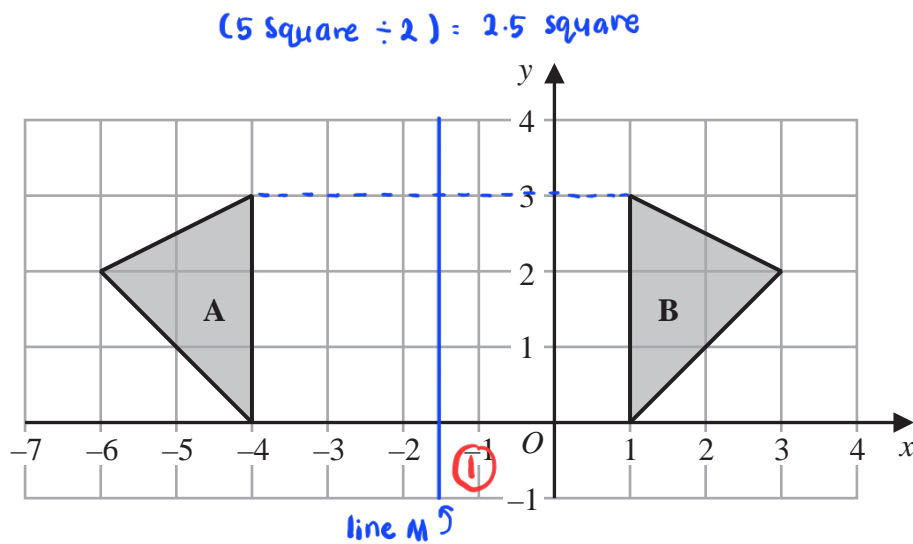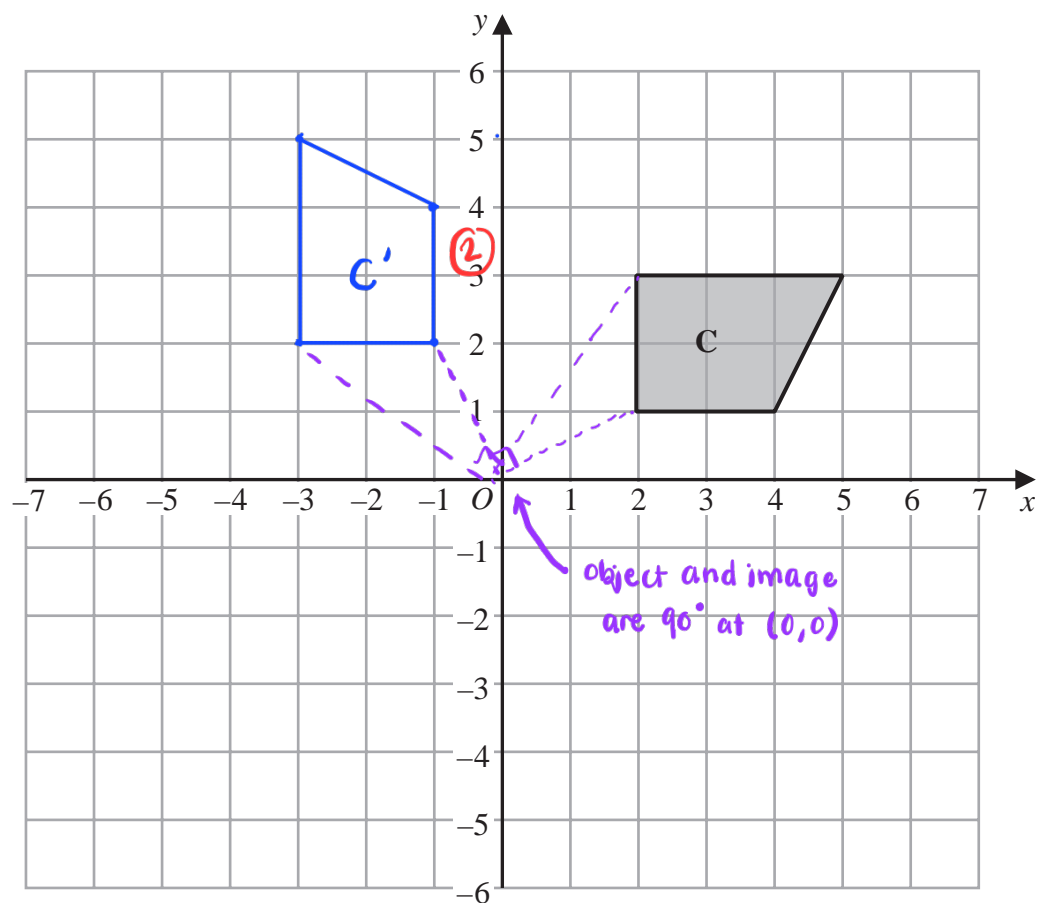**1**

(5 Square ÷ 2) = 2.5 square

line M

On the grid above, triangle **A** is the reflection of triangle **B** in the mirror line M.

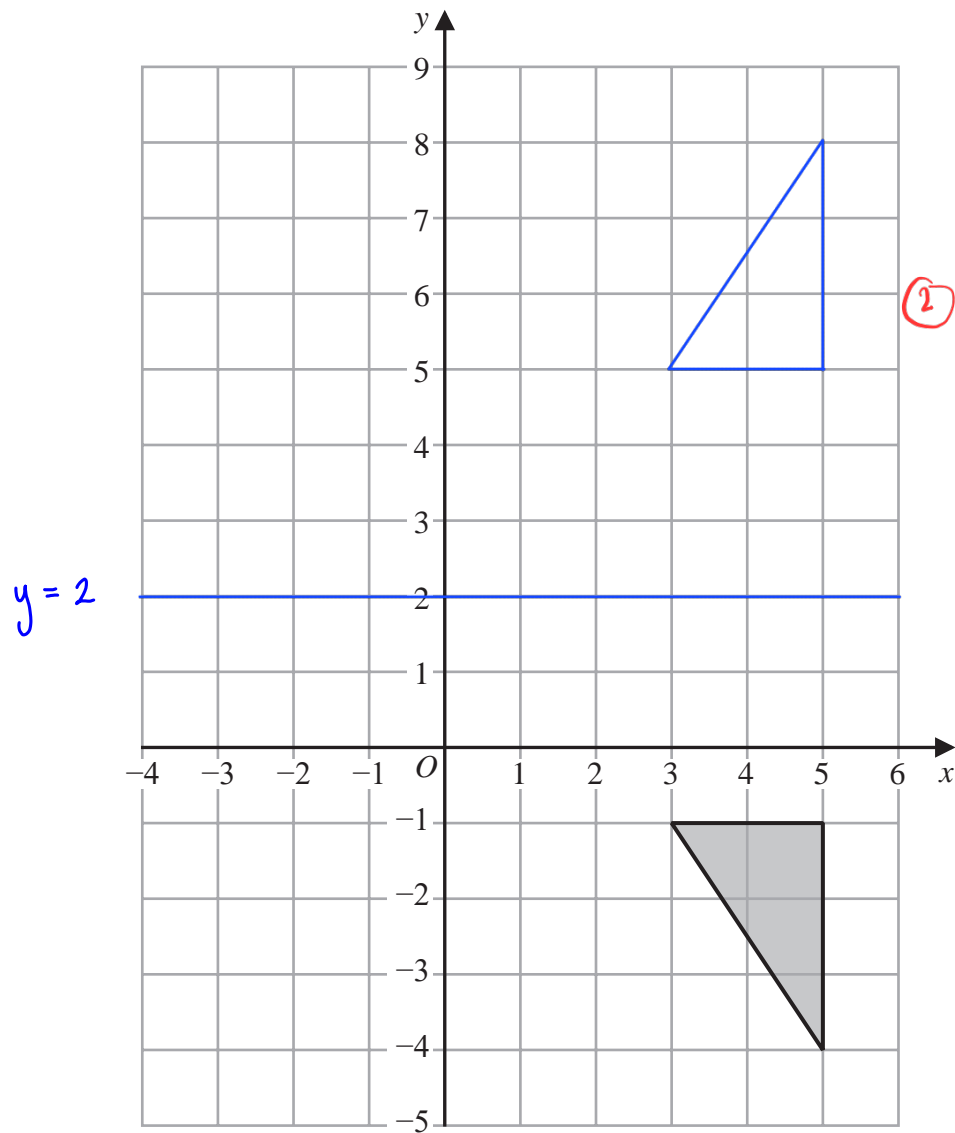(a) On the grid, draw the mirror line M.
Label the line M.

