



**Bishops
Online
Tutoring**



Education Consultancy

Edexcel GCSE Mathematics

SYMMETRY

Materials Required:

- Pen
- HB Pencil
- Ruler (in centimetres and millimetres)
- Protractor
- Compass

Instructions:

- Use a black ink pen to answer all questions
- Fill your name in the section below
- Answer the questions in the spaces provided
- Show your working out for all answers

Information:

- The marks allocated for each question are displayed within brackets – utilise this information to gauge the appropriate amount of time to dedicate to each question
- Questions marked with an asterisk (*) will assess your written communication; be careful of spelling, punctuation and grammar with these questions

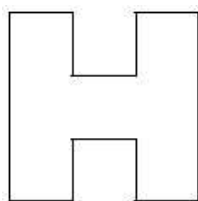
Advice:

- Carefully read the question before attempting to answer it
- Be vary of time and try to answer every question
- If you have enough time in the end, go back and check your answers. A good way to check your answers is to retry the question with the hope of getting the same answer as before without looking at your working out from before

NO CALCULATOR ALLOWED

NAME:

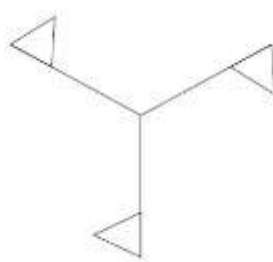
1. (a) On the shape, draw all the lines of symmetry.



(2)

The shape below has rotational symmetry.

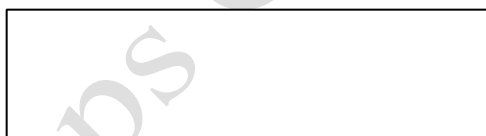
- (b) Write down the order of rotational symmetry.



(1)

(Total 3 marks)

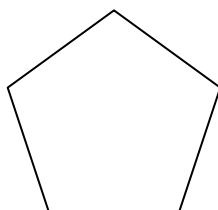
-
2. Here is a rectangle.



- (a) Draw all the lines of symmetry of this rectangle.

(2)

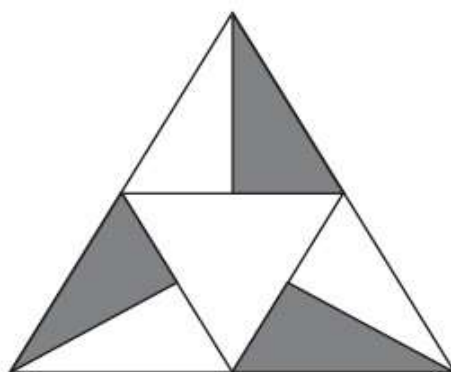
Here is a regular pentagon.



- (b) Write down the order of rotational symmetry of this regular pentagon.

(1)

Here is a shape.

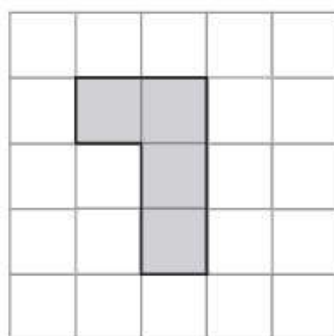


- (c) Write down the order of rotational symmetry of this shape.

.....
(1)

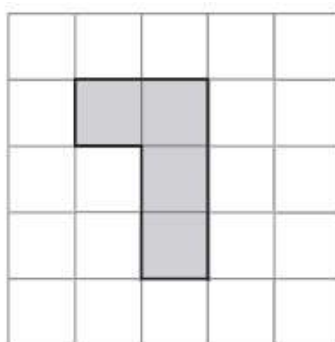
(Total 4 marks)

3. (a) Shade **one** more square to make a pattern with 1 line of symmetry.



(1)

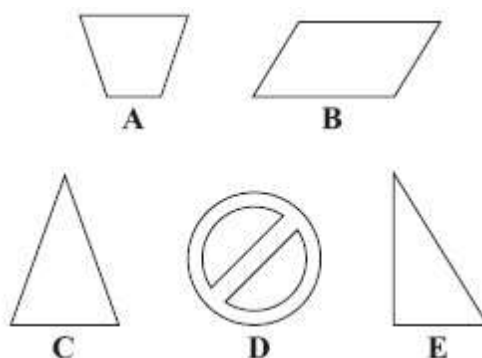
- (b) Shade **one** more square to make a pattern with rotational symmetry of order 2



(1)

(Total 2 marks)

4. Here are five shapes.



Two of these shapes have only **one** line of symmetry.

(a) Write down the letter of each of these **two** shapes.

..... and
(2)

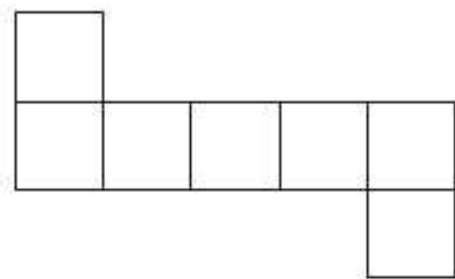
Two of these shapes have rotational symmetry of order 2

(b) Write down the letter of each of these **two** shapes.

