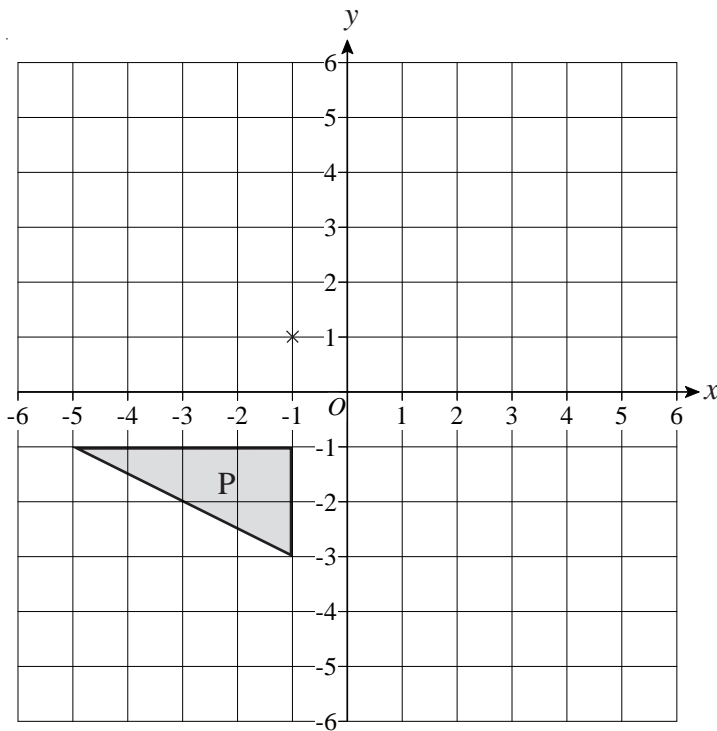


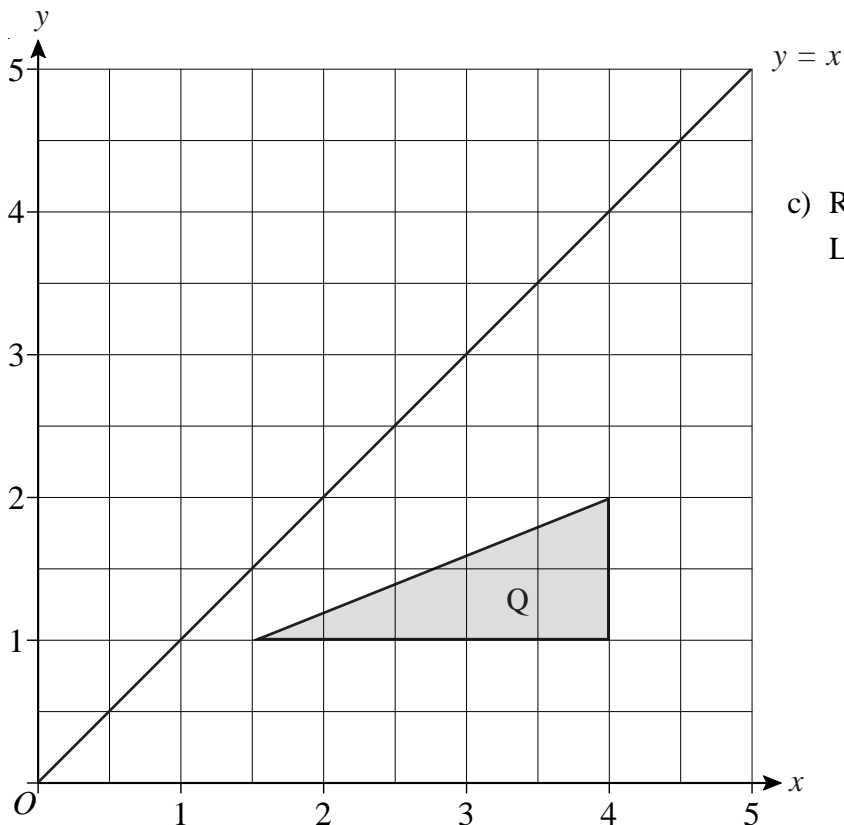
Combinations of Transformations

1)



a) Rotate triangle P 180° about the point $(-1, 1)$.
Label the new triangle A.

