

Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Symmetry

Calculator Allowed

INSTRUCTIONS TO CANDIDATES

Write your name in the space provided.

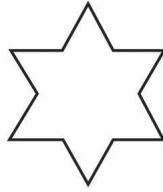
Write your answers in the spaces provided in this question paper.

Answer ALL questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

Total Marks :

1) (a)



What is the order of rotational symmetry of the star shown above?

Answer _____ [1]

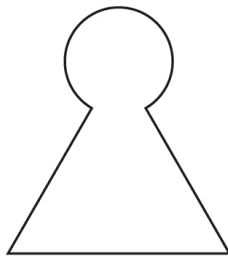
(b) What 4-sided shape has rotational symmetry of order 4?

Answer _____ [1]

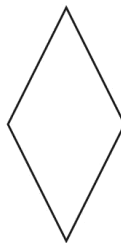
(c) Name a 4-sided shape with a rotational symmetry of order 2.

Answer _____ [1]

2)

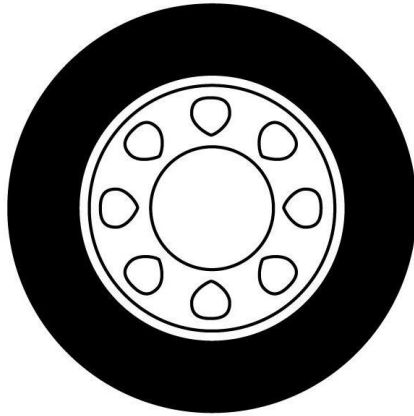


Draw the line of symmetry on the shape above. [1]



Draw all the lines of symmetry for this rhombus [2]

3)



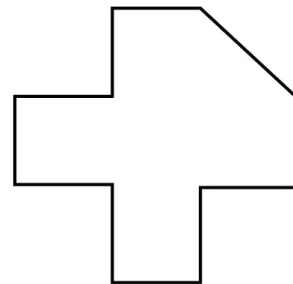
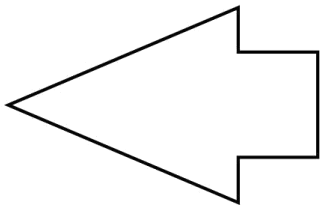
(i) What is the order of rotational symmetry of this car wheel?

Answer _____ [1]

(ii) This wheel travels about 6 feet in one complete turn. About how many metres is that?

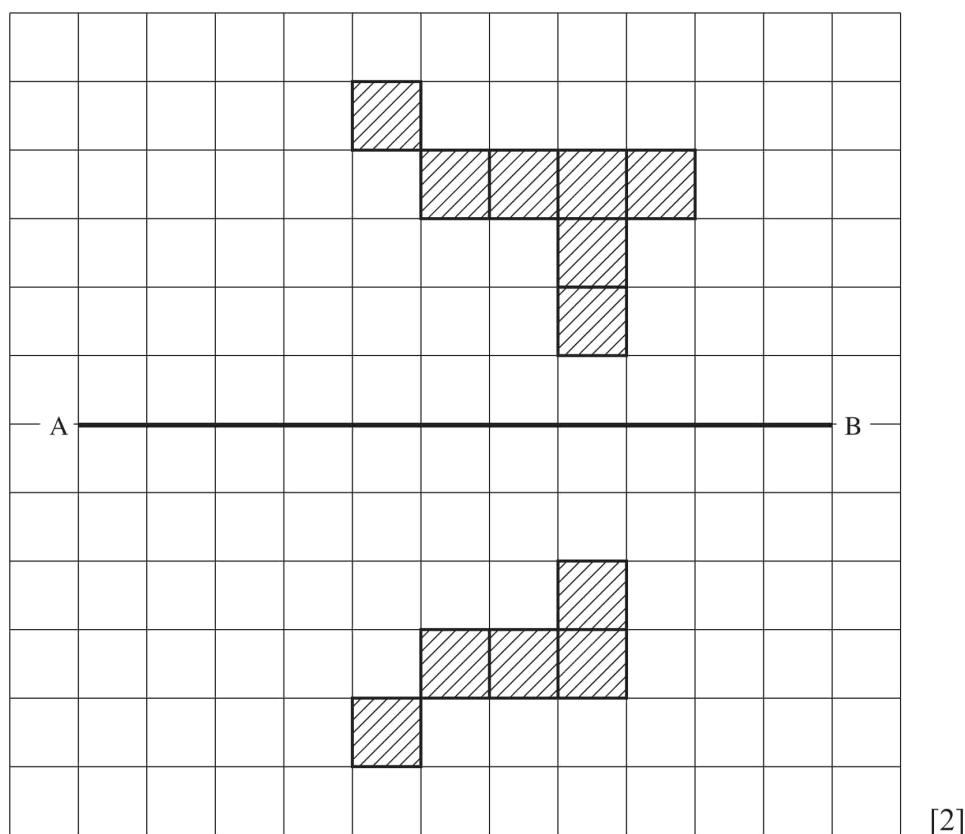
Answer _____ m [2]

4) Draw a line of symmetry on each shape below.



[2]

- 5) (a) Shade **two** squares on the diagram below so that AB is a line of symmetry.