..... and
(2)

(Total 4 marks)

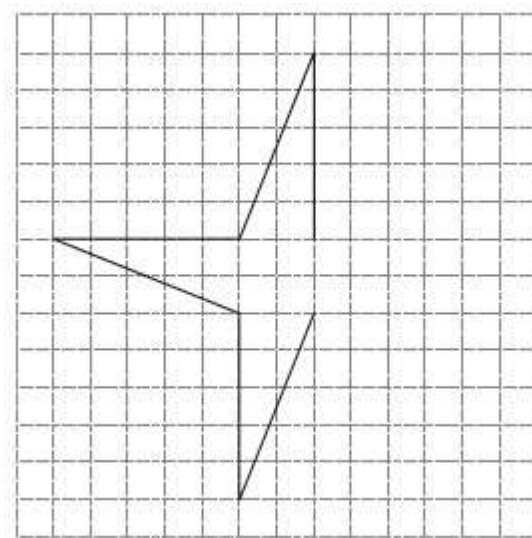
5. (a) This shape has rotational symmetry.



Mark with a cross (×) the centre of rotation.

(1)

(b)

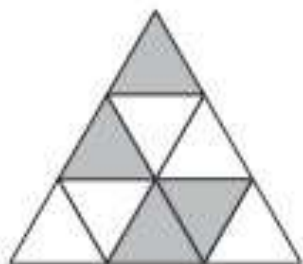


Complete this shape so that it has rotational symmetry of order 4

(1)

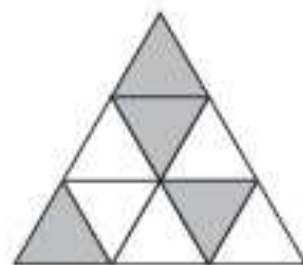
(Total 2 marks)

6. (a) Shade **two** more triangles to make a pattern with 1 line of symmetry.



(1)

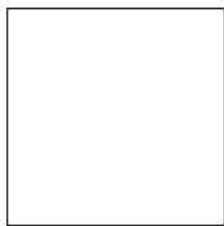
(b) Shade **two** more triangles to make a pattern with rotational symmetry of order 3



(1)

(Total 2 marks)

7. Here is a square.



(a) On the square, draw all the lines of symmetry.

(2)

Here is a rectangle.



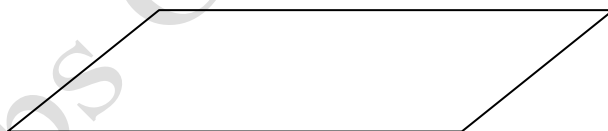
(b) Write down the order of rotational symmetry of the rectangle.

.....

(1)

(Total 3marks)

8. Here is a parallelogram.



(a) Write down the order of rotational symmetry of the parallelogram.

(1)

.....

Here is a rectangle.



(b) On the rectangle, draw all the lines of symmetry.

(1)

(Total 2 marks)

9. Here are four road signs.



A



B



C



D

Two of these road signs have one line of symmetry.

(a) Write down the letters of each of these **two** road signs.

..... and
(2)

Only **one** of these four road signs has rotational symmetry.

(b) (i) Write down the letter of this road sign.

.....

(ii) Write down its order of rotational symmetry.

.....

(2)

(Total 4 marks)

10. Here is a shape.



(a) Draw all the lines of symmetry on this shape.

(2)

Here is a regular hexagon.

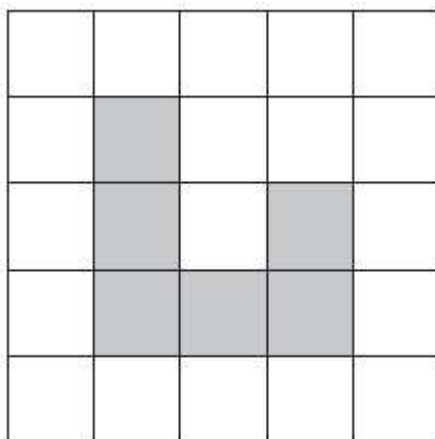


(b) Write down the order of rotational symmetry of this regular hexagon.

.....
(1)

(Total 3 marks)

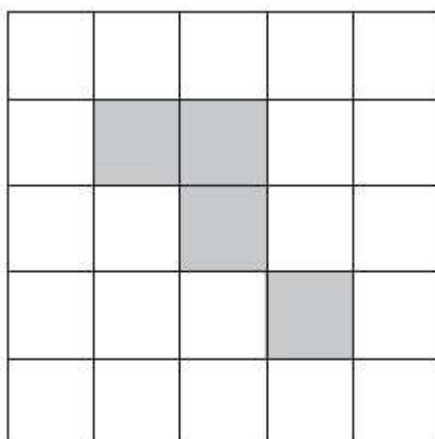
11. (a)



Shade **one** more square to make a pattern with 1 line of symmetry.

(1)

(b)



Shade **one** more square to make a pattern with rotational symmetry of order 2

(1)

(Total 2 marks)