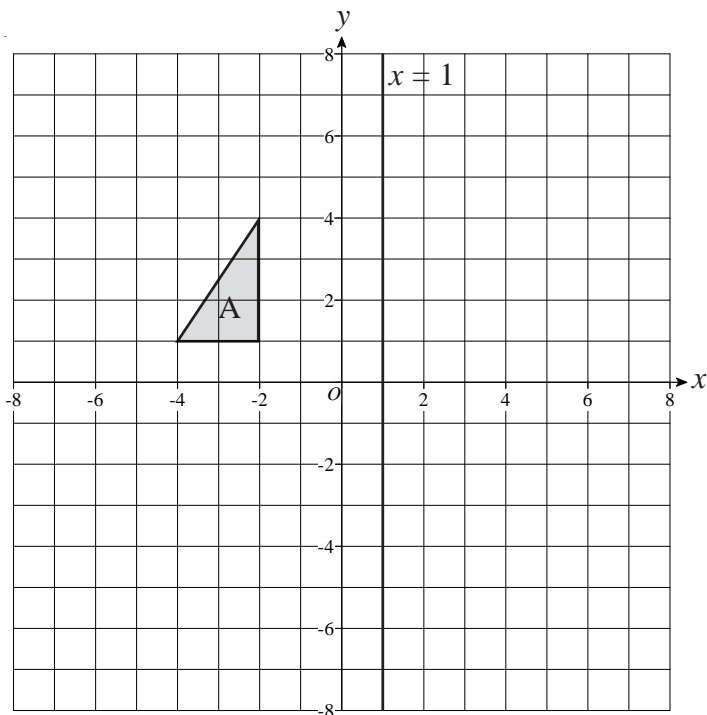
b) Translate triangle P by the vector $\begin{pmatrix} 6 \\ -1 \end{pmatrix}$.
Label the new triangle B.



c) Reflect triangle Q in the line $y = x$.
Label the new triangle C.

Combinations of Transformations

1)

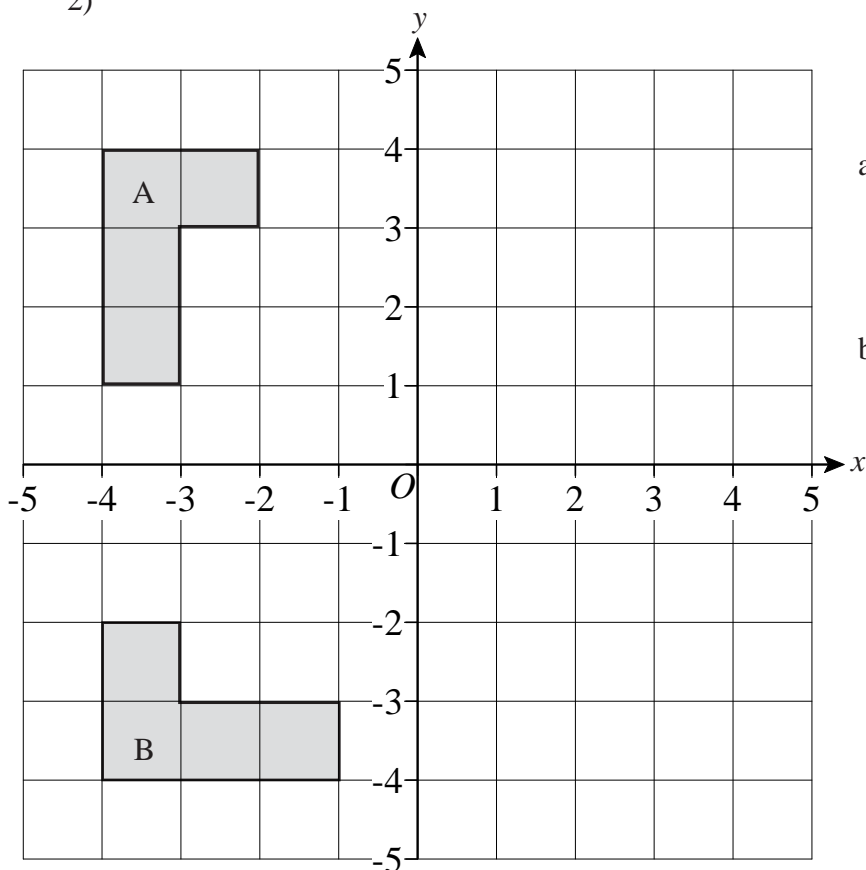


Triangle A is reflected in the x -axis to give triangle B.