(1)

object and image
are 90° at (0,0)

(b) On the grid above, rotate the shaded shape **C** 90° anticlockwise about the point with
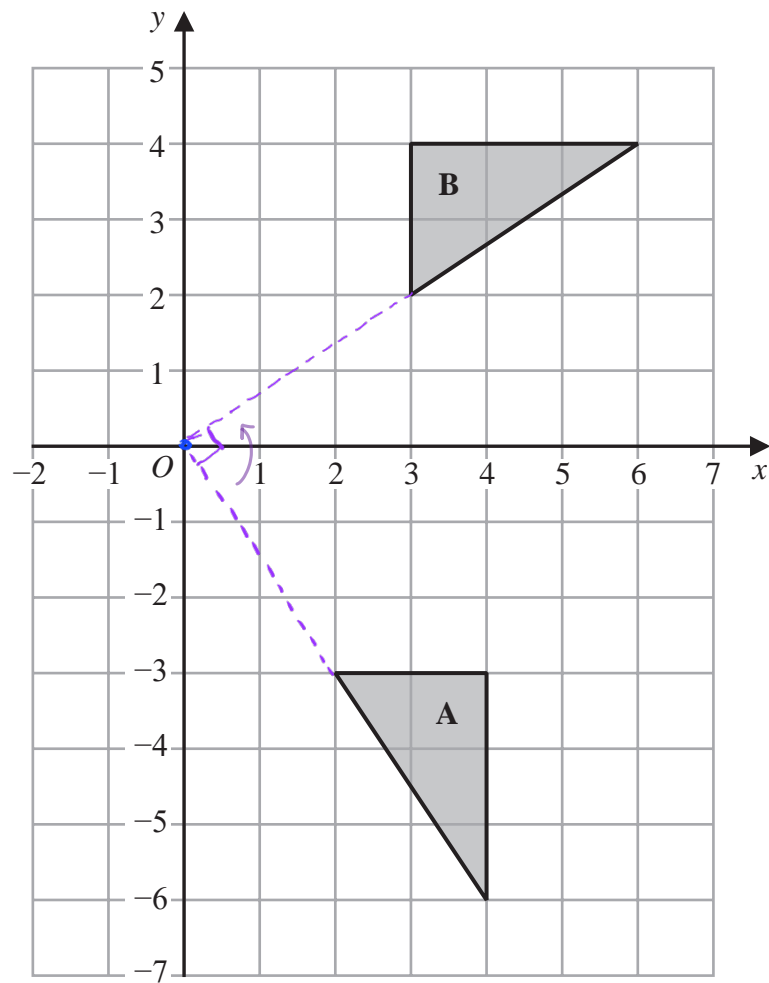coordinates (0, 0)

(2)

(Total for Question 1 is 3 marks)

2

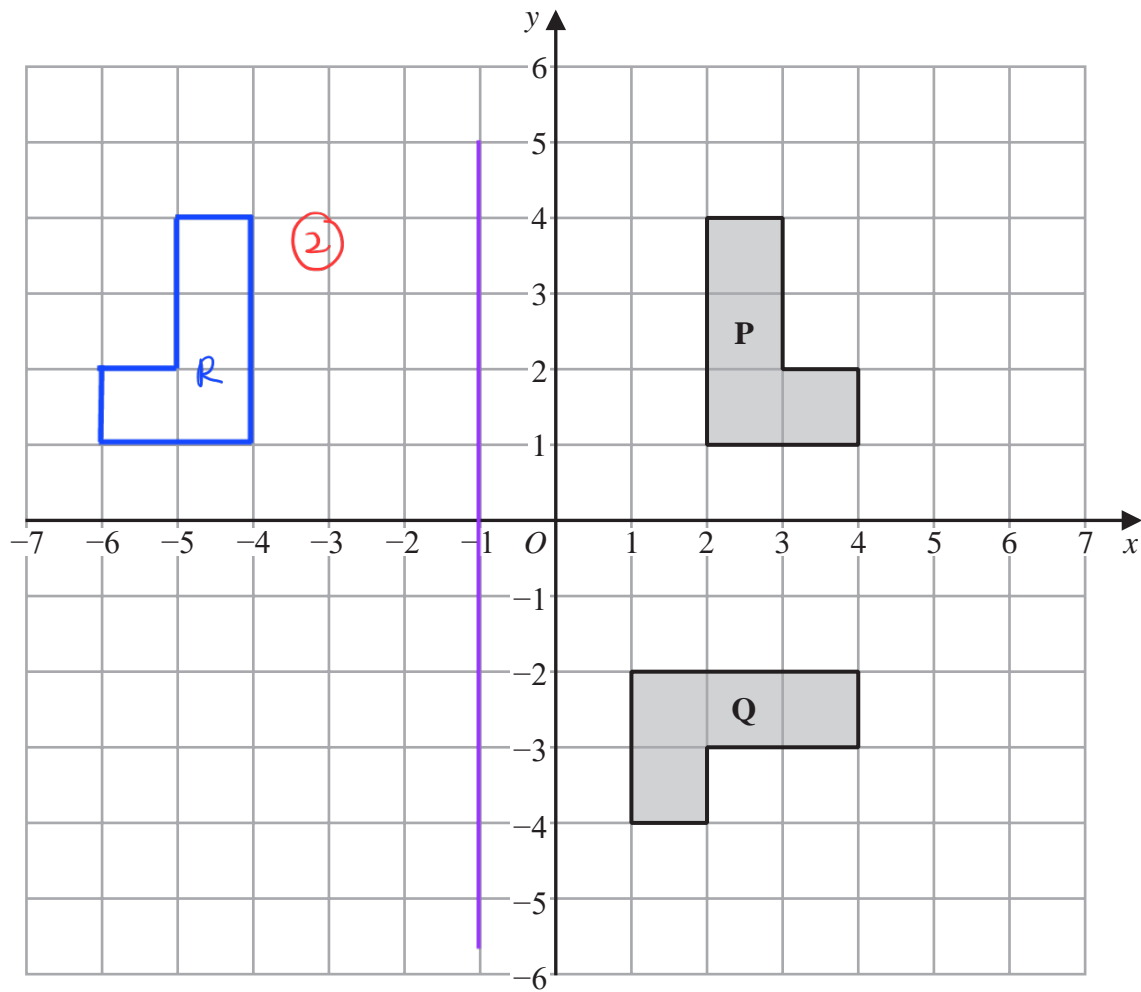(a) On the grid, reflect the shaded triangle in the line with equation $y = 2$

(2)

(b) Describe fully the single transformation that maps triangle **A** onto triangle **B**.

(3)

Rotation of 90° anticlockwise about (0,0) ③

(Total for Question 2 is 5 marks)

