

Rotations

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

Name _____

Total marks: **21**

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

- 1** (a) The point $(2, 5)$ is rotated 180° about the origin, O .
Write down the coordinates of the image.

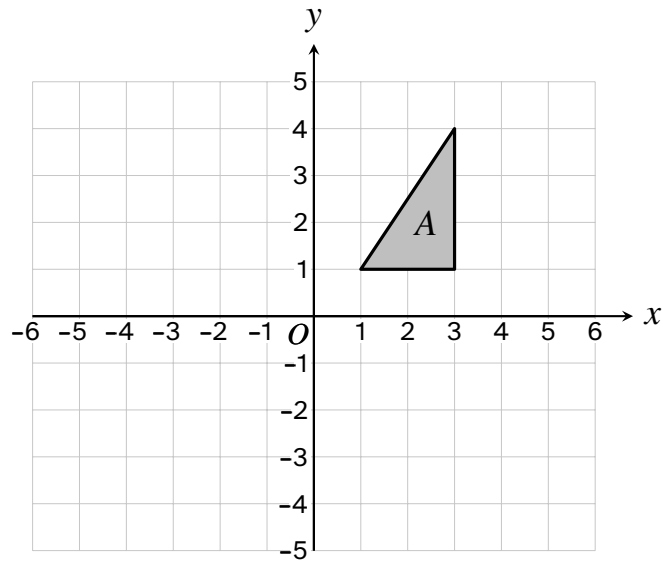
(..... ,)
(1)

- (b) The point $(4, 1)$ is rotated 90° clockwise about the origin, O .
Write down the coordinates of the image.

(..... ,)
(1)

(Total for Question 1 is 2 marks)

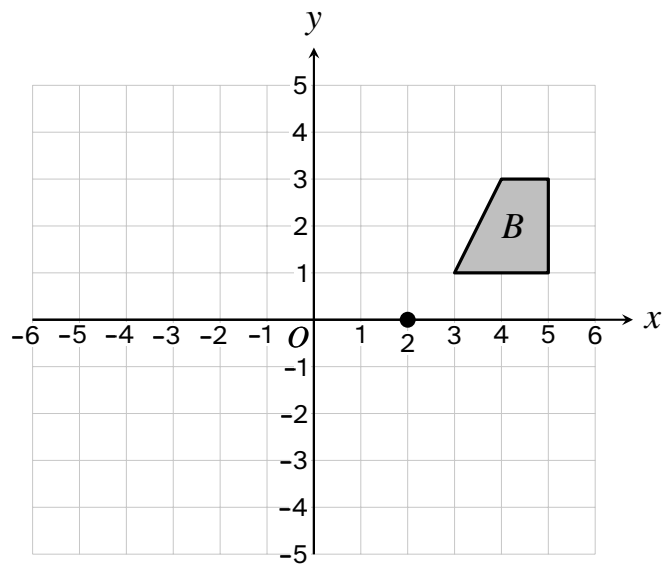
- 2 On the grid, rotate triangle A 90° anticlockwise about O .



(2)

(Total for Question 2 is 2 marks)

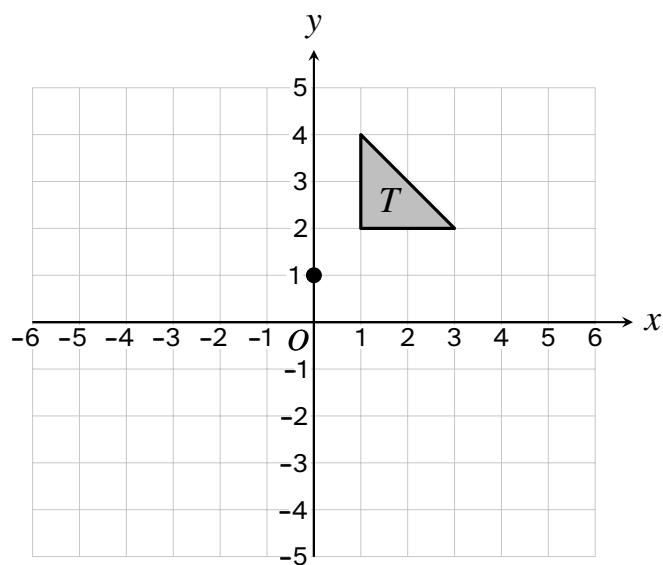
- 3 On the grid, rotate shape B 180° about the point $(2, 0)$



(2)

(Total for Question 3 is 2 marks)

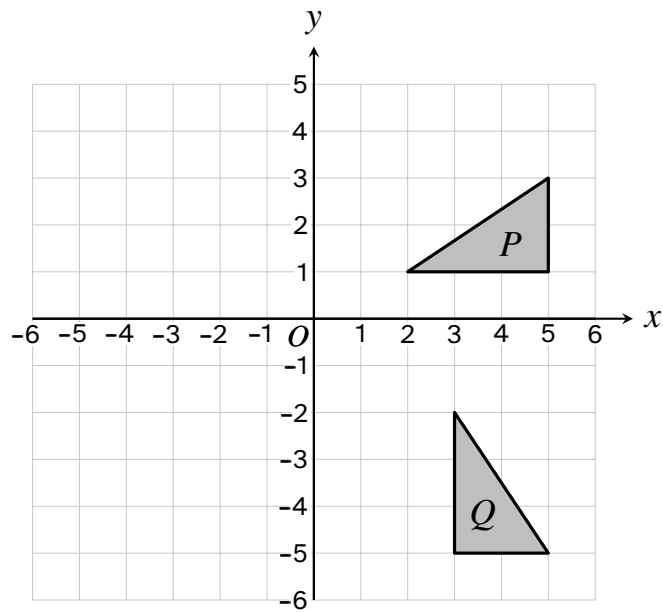
- 4 On the grid, rotate triangle T 90° clockwise about the point $(0,1)$