[2]

(b)

M A T H S

From the letters in the word above, choose

- (i) a letter with no lines of symmetry. Answer _____ [1]
- (ii) a letter with rotational symmetry of order 2. Answer _____ [1]
- (c) The complete word below has one horizontal line of symmetry as shown.

--C-O-D--

Write down another **three letter word** which has one horizontal line of symmetry.

Answer _____ [1]

- 6) The table gives the names of some quadrilaterals and their symmetries. Complete the table.

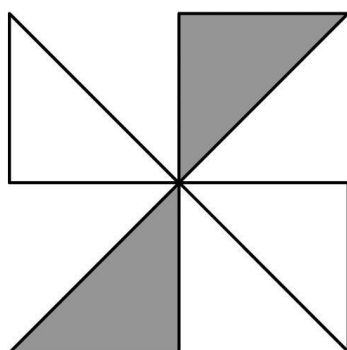
Name of Quadrilateral	Number of Lines of Symmetry	Order of Rotational Symmetry
Square	4	4
_____	2	2
Parallelogram	_____	_____

[3]

- 7) (a) Name a quadrilateral which has only one line of symmetry.

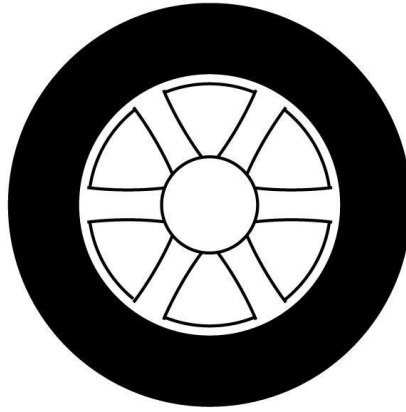
Answer _____[1]

- (b) What is the order of rotational symmetry of the shape shown below?



Answer _____[1]

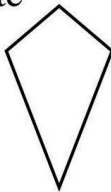
8) (a)



On the picture of the car wheel **above**, draw **all** the axes of symmetry. [2]

(b) Match the order of rotational symmetry to the shape.

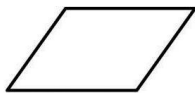
kite



Order

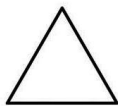
4

parallelogram



3

equilateral triangle



2

square



none of above

[3]

9) (a) **B U S**

From the letters in the word BUS (above) choose

(i) a letter with one vertical line of symmetry

Answer _____ [1]

(ii) a letter with one horizontal line of symmetry

Answer _____ [1]

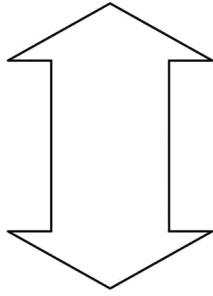
(iii) a letter with rotational symmetry of order 2

Answer _____ [1]

(b) _____ **A T**

Write a letter with exactly two lines of symmetry, in the blank space to create a new word. [1]

10)



For the shape shown above

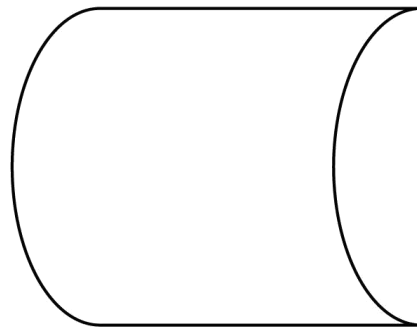
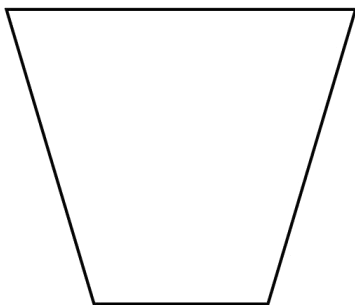
(i) state the number of lines of symmetry

Answer _____ [1]

(ii) state the order of rotational symmetry

Answer _____ [1]

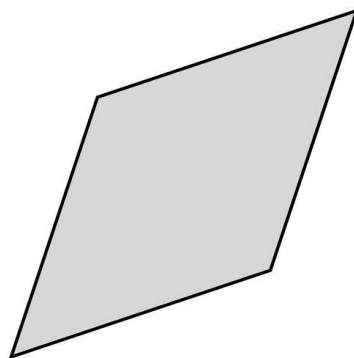
11) Draw a line of symmetry on each of the following shapes.



[2]

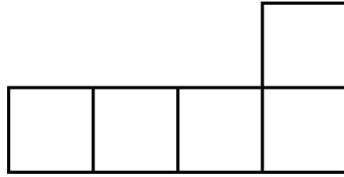
12) Draw in all the lines of symmetry for shape B.

Shape B



[2]

- 13) Add a one centimetre square to complete a shape with one line of symmetry.



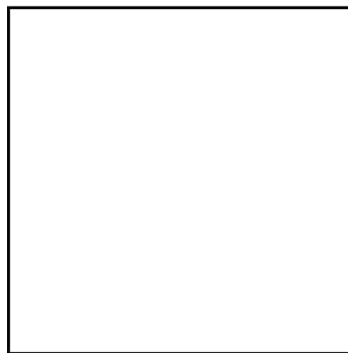
[1]

Add a one centimetre square to complete a shape which has rotational symmetry of order 2



[1]

14)



- (a) Draw all the lines of symmetry on the square.

[2]

- (b) What is the order of rotational symmetry of the square?

Answer _____ [1]