

**Western Cape
Government**

Education

GRADE 8

**MATHEMATICS
PAPER 2**

JUNE 2015

MARKS: 60

TIME: 1 ½ HOURS

This paper consists of 6 pages.

INSTRUCTIONS

Read the following instructions carefully before answering the questions.

1. This question paper consists of 5 questions which must all be answered.
2. Number the answers correctly according to the numbering system used in this question paper.
4. Clearly show ALL calculations.
5. Answers only will not necessarily be awarded full marks.
6. You may use an approved scientific calculator (non-programmable and non-graphical), unless stated otherwise.
7. If necessary, round off answers to TWO decimal places, unless stated otherwise.
8. Write neatly and legibly.

QUESTION 1

Complete the following geometrical statements:

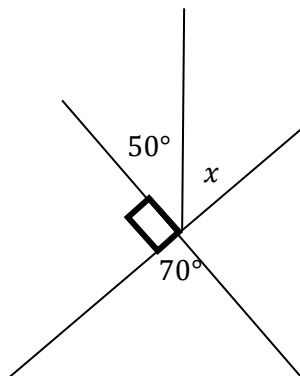
- 1.1 The supplement of 75° is (1)
- 1.2 From 2 o'clock to 6 o'clock the hour hand of a clock turns through $^\circ$ (1)
- 1.3 A triangle with two equal sides is called (1)
- 1.4 73° is the of 17° (1)
- 1.5 An angle of 360° is called a (1)
- 1.6 The lines that are equidistant from each other are called.....lines. (1)
- 1.7 The opposite angles of a rhombus are (1)

[7]

QUESTION 2

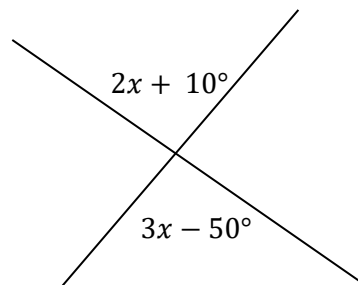
Determine the values of the variables in the diagrams. Give reasons for your answers.

2.1.1



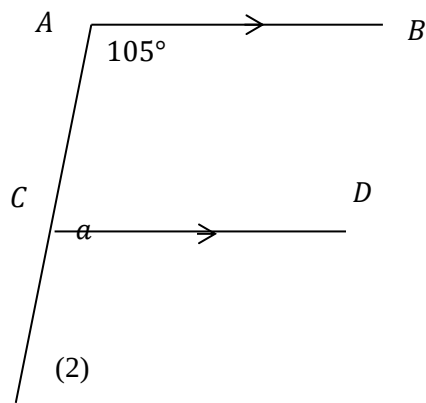
(3)

2.1.2



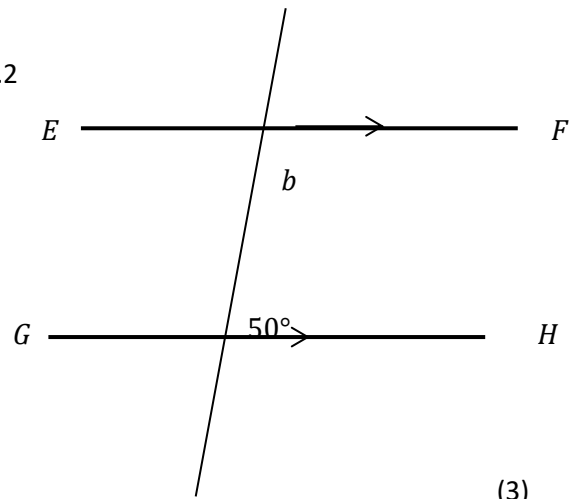
(3)

2.2.1



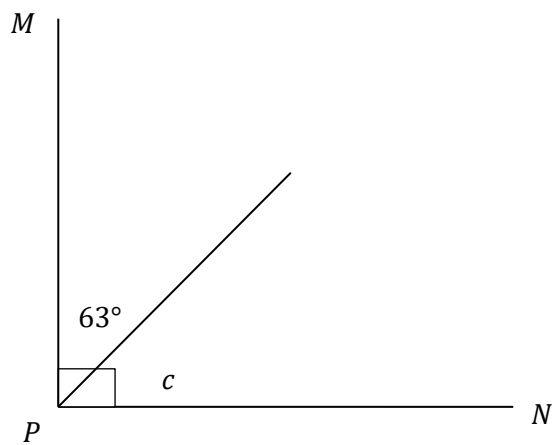
(2)

2.2.2



(3)

2.2.3



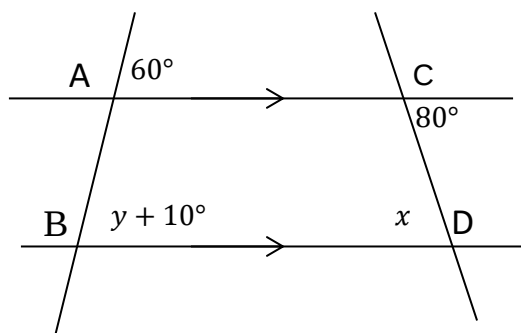
(3)