Triangle B is reflected in the line $x = 1$ to give triangle C.

Describe fully the **single** transformation that takes triangle A to triangle C.

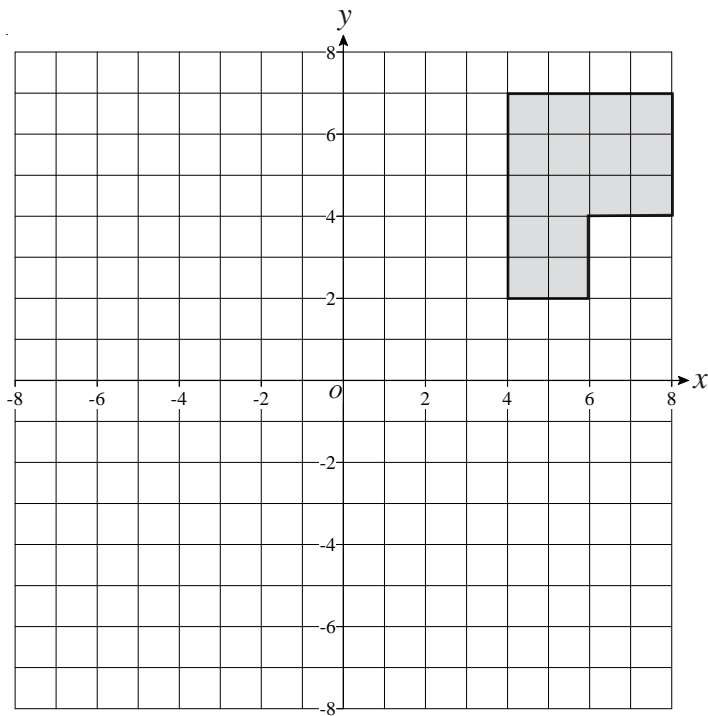
2)



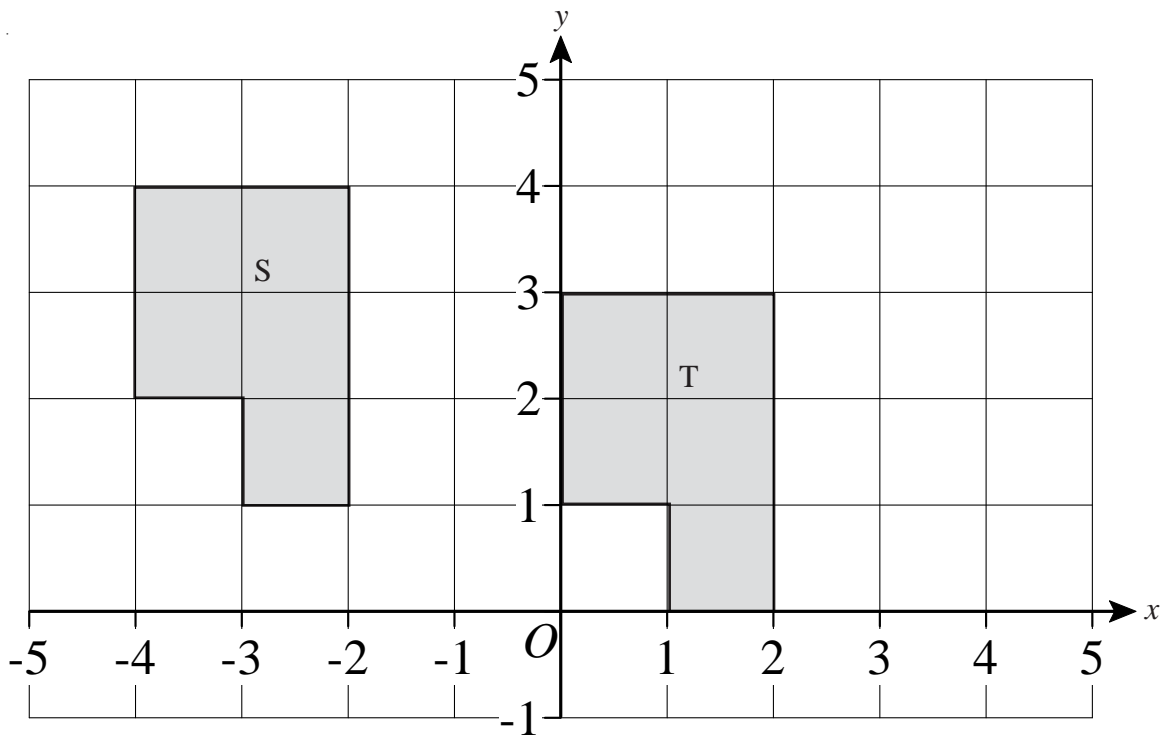
a) Reflect shape A in the y -axis.

