

Symmetry

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **20**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

1 Write down the number of lines of symmetry of

(a) a rectangle

.....
(1)

(b) an equilateral triangle

.....
(1)

(c) a kite

.....
(1)

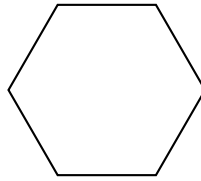
(Total for Question 1 is 3 marks)

2 Write down the order of rotational symmetry of a rectangle.

.....
(1)

(Total for Question 2 is 1 mark)

3 Here is a regular hexagon.



(a) Write down the number of lines of symmetry of the hexagon.

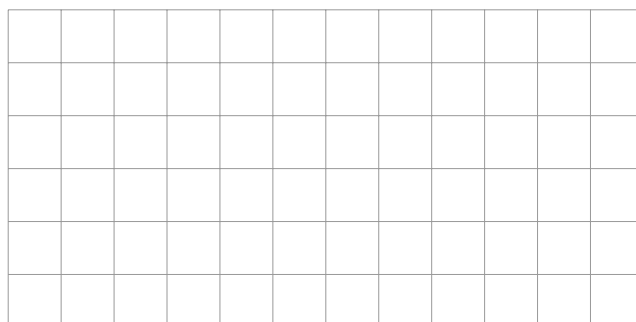
.....
(1)

(b) Write down the order of rotational symmetry of the hexagon.

.....
(1)

(Total for Question 3 is 2 marks)

4 On the grid, draw a quadrilateral that has
exactly one line of symmetry
and
exactly one pair of parallel sides.

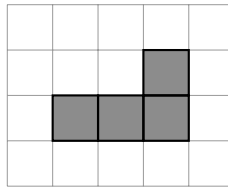


(2)

(Total for Question 4 is 2 marks)

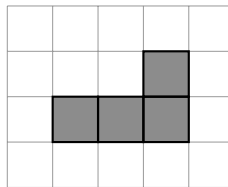
5 Here are some shaded squares on a grid.

(a) Shade **one** more square so that the shape has exactly one line of symmetry.



(1)

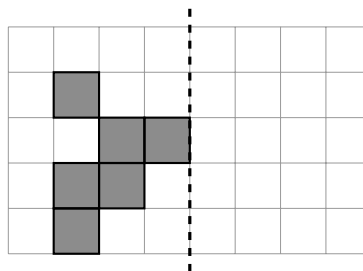
(b) Shade **two** more squares so that the shape has rotational symmetry of order 2



(1)

(Total for Question 5 is 2 marks)

6 Reflect the shaded shape in the dashed line.



(2)

(Total for Question 6 is 2 marks)

- 7 $ABCDEF$ is a hexagon.
The hexagon has rotational symmetry of order 2

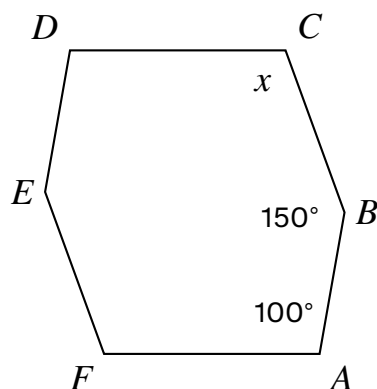


Diagram **NOT** accurately drawn

Work out the value of x .
You must show all your working.

$x = \dots\dots\dots$
(3)

(Total for Question 7 is 3 marks)

- 8** $ABCD$ is a kite.
The diagonal AC is a line of symmetry of the kite.
All measurements are in centimetres.

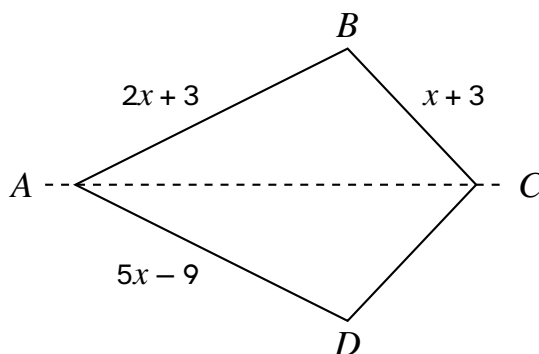


Diagram **NOT** accurately drawn

- (a) Find the value of x .

$x = \dots\dots\dots$
(3)

- (b) Work out the perimeter of the kite.

$\dots\dots\dots$ cm
(2)

(Total for Question 8 is 5 marks)