(2)

(Total for Question 4 is 2 marks)

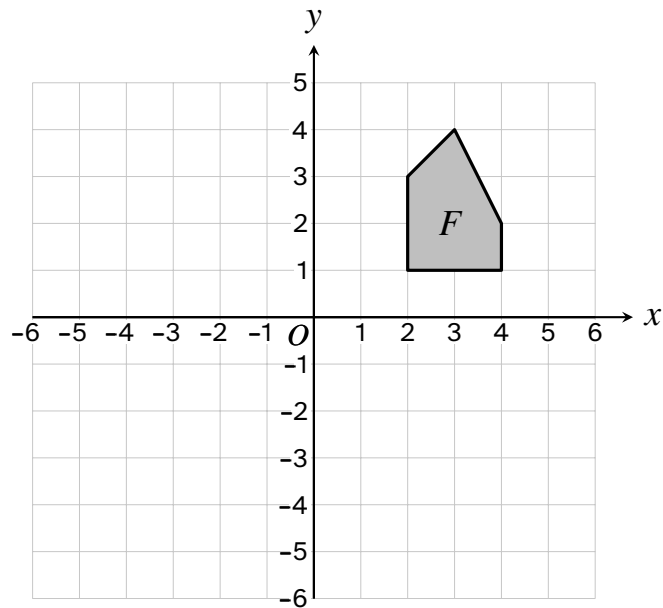
- 5 Describe fully the single transformation that maps triangle P onto triangle Q .



(2)

(Total for Question 5 is 2 marks)

6 Here is shape F on a grid.



- (a) On the grid, rotate shape F 180° about O .
Label the image G .

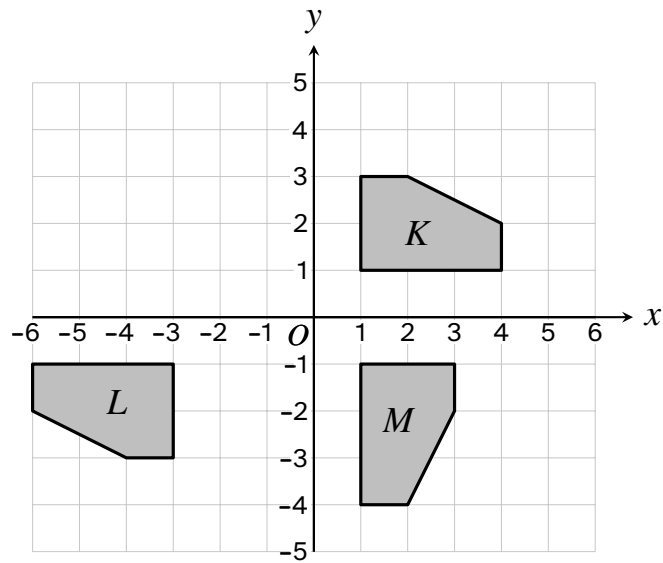
(1)

- (b) On the grid, rotate shape F 90° clockwise about the point $(0, -1)$.
Label the image H .

(2)

(Total for Question 6 is 3 marks)

7 The grid shows three shapes, K , L and M .



(a) Describe fully the single transformation that maps shape K onto shape L .

(2)

(b) Describe fully the single transformation that maps shape K onto shape M .

(2)

(Total for Question 7 is 4 marks)

- 8 Mo rotates the point $(3, 2)$ 90° anticlockwise about the origin, O .
He says,
'The image of the point is $(2, -3)$ '

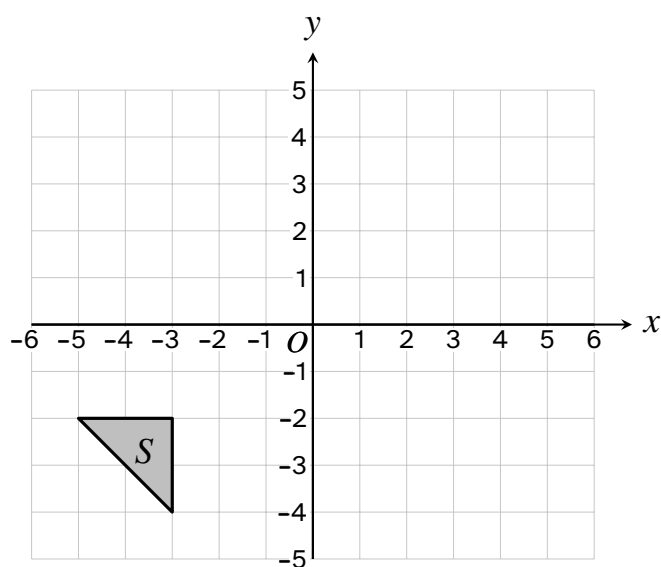
Is Mo correct?

Give a reason for your answer.

(2)

(Total for Question 8 is 2 marks)

- 9 On the grid, rotate triangle S 90° clockwise about the point $(-1, -1)$



(2)

(Total for Question 9 is 2 marks)