b) Describe fully the **single** transformation which takes shape A to shape B.

Combinations of Transformations

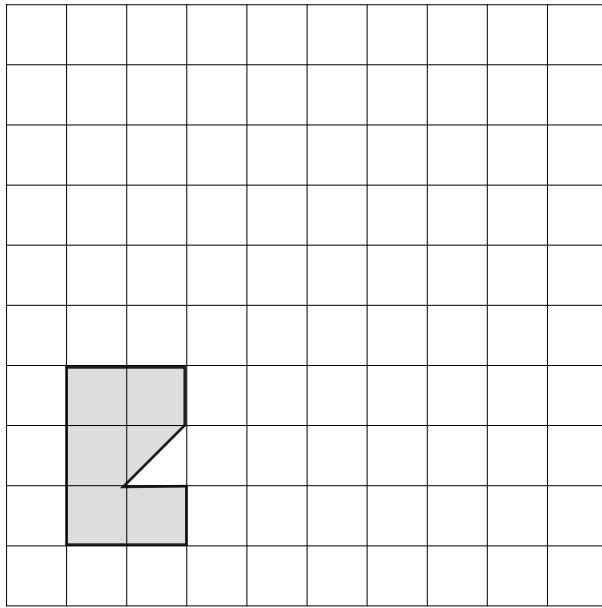


a) Rotate the shaded shape 90° clockwise about the point O .

