

Enlargements with Negative Scale Factors

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

Name _____

Total marks: **20**

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

- 1** Triangle X has area 6 cm^2 . It is enlarged by scale factor $-\frac{1}{2}$
Find the area of the image.

..... cm^2
(2)

(Total for Question 1 is 2 marks)

- 2** Shape Y has area 2 cm^2
 Y is enlarged by scale factor k to give a shape with area 50 cm^2
Write down the two possible values of k .

.....
(2)

(Total for Question 2 is 2 marks)

- 3** The point $(5, 2)$ is enlarged by scale factor -3 with centre of enlargement $(2, 1)$
Find the coordinates of the image.

(..... ,)
(2)

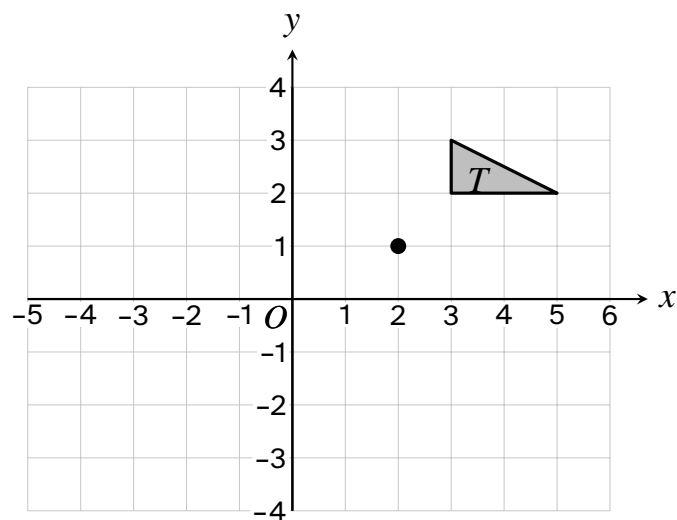
(Total for Question 3 is 2 marks)

- 4** Triangle A is rotated 180° about $(-1, -2)$
Describe fully a different single transformation that has the same effect.

(2)

(Total for Question 4 is 2 marks)

- 5 (a) On the grid, enlarge shape T by scale factor -2 , centre $(2, 1)$. Label the image V .



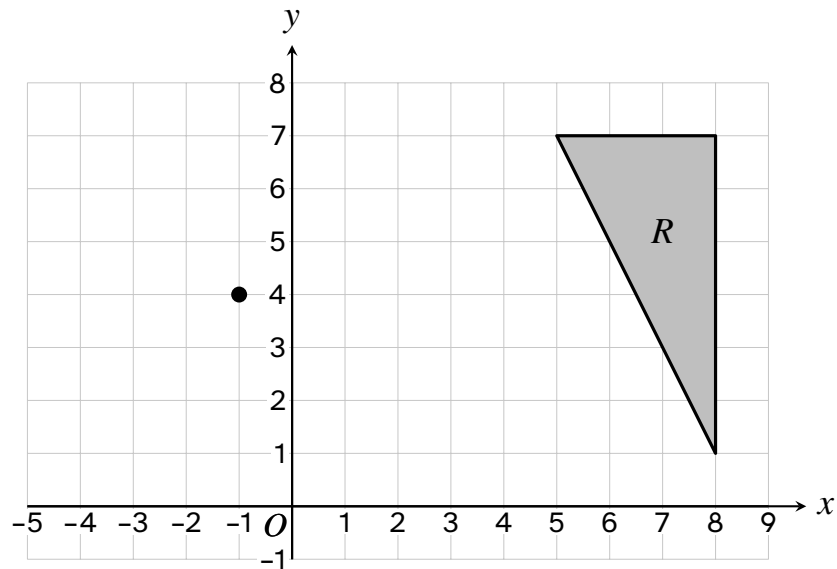
(2)

- (b) Shape T is also enlarged by scale factor 2, centre $(2, 1)$, to give shape W . Describe fully the single transformation that maps shape V onto shape W .