3

(a) Describe fully the single transformation that maps shape **P** onto shape **Q**.
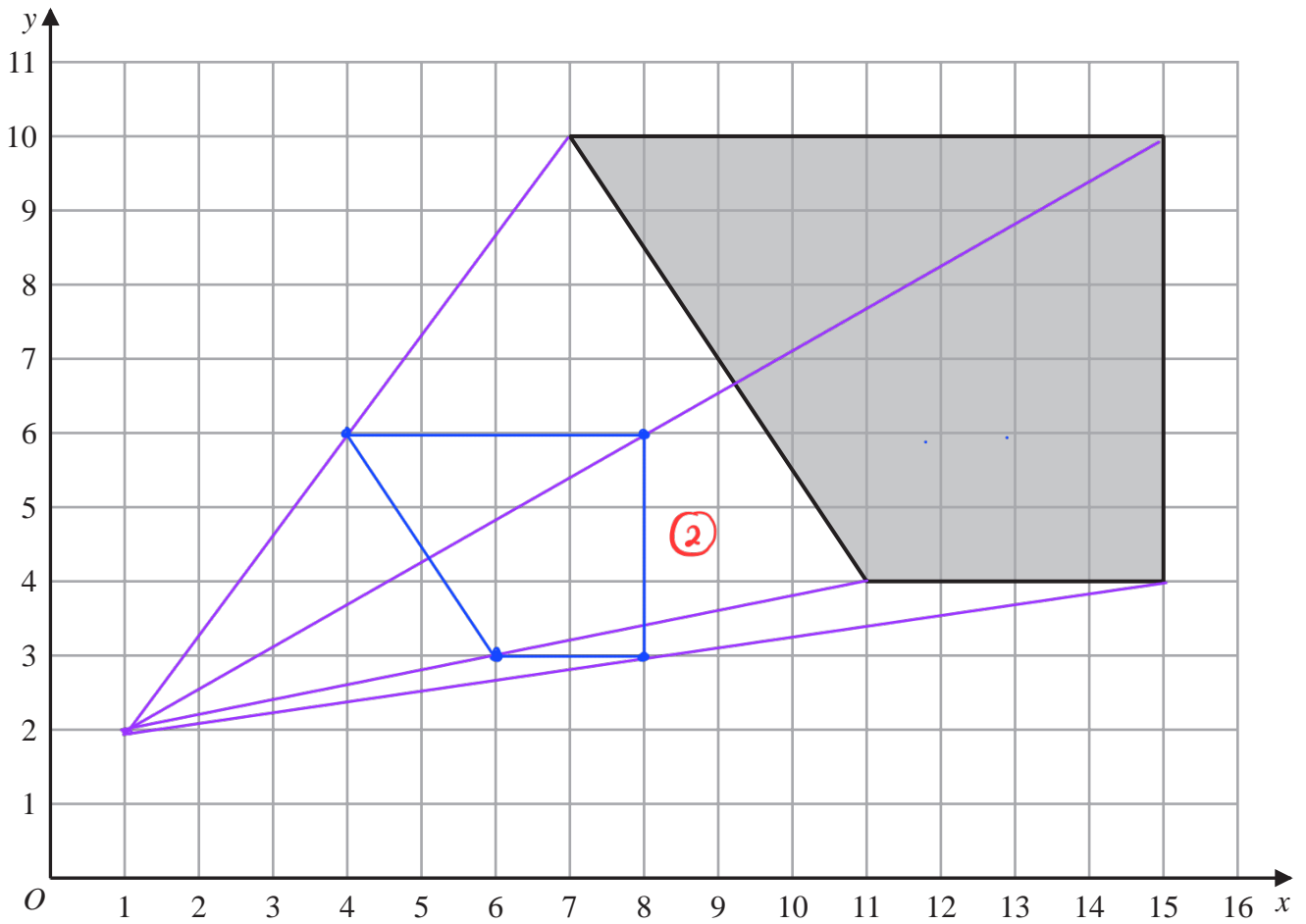
Rotation 90° clockwise at centre (0,0)

(3)

(b) On the grid, reflect shape **P** in the line $x = -1$
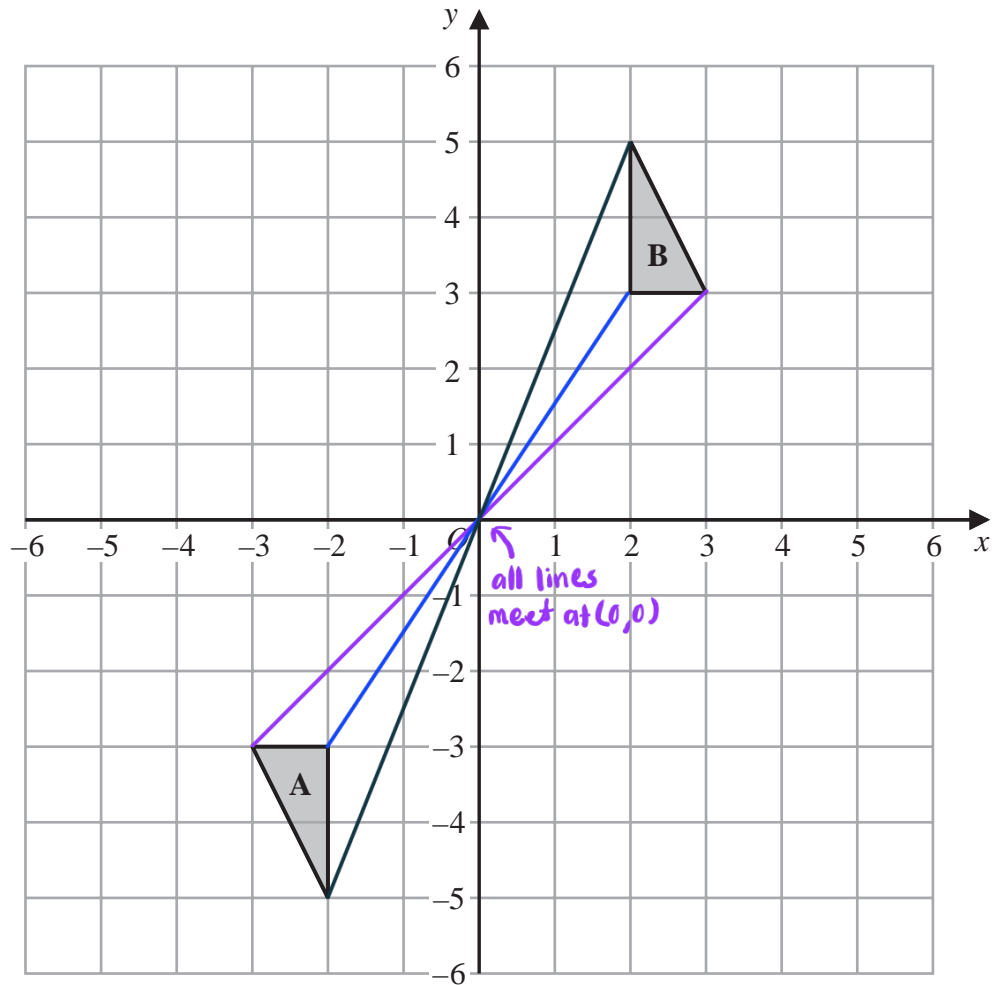Label the new shape **R**.

(2)

(Total for Question 3 is 5 marks)

4

On the grid, enlarge the shaded shape with scale factor $\dfrac{1}{2}$ and centre (1, 2)

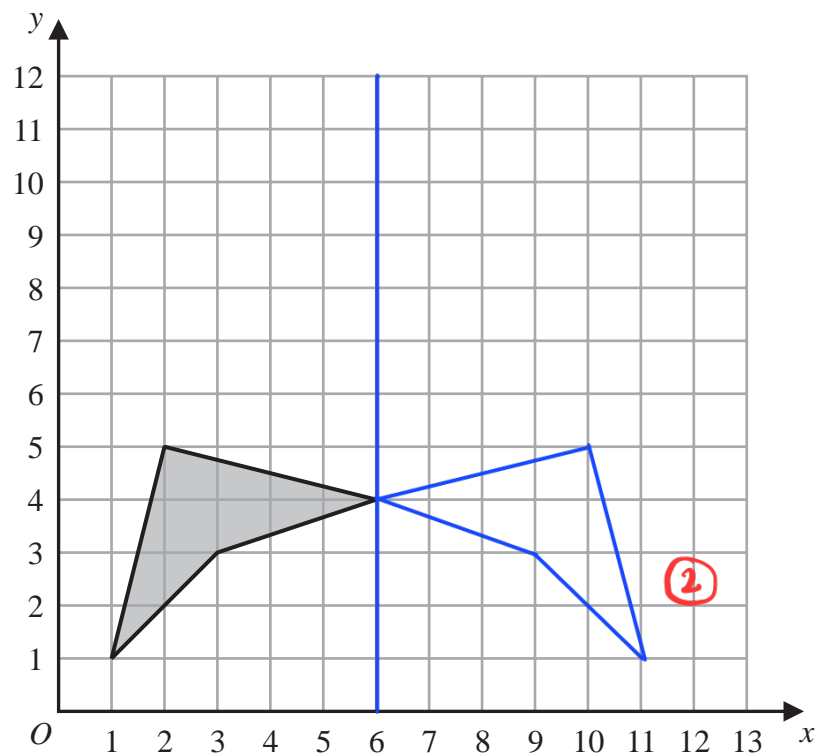**(Total for Question 4 is 2 marks)**

5

all lines
meet at (0,0)

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

Rotation of 180° at centre (0,0)   ②

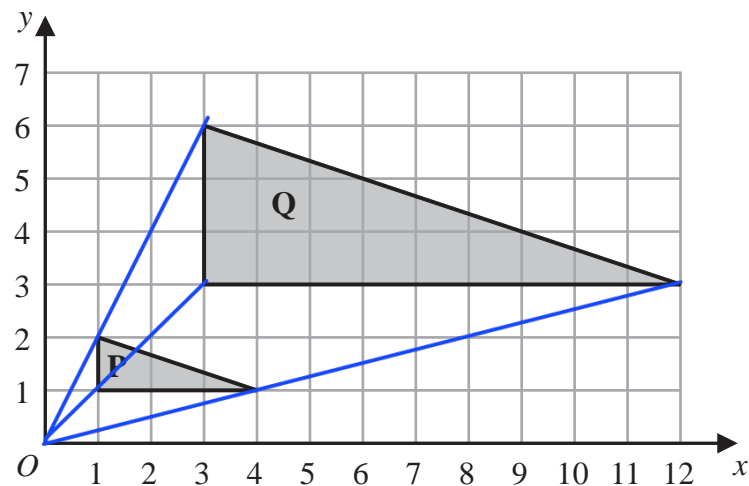**(Total for Question 5 is 2 marks)**

6 The diagram shows a shaded shape on a grid.

(a) On the grid, reflect the shape in the line with equation $x = 6$

(2)

The diagram below shows triangle **P** and triangle **Q** drawn on a grid.

