

Describing and Combining Transformations

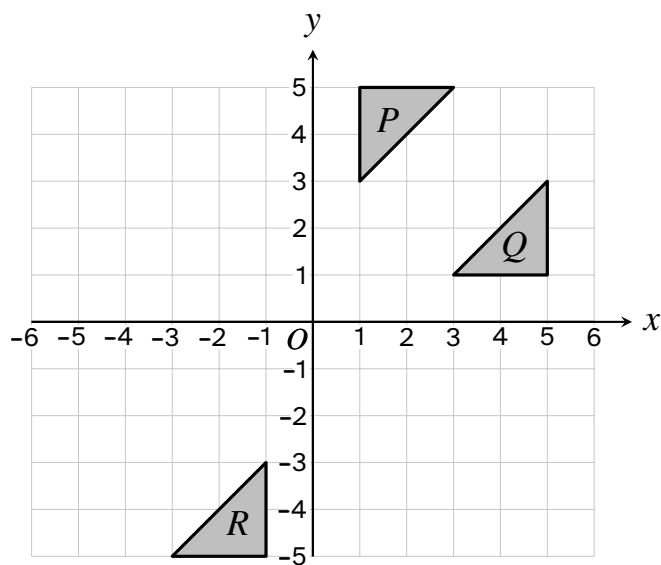
For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **20**

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

- 1** The grid shows three triangles, P , Q and R .



- (a) Describe fully the single transformation that maps triangle P onto triangle Q .

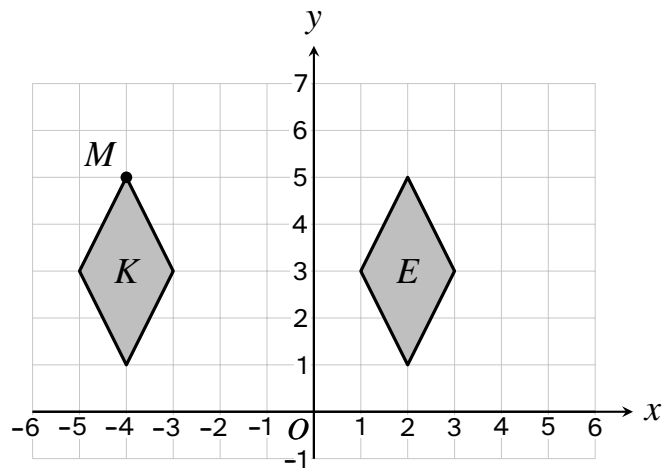
(2)

- (b) Describe fully the single transformation that maps triangle P onto triangle R .

(2)

(Total for Question 1 is 4 marks)

- 2 Kite E is a reflection of kite K .
 M is a vertex of kite K .



- (a) Write down the coordinates of the image of point M .

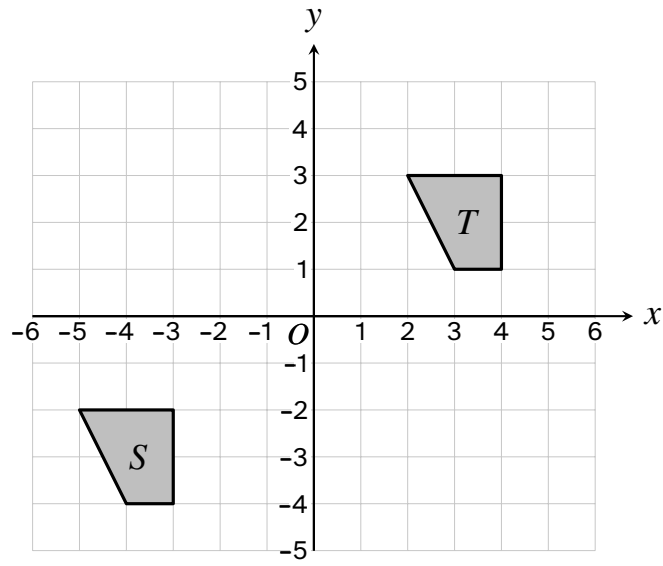
(..... ,)
 (1)

- (b) Write down an equation of the mirror line.

.....
 (1)

(Total for Question 2 is 2 marks)

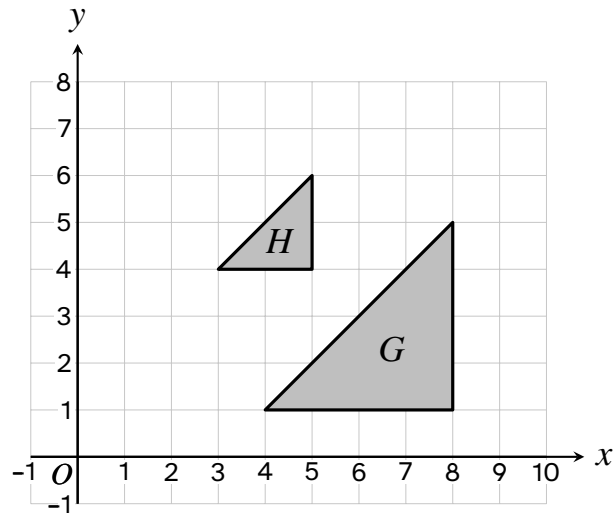
- 3 Describe fully the single transformation that maps shape S onto shape T .