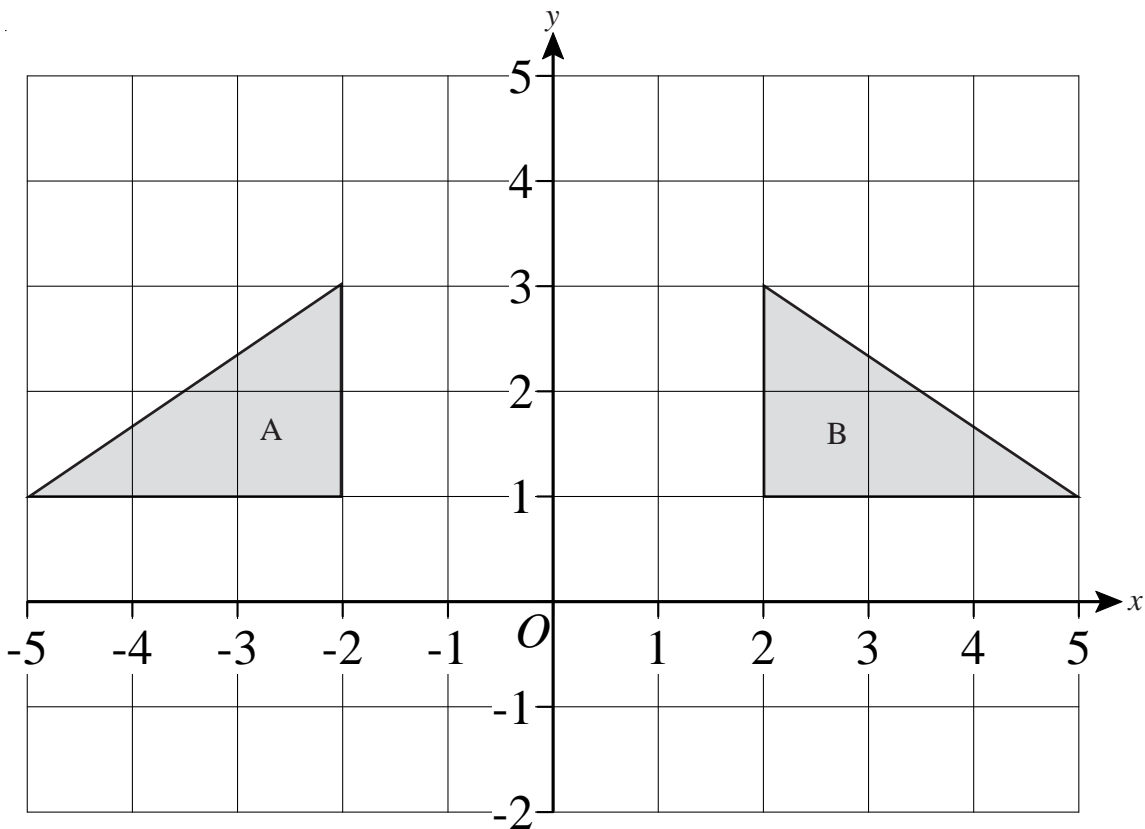


b) Describe fully the single transformation that will map shape S onto shape T.

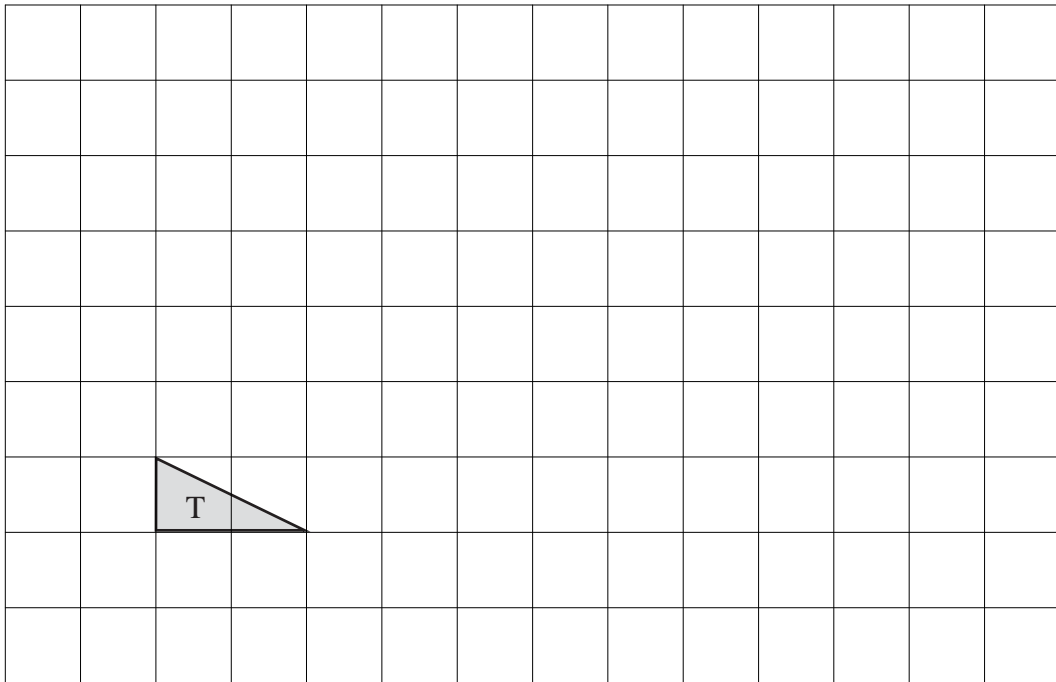
1)



a) On the grid, draw an enlargement, scale factor 2, of the shaded shape.