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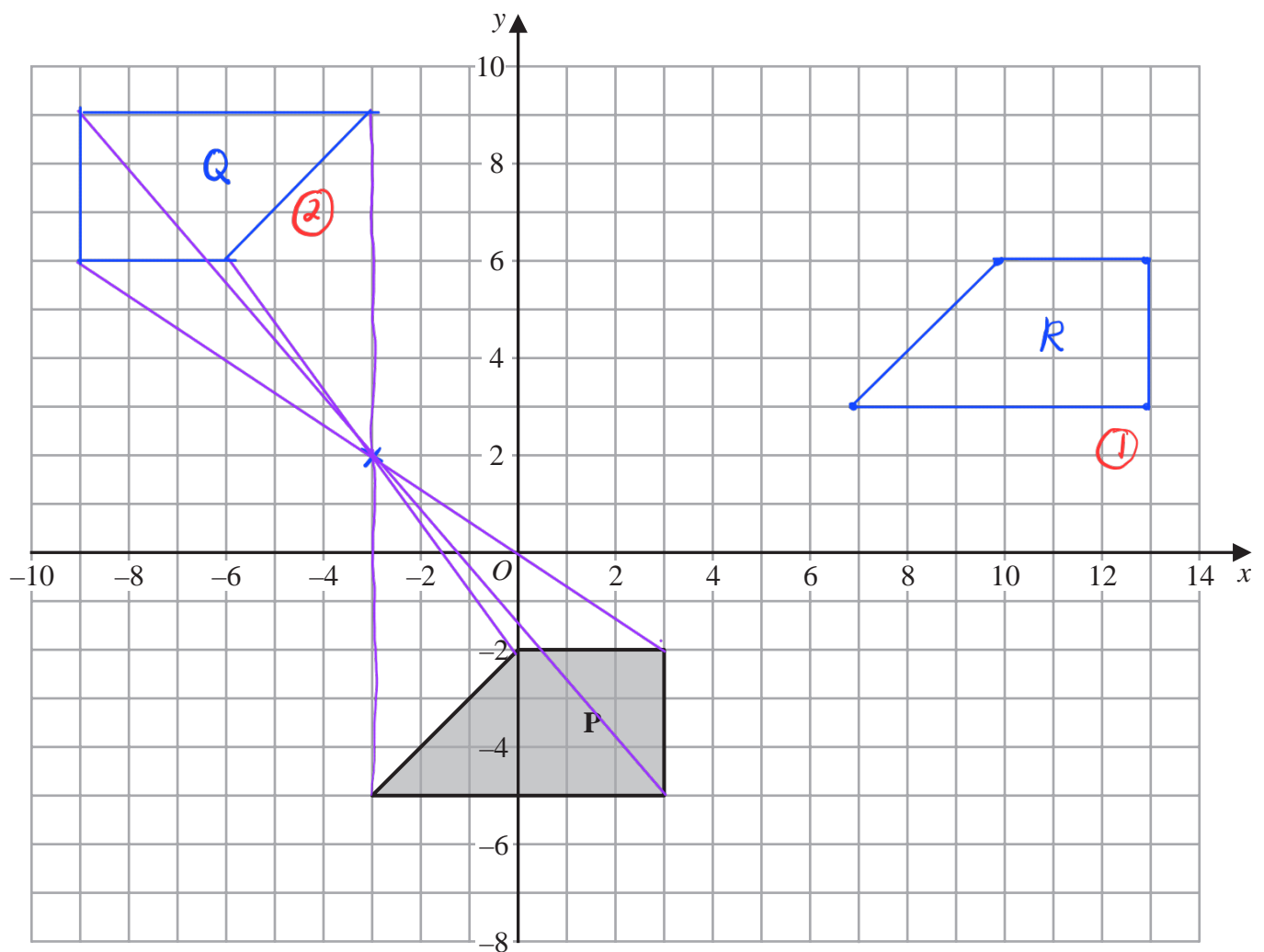
(3)

Enlargement of scale factor 3 at point (0,0)

(Total for Question 6 is 5 marks)

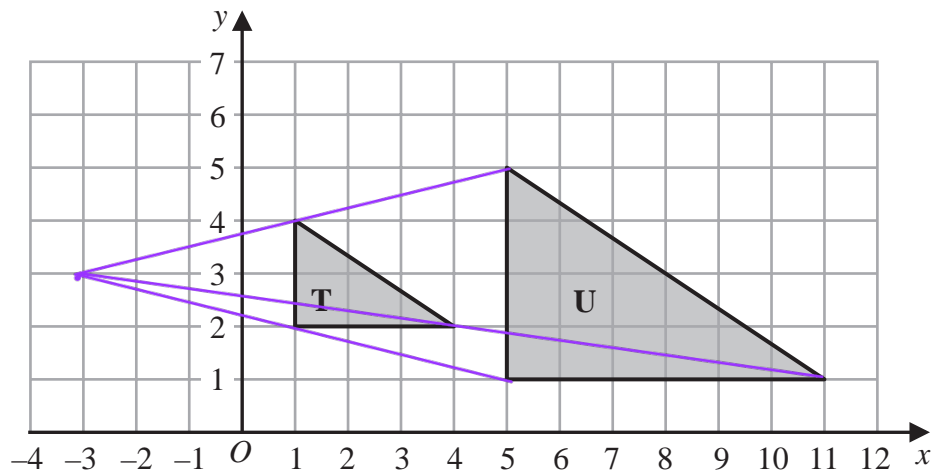**7** Here is a shape **P** drawn on a grid of squares.

(a) On the grid, rotate shape **P** 180° about the point (–3, 2)
Label the new shape **Q**.

(2)

(b) On the grid, translate shape **P** by the vector $\begin{pmatrix} 10 \\ 8 \end{pmatrix}$ 10 position to the right

8 position upwards

Label the new shape **R**.

(1)

Here are triangle **T** and triangle **U** drawn on a grid of squares.