(2)

(Total for Question 3 is 2 marks)

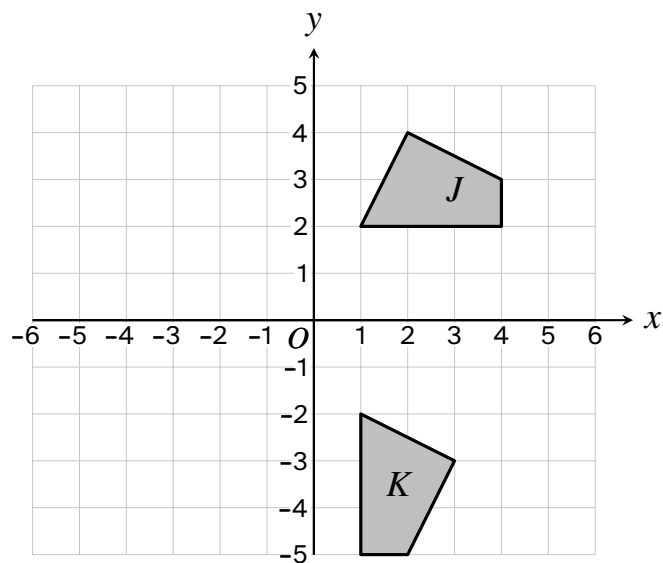
- 4 Describe fully the single transformation that maps triangle G onto triangle H .



(2)

(Total for Question 4 is 2 marks)

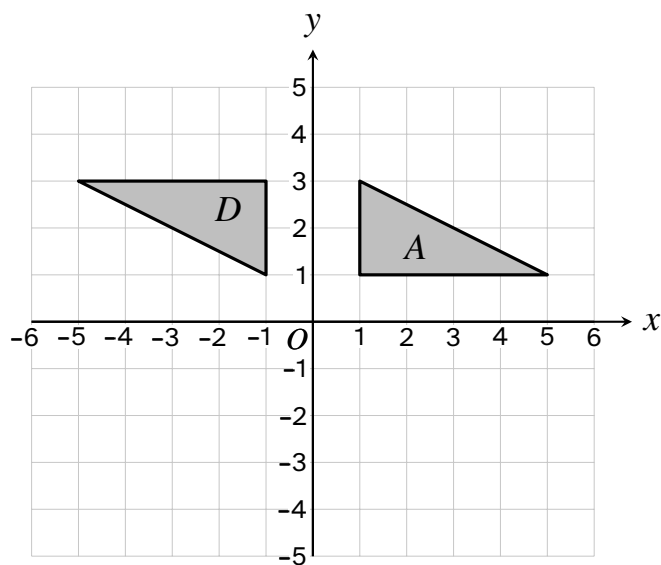
- 5 Describe fully the single transformation that maps shape J onto shape K .



(2)

(Total for Question 5 is 2 marks)

- 6 The grid shows triangle A and triangle D .



- (a) Rotate triangle A 90° clockwise about $(0, 0)$
Label the image B .

(2)

- (b) Reflect triangle B in the y -axis.
Label the image C .

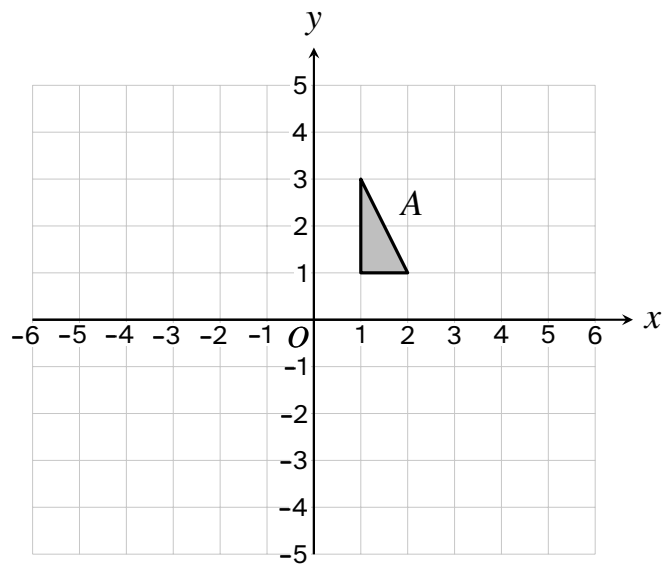
(1)

- (c) Describe fully the single transformation that maps triangle A onto triangle D .

(2)

(Total for Question 6 is 5 marks)

7 Here is shape A on a grid.



- (a) Translate shape A by the vector $\begin{pmatrix} 4 \\ -5 \end{pmatrix}$
Label the image B .

(1)

- (b) Describe fully the single transformation that maps shape B onto shape A .

(2)

(Total for Question 7 is 3 marks)
