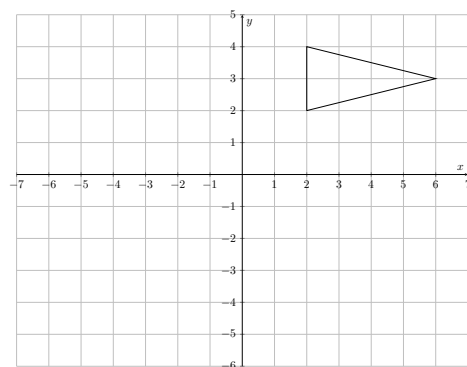


# Chapter 1

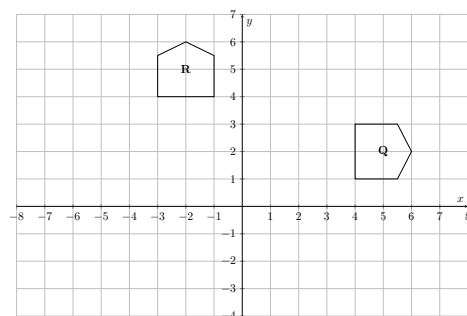
## GCSE Transformation Questions

1.



On the grid, enlarge the triangle by scale factor  $-\frac{1}{2}$ , centre  $(0, -2)$ . (2)

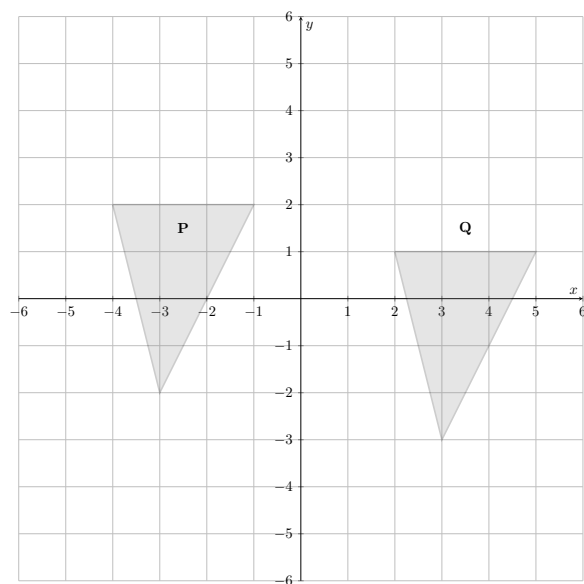
2.



Describe fully the single transformation that maps shape **Q** onto shape **R**. (3)

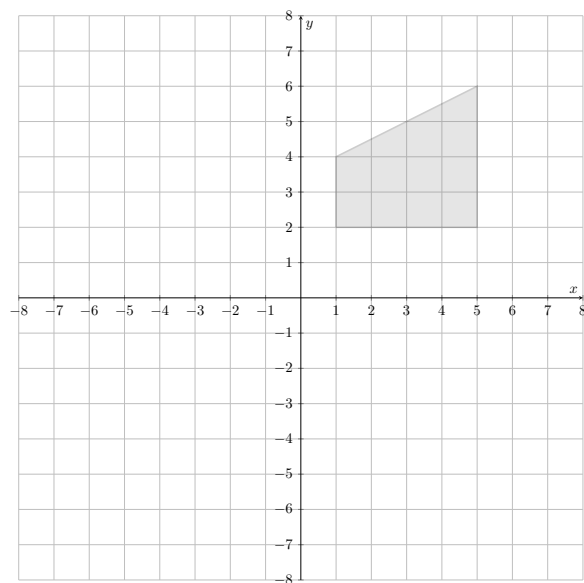
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3.



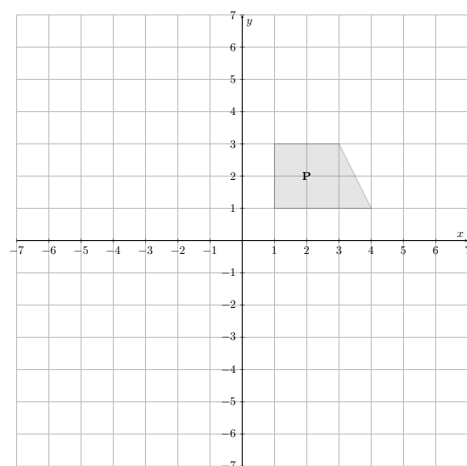
Describe fully the single transformation that maps triangle **P** onto triangle **Q**. (2)

4.



Enlarge the shaded shape by scale factor  $-\frac{1}{2}$  with centre  $(-1, -2)$ . (3)

5.



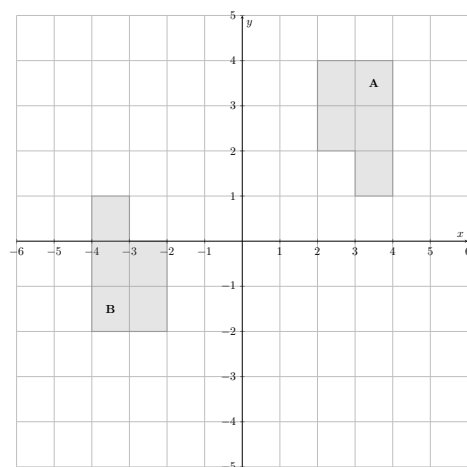
Shape  $P$  is reflected in the line  $x = -1$  to give shape  $Q$ .

Shape  $Q$  is reflected in the line  $y = 0$  to give shape  $R$ .