(c) Describe fully the single transformation that maps triangle **T** onto triangle **U**.
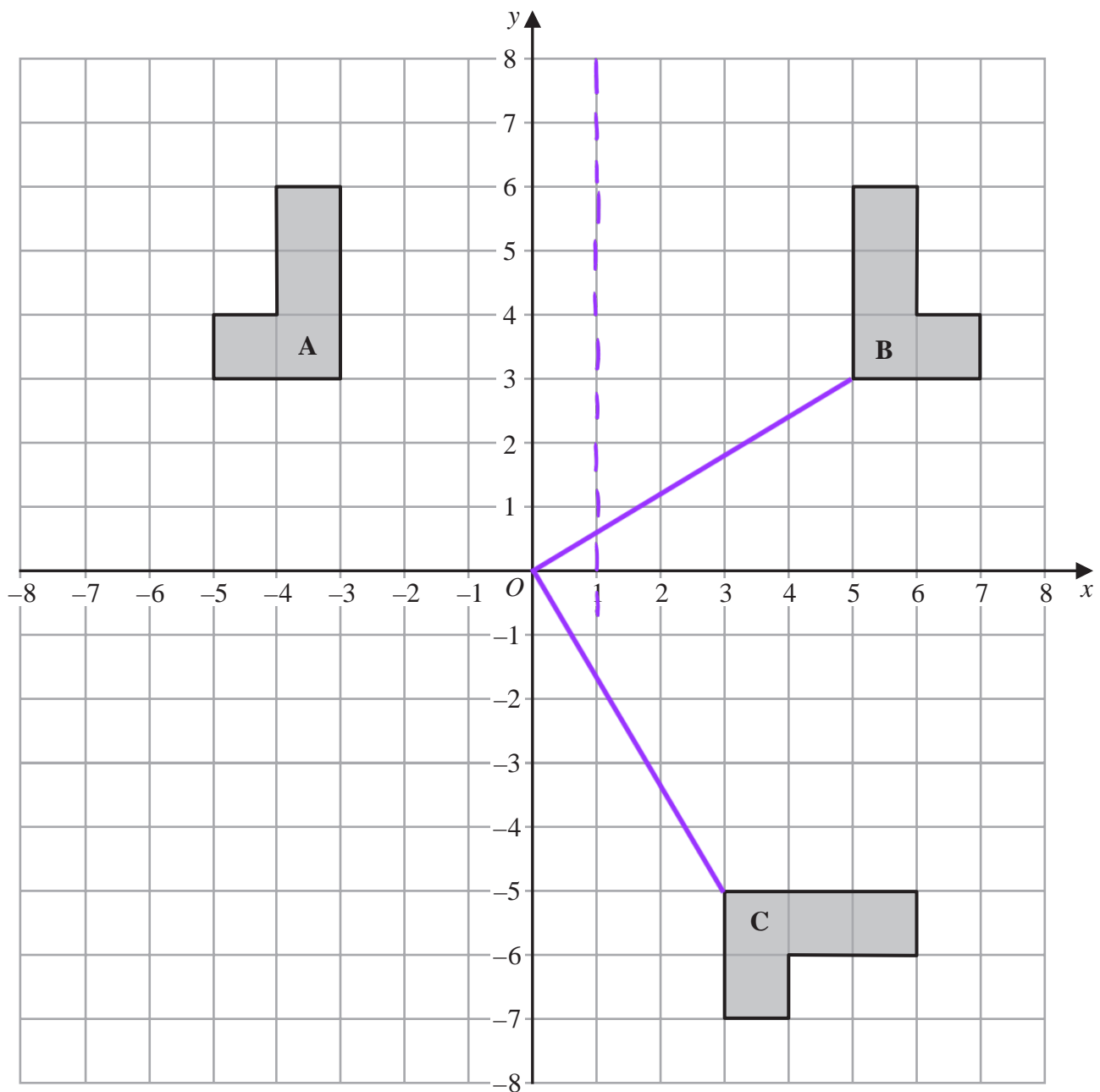
Enlargement of Scale factor 2 at Centre (-3,3)
　　　①　　　　　　　　①　　　　　　①

(3)

(Total for Question 7 is 6 marks)

8

(a) Describe fully the single transformation that maps shape **A** onto shape **B**.
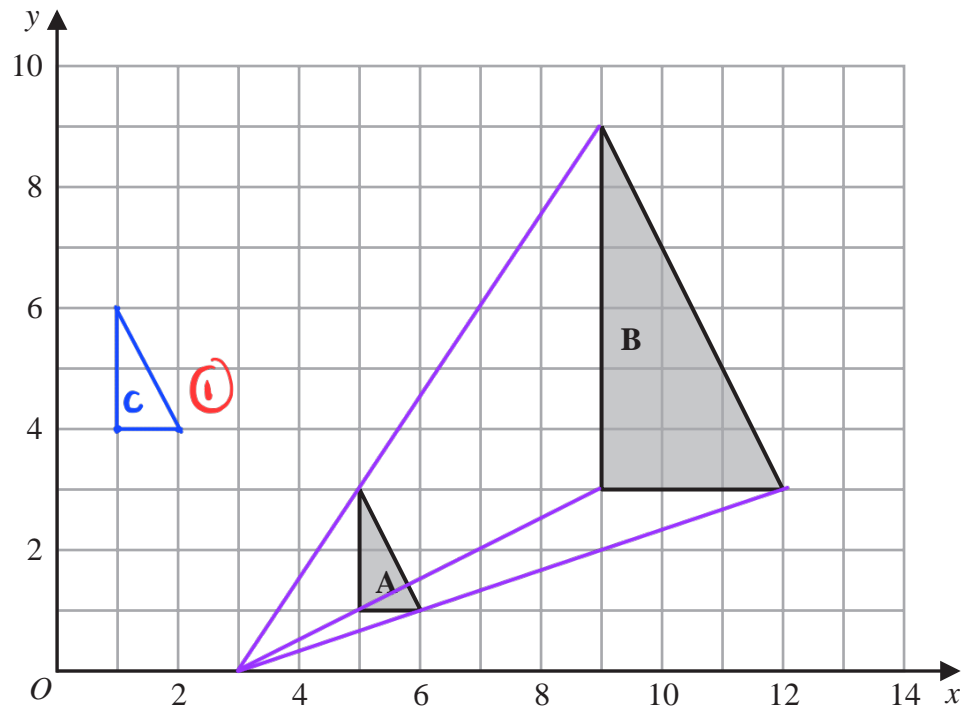
Reflection at x = 1 ②

(2)

(b) Describe fully the single transformation that maps shape **B** onto shape **C**.

Rotation at (0,0), 90° clockwise ③

(3)

(Total for Question 8 is 5 marks)

9

(a) Describe fully the single transformation that maps triangle **A** onto triangle **B**

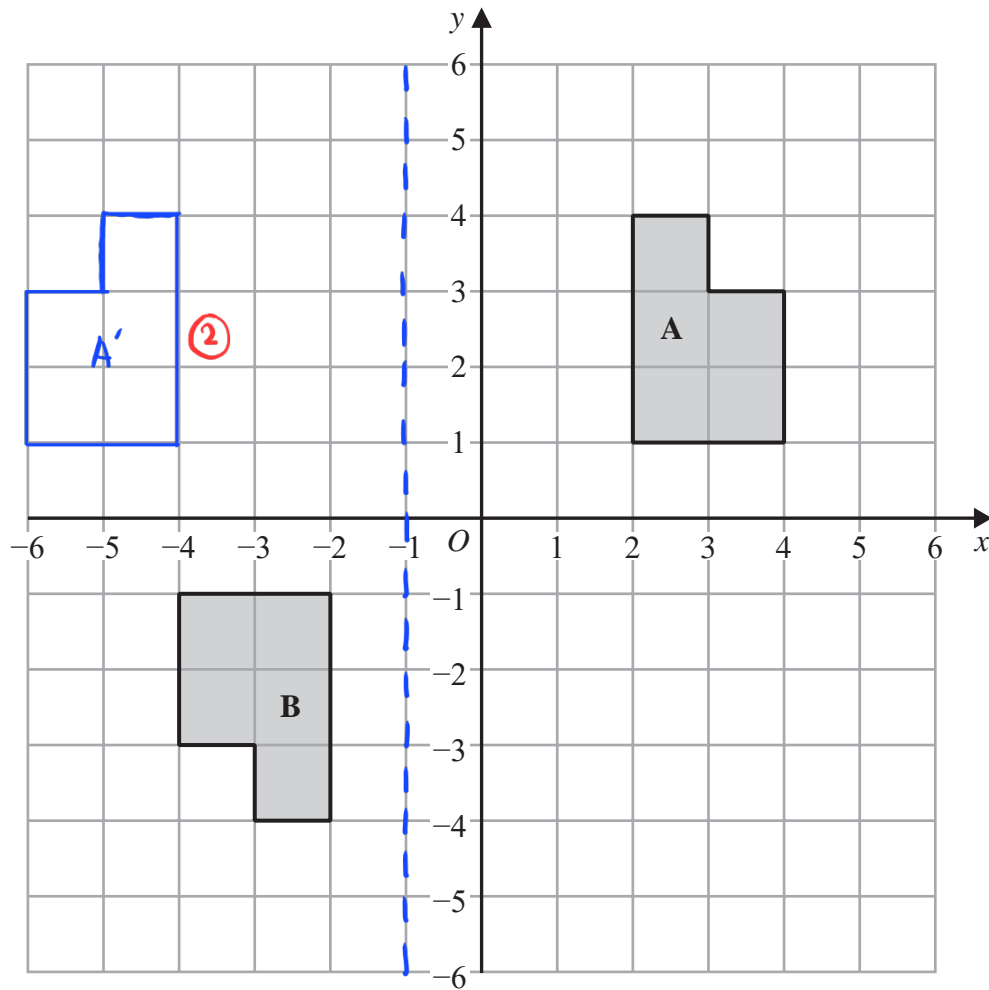Enlargement of scale factor 3 at centre (3,0)