[14]

QUESTION 3

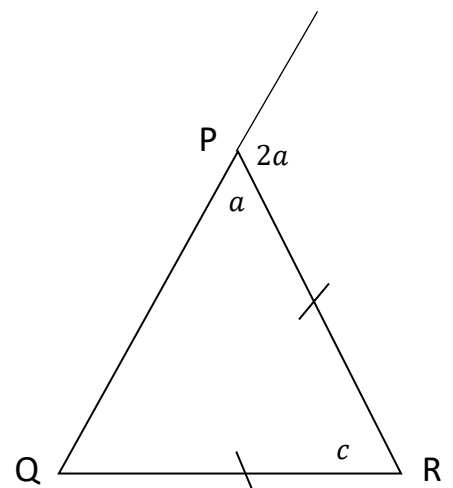
Determine the values of the variables in the diagrams below:

3.1



(5)

3.2



(6)

STATEMENT	NAME OF GEOMETRICAL FIGURE
3.3.1 All the sides of the triangle have the same lengths.	
3.3.2 All three angles of the triangle are equal to 60°	
3.3.3 The triangle has two angles equal to 45° .	
3.3.4 One of the angles is equal to 90° .	
3.3.5 One of the angles is more than 90° .	
3.3.5 The internal angles of a four-sided figure adds up to 360°	
3.3.6 The four- sided figure has two that has two pairs of adjacent sides equal.	

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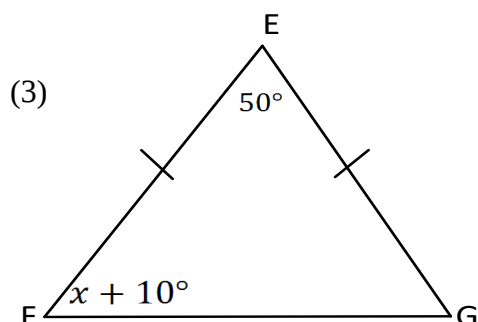
(6)

[17]

QUESTION 4

Use the diagrams below to answer the questions. **PROVIDE REASONS WITH YOUR ANSWERS.**
The diagrams are not drawn to scale.

4.1 Determine the value of x :

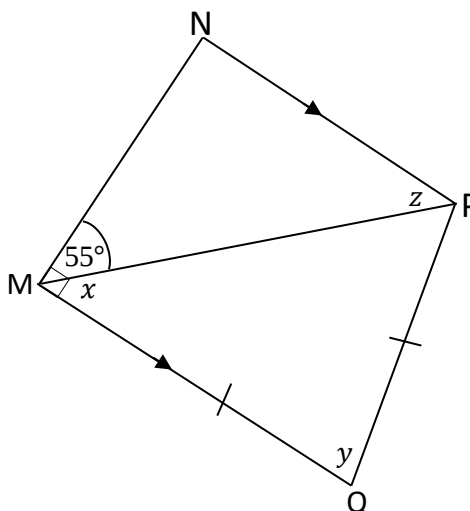


4.2

4.2.1 Determine the size of x . (3)

4.2.2 Determine the size of z . (2)

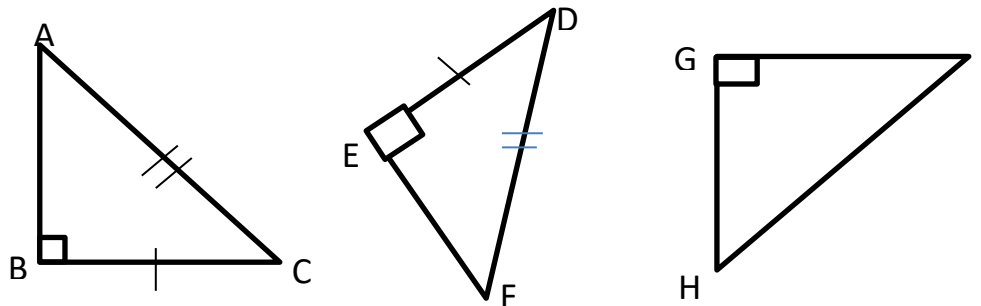
4.2.3 Determine the size of y . (4)



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QUESTION 5

5.1 Consider the triangles below. Are the triangles similar, congruent or neither. Give a reason for each answer.



5.1.1 Are $\triangle ABC$ and $\triangle DEF$ similar, congruent or neither. Give a reason. (2)

5.1.2 Are $\triangle ABC$ and $\triangle JGH$ similar, congruent or neither. Give a reason. (2)

5.2 In the question below

- Write down the **name** of the 2D shape in Column A next to the question number in your answer book.
- Choose only ONE characteristic from Column B and write it next to each of the 2D shapes.

Question No.	COLUMN A Diagram	COLUMN B Characteristics
5.2.1		2 pairs opposite sides parallel. All angles equal.
5.2.2		2 pairs of opposite sides are parallel. 2 pairs of opposite angles are equal. 1 pair opposite sides parallel.
5.2.3		All interior angles add to 360°

(3 × 2 = 6)

[10]

TOTAL: 60 MARKS