Describe fully the single transformation that maps shape  $P$  onto shape  $R$ . (3)

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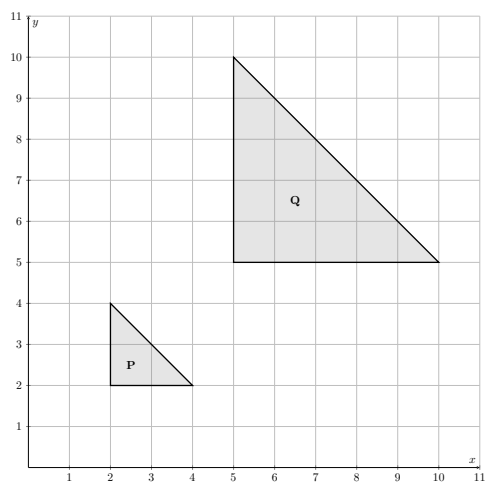
6.



Describe fully the single transformation that maps shape **A** onto shape **B** (3)

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7.

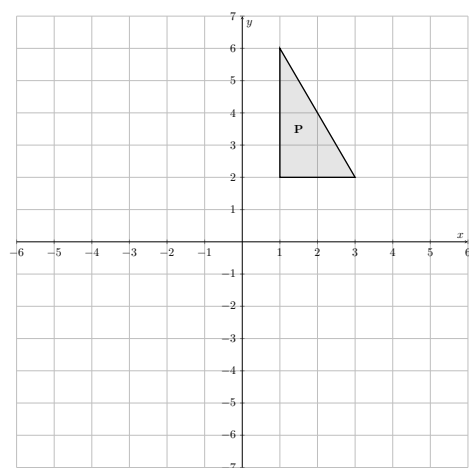


Describe fully the single transformation that maps shape **P** onto shape **Q**. (3)

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8.



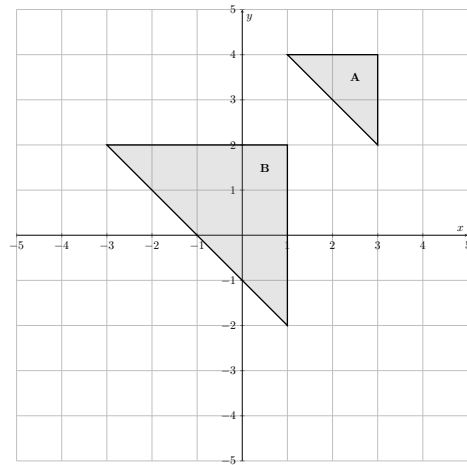
Triangle **P** is drawn on a coordinate grid. The triangle **P** is reflected in the line  $x = -1$  and then reflected in the line  $y = 1$  to give triangle **Q**.

Describe fully the single transformation which maps triangle **P** onto triangle **Q**. (3)

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9.



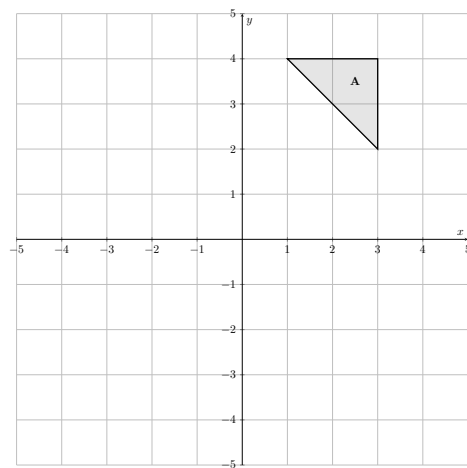
Triangle **A** and triangle **B** are drawn on the grid.

- (a) Describe fully the single transformation which maps triangle **A** onto triangle **B**. (3)

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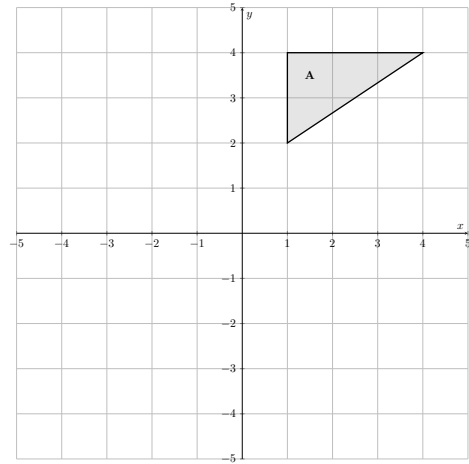
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- (b)



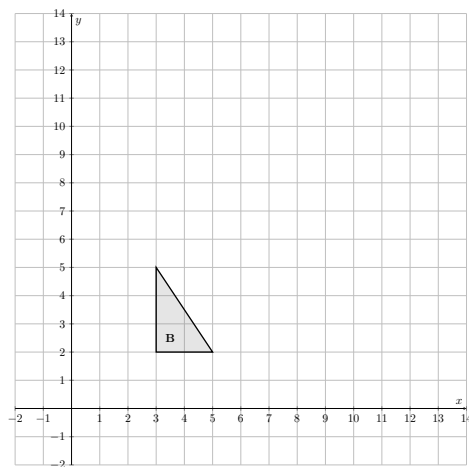
- Reflect triangle **A** in the line  $x = 4$ . (2)

10. (a)



Rotate triangle **A**  $90^\circ$  clockwise, centre  $O$ .

(b)



Enlarge triangle **B** by scale factor 3, centre  $(1, 2)$ .