(3)

(Total for Question 9 is 3 marks)

10

(a) Describe fully the single transformation that maps shape **A** onto shape **B**.
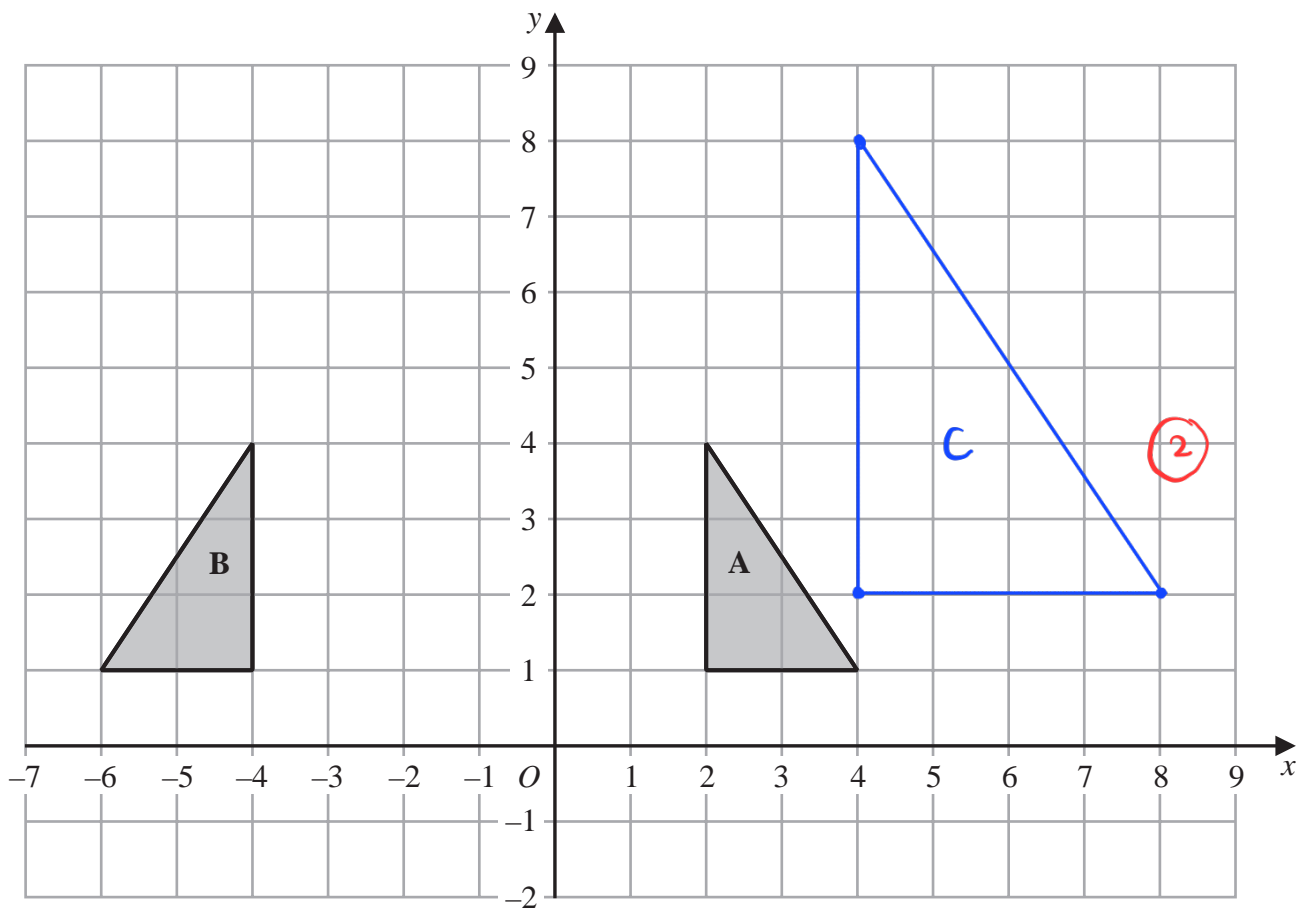
Rotation 180° about centre O.
②

(2)

(b) On the grid, reflect shape **A** in the line with equation $x = -1$

(2)

(Total for Question 10 is 4 marks)

11

(a) Describe fully the single transformation that maps triangle **A** onto triangle **B**
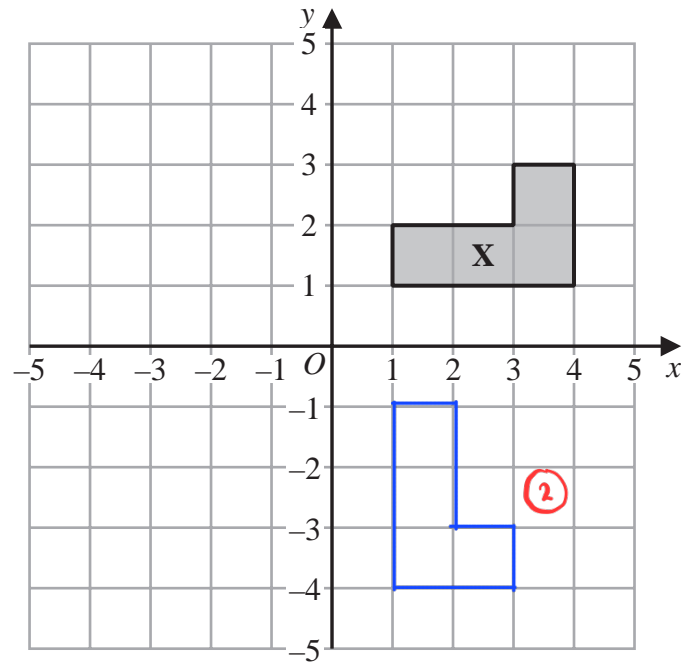
Reflection at line $x = -1$. ②

(2)

(b) On the grid above, enlarge triangle **A** with scale factor 2 and centre O
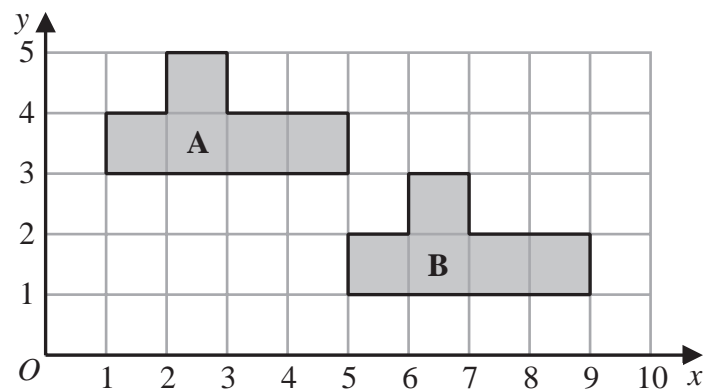Label your triangle **C**

(2)

(Total for Question 11 is 4 marks)

12

(a) On the grid above, rotate shape **X** 90° clockwise about O

(2)