(2)

(Total for Question 5 is 4 marks)

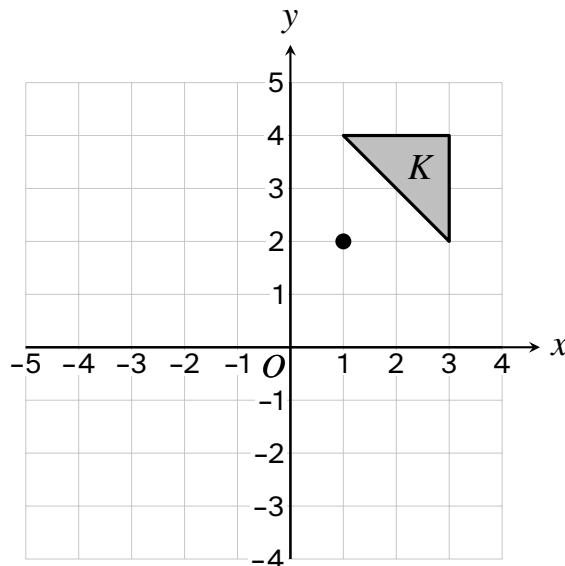
- 6 Enlarge triangle R by scale factor $-\frac{1}{3}$ with centre of enlargement $(-1, 4)$



(2)

(Total for Question 6 is 2 marks)

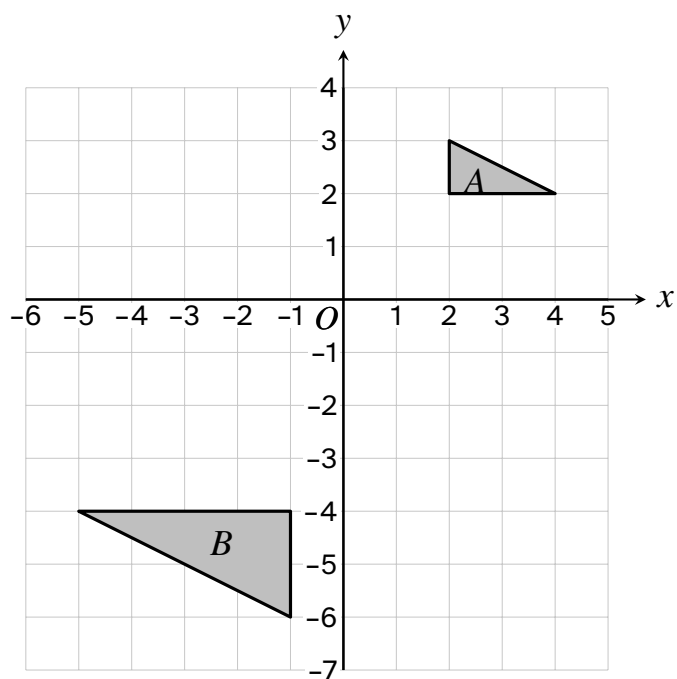
- 7 Enlarge triangle K by scale factor $-2\frac{1}{2}$, centre $(1, 2)$
Label the image L .



(2)

(Total for Question 7 is 2 marks)

- 8 Shapes A and B are drawn on the grid.

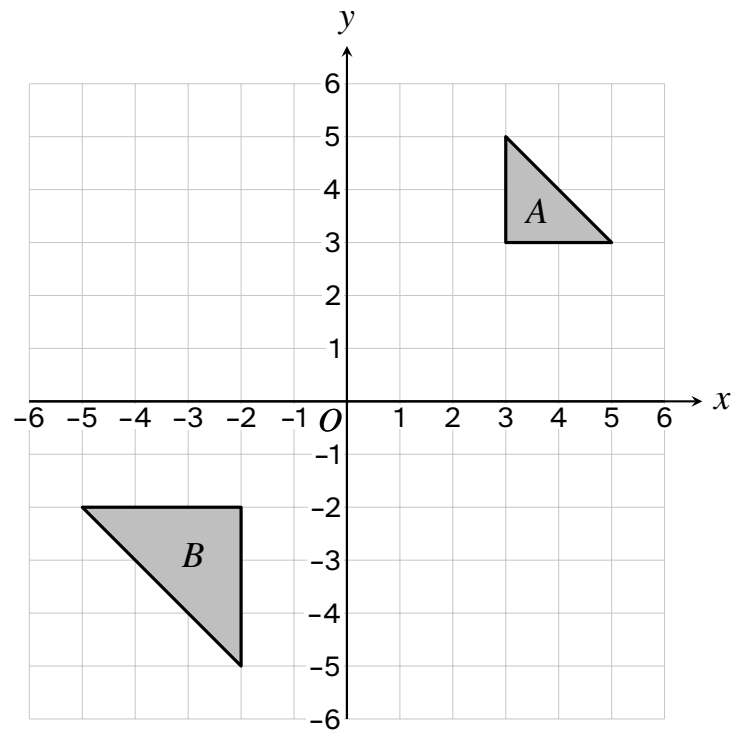


Describe fully the single transformation that maps shape A onto shape B .

(2)

(Total for Question 8 is 2 marks)

- 9 Triangles A and B are drawn on the grid.



Describe fully the single transformation that maps triangle A onto triangle B .

(2)

(Total for Question 9 is 2 marks)