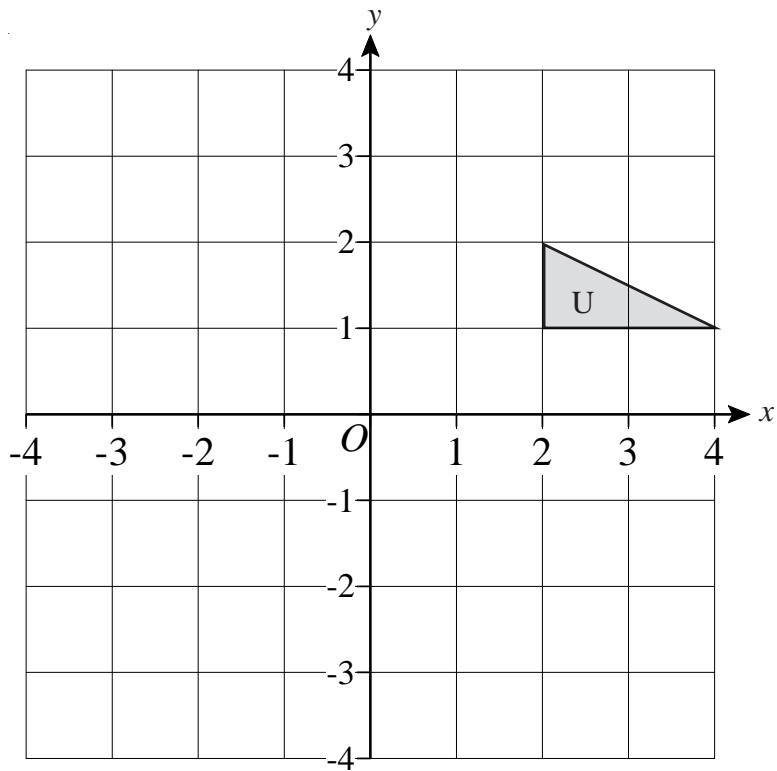


b) Describe fully the single transformation that maps triangle A onto triangle B.



Triangle T has been drawn on a grid.

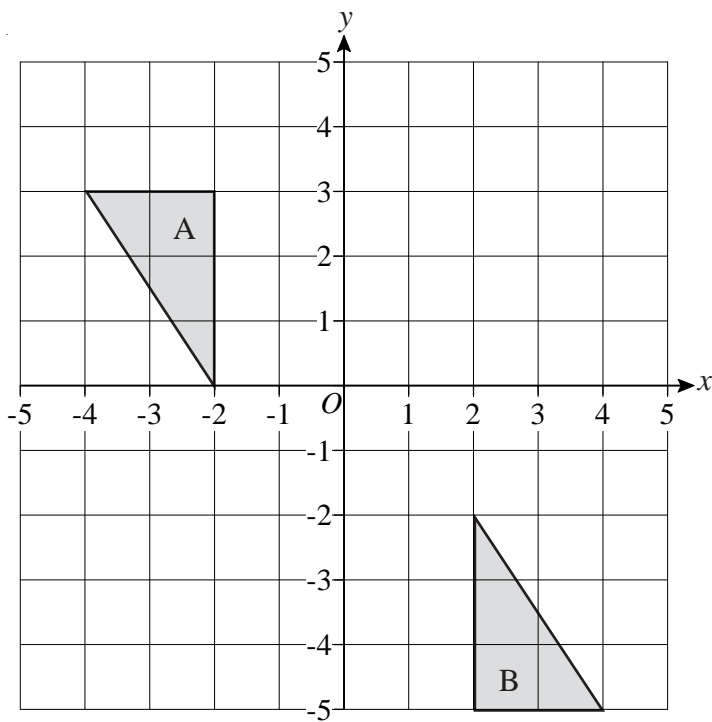
- a) On the grid, draw an enlargement of the triangle T with scale factor 3.



Triangle U has been drawn on a grid.

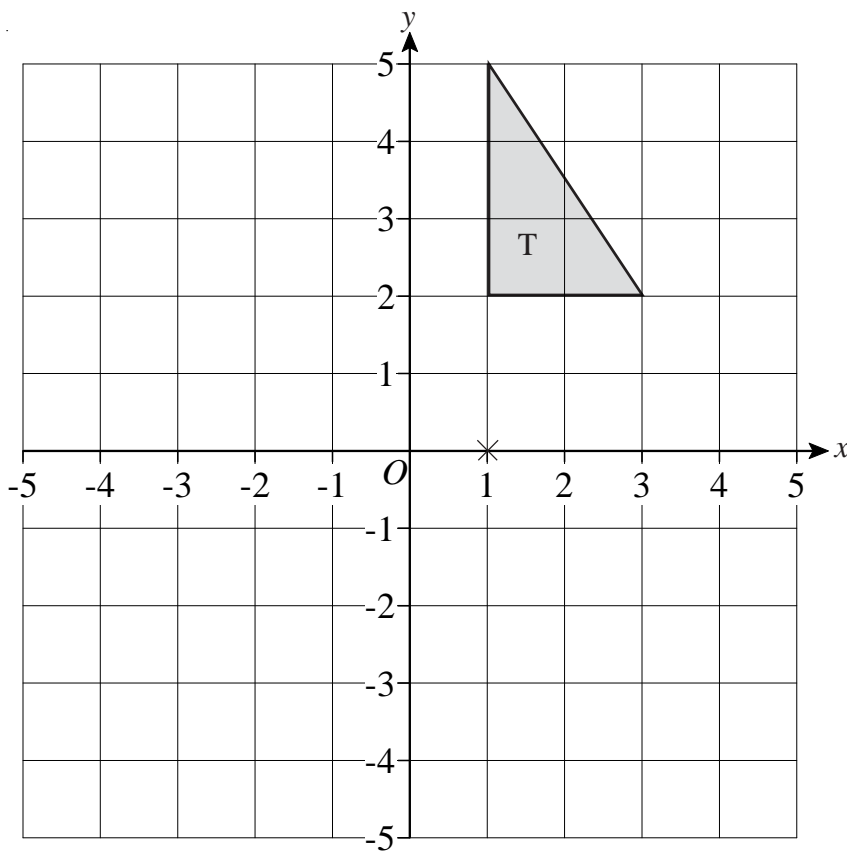
- b) On the grid, rotate triangle U 90° clockwise about the centre O.

1)



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

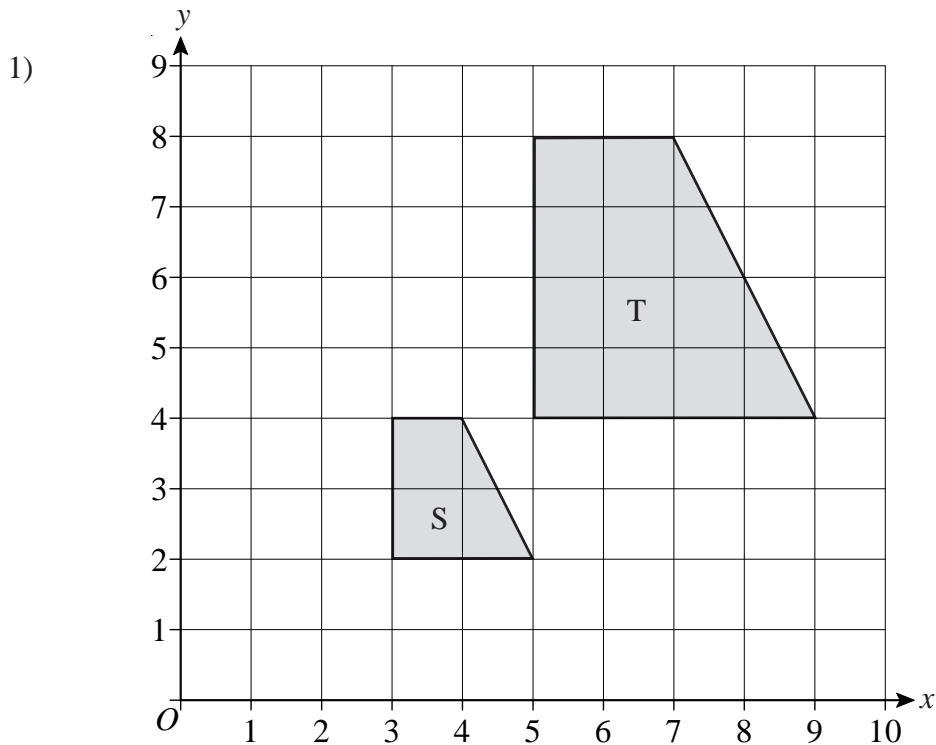
2)