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

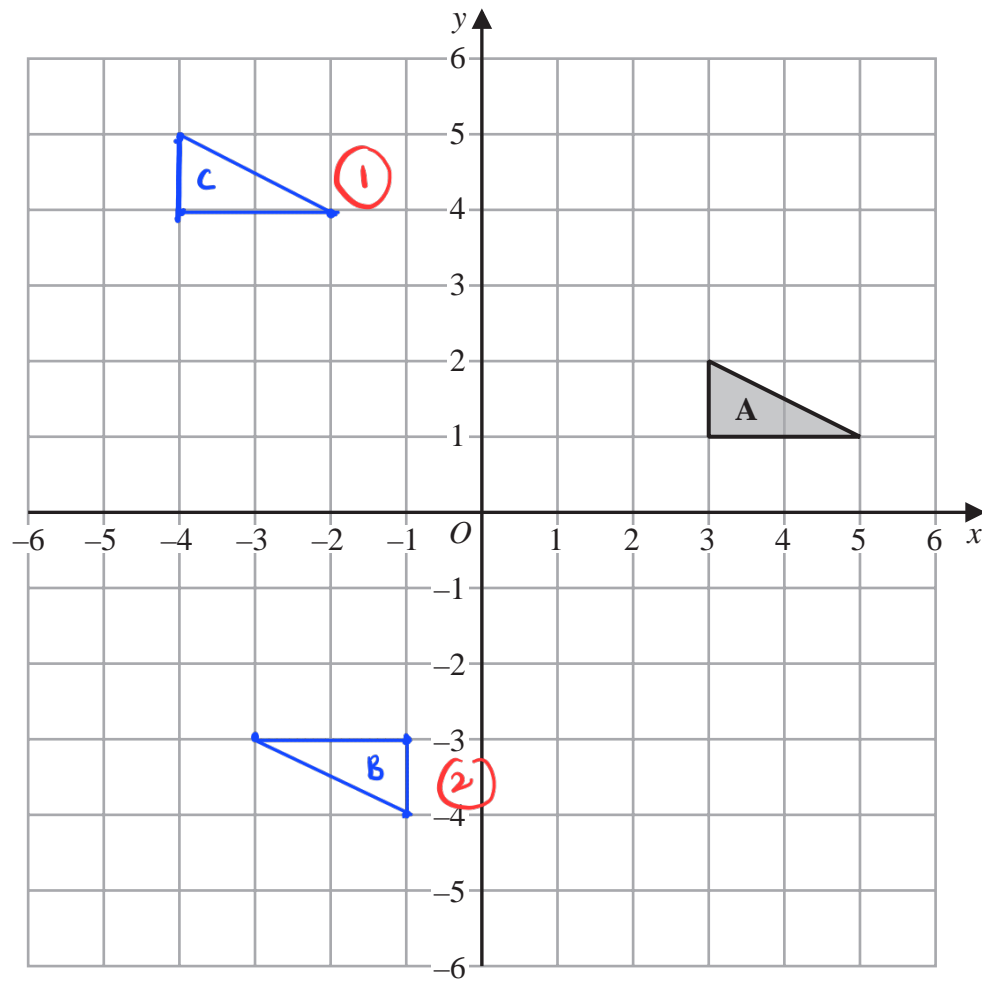Translation with vector $\begin{pmatrix} 4 \\ -2 \end{pmatrix}$

(2)

(Total for Question 12 is 4 marks)

13

(a) On the grid, rotate triangle **A** 180° about (1, –1)
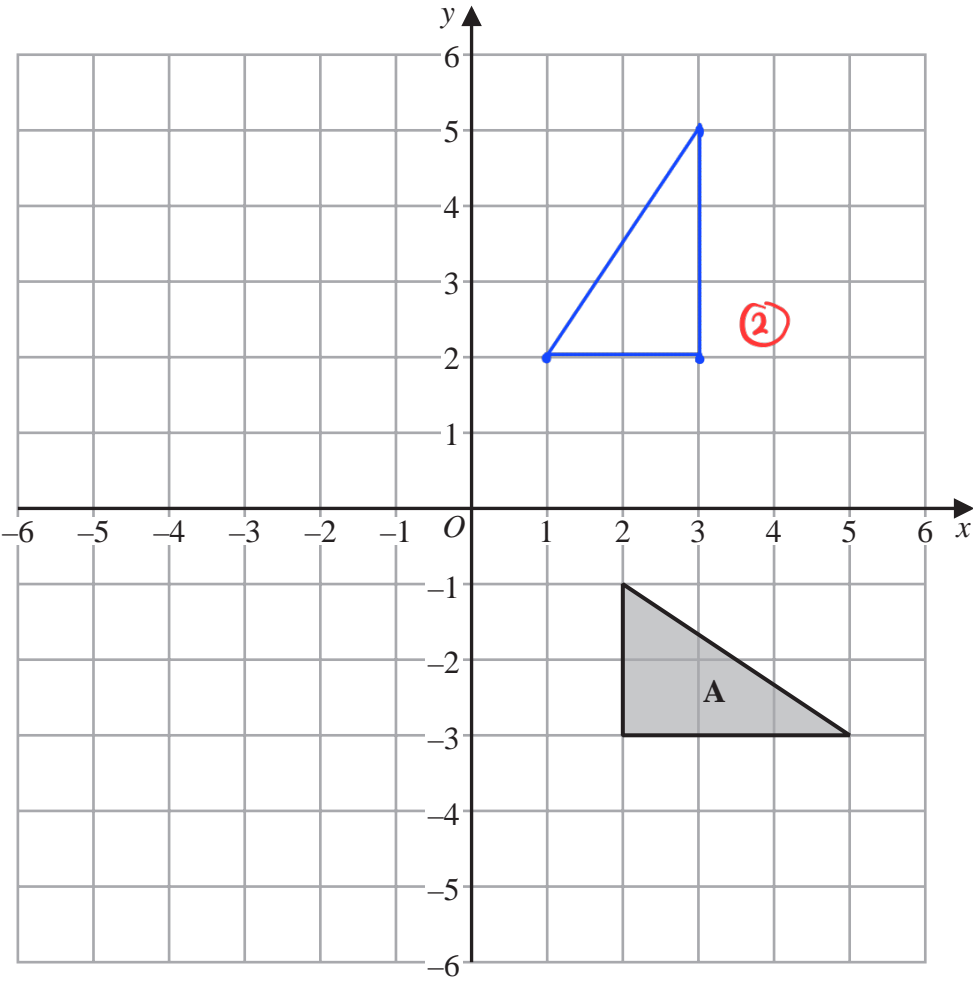Label the new triangle **B**

(2)

(b) On the grid, translate triangle **A** by the vector $\begin{pmatrix} -7 \\ 3 \end{pmatrix}$
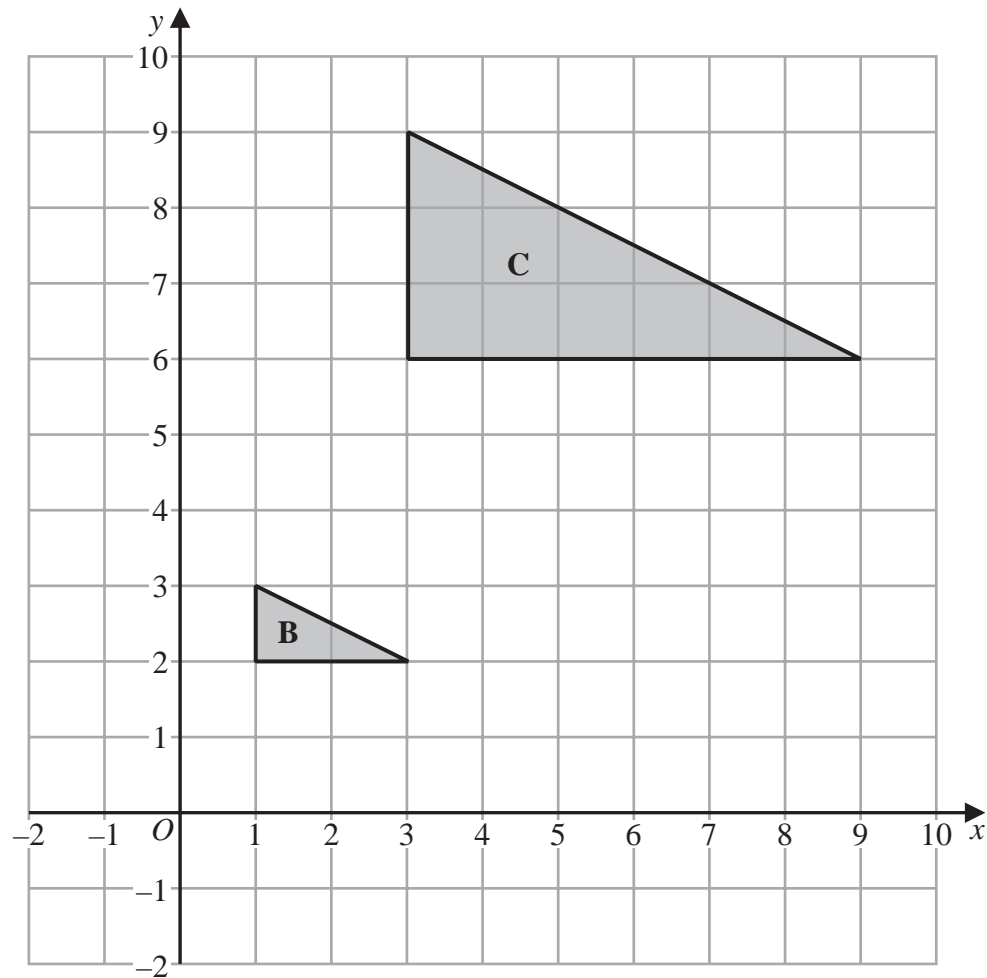
Label the new triangle **C**

