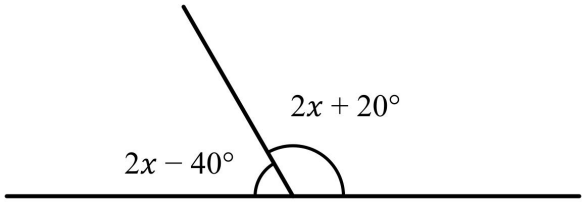
2.3.1 (2)



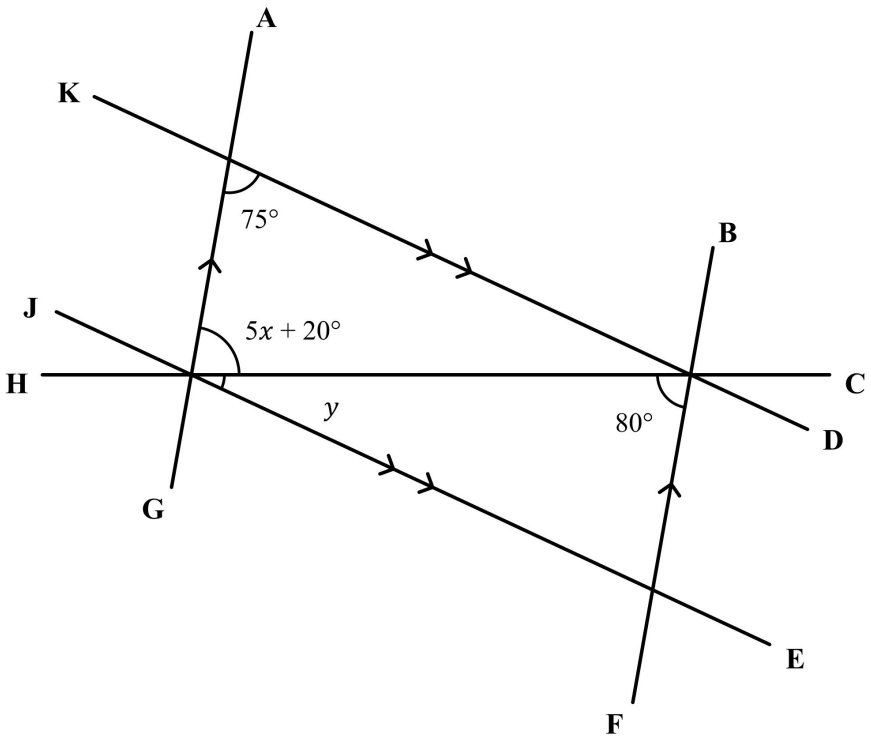
2.3.2 (6)



2.4 Calculate, with reasons, the value of x: (3)



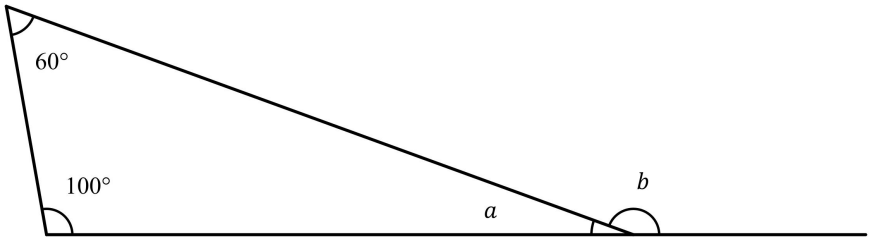
2.5 Calculate, with reasons, the values of x and y: (6)



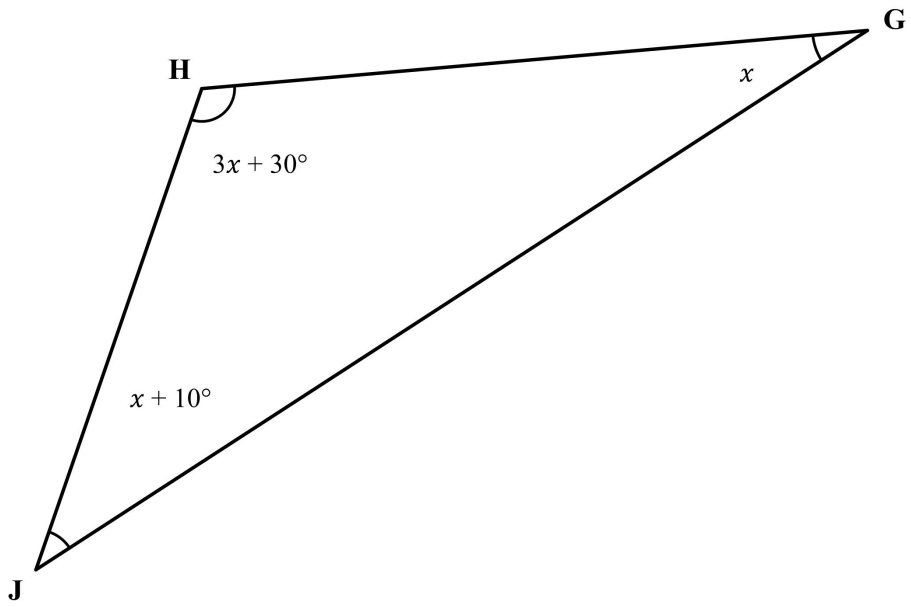
[19]

QUESTION 3

3.1 Determine, with reasons, the values of the unknown angles: (4)



3.2 Consider the diagram and answer the questions that follow:



3.2.1 Determine, with reasons, the value of x. (3)

3.2.2 Calculate the size of each angle. (3)

3.2.3 What type of triangle is △GHJ? (1)

[11]

TOTAL: 50