(1)

(Total for Question 13 is 3 marks)

14

(a) On the grid, rotate triangle **A** 90° anticlockwise about centre *O*

(2)

(b) Describe fully the single transformation that maps triangle **B** onto triangle **C**
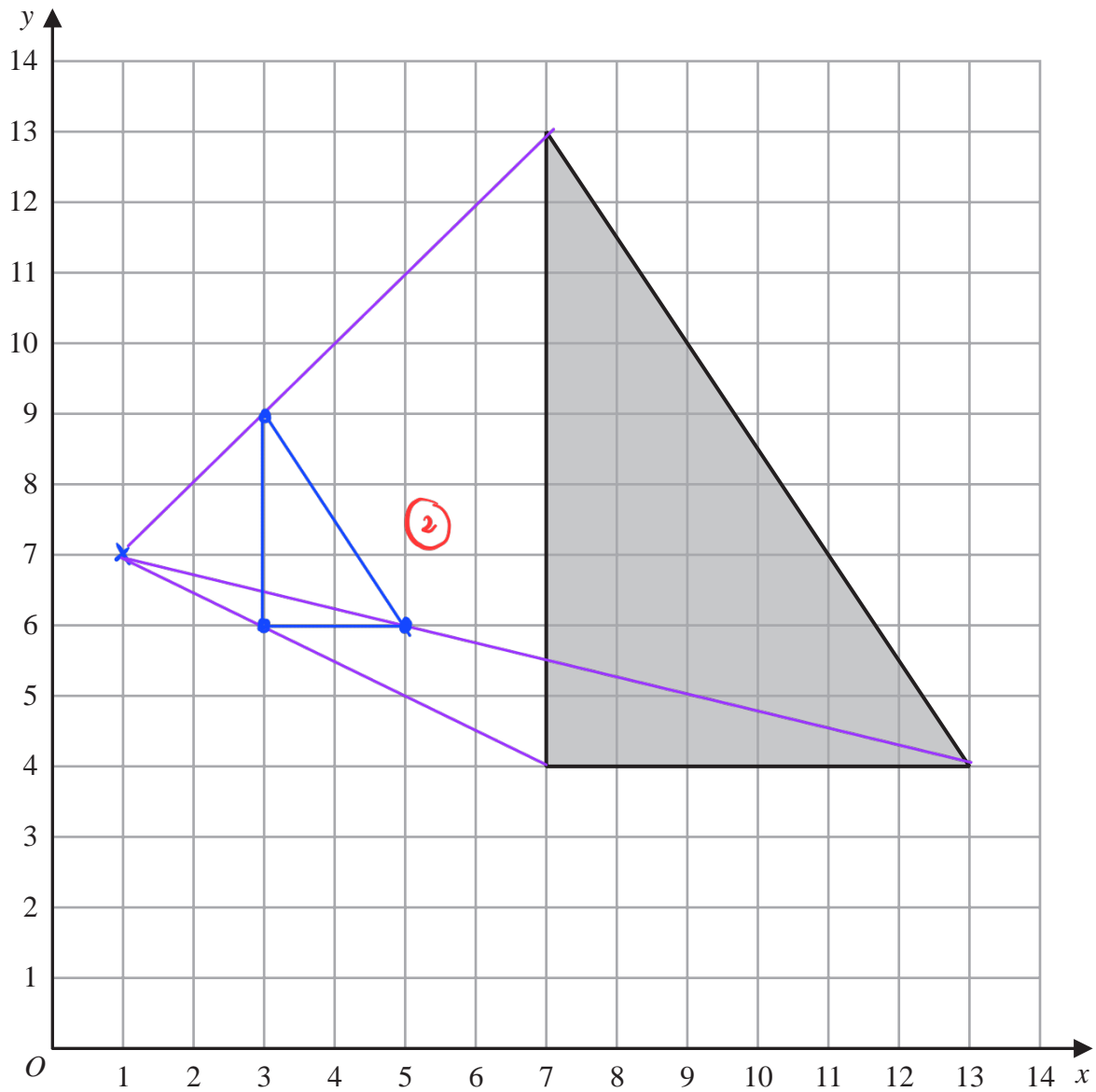
Enlargement of scale factor 3 at point (0,0) .

②

(2)

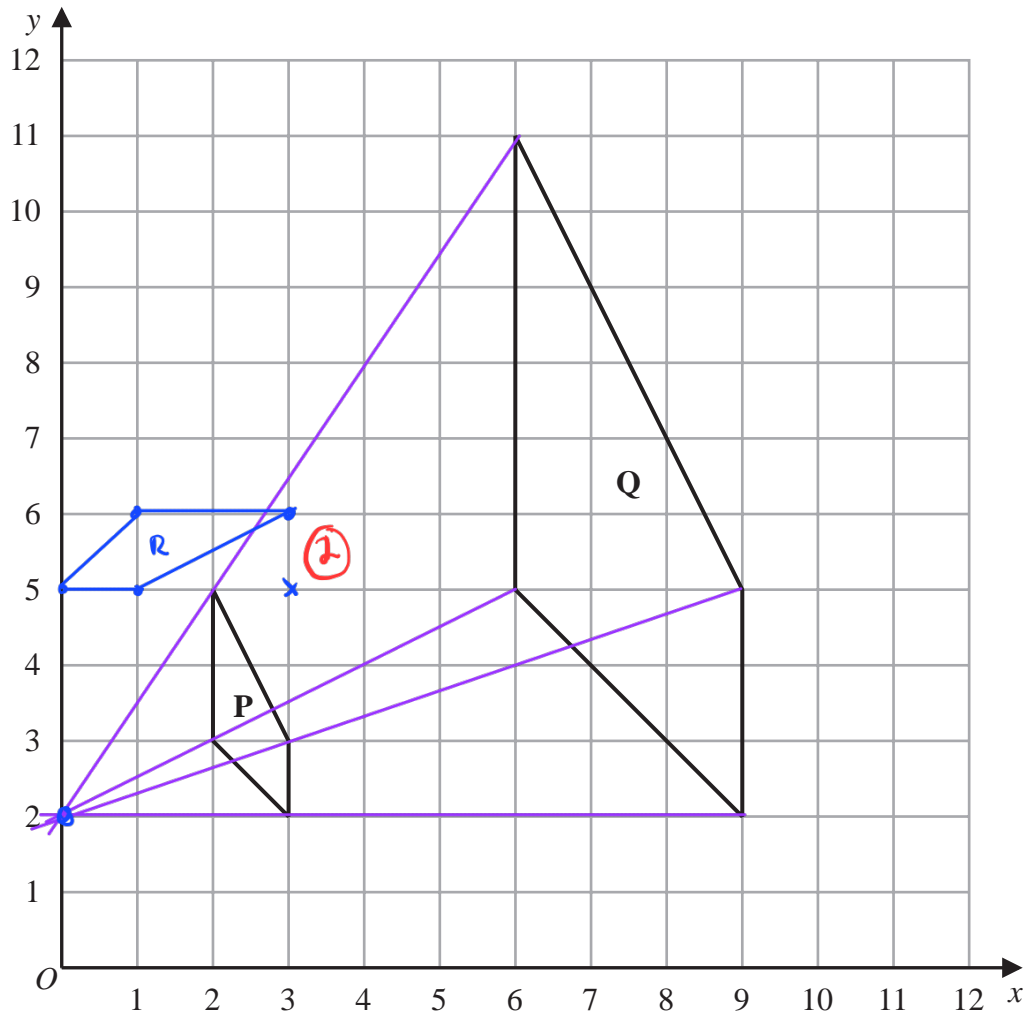**(Total for Question 14 is 4 marks)**

15

On the grid, enlarge the shaded shape with scale factor $\frac{1}{3}$ and centre (1, 7)

(Total for Question 15 is 2 marks)

16   The diagram shows shape **P** and shape **Q** drawn on a grid.

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

Enlargement of scale factor 3 at Centre (0,2)

(3)

(Total for Question 16 is 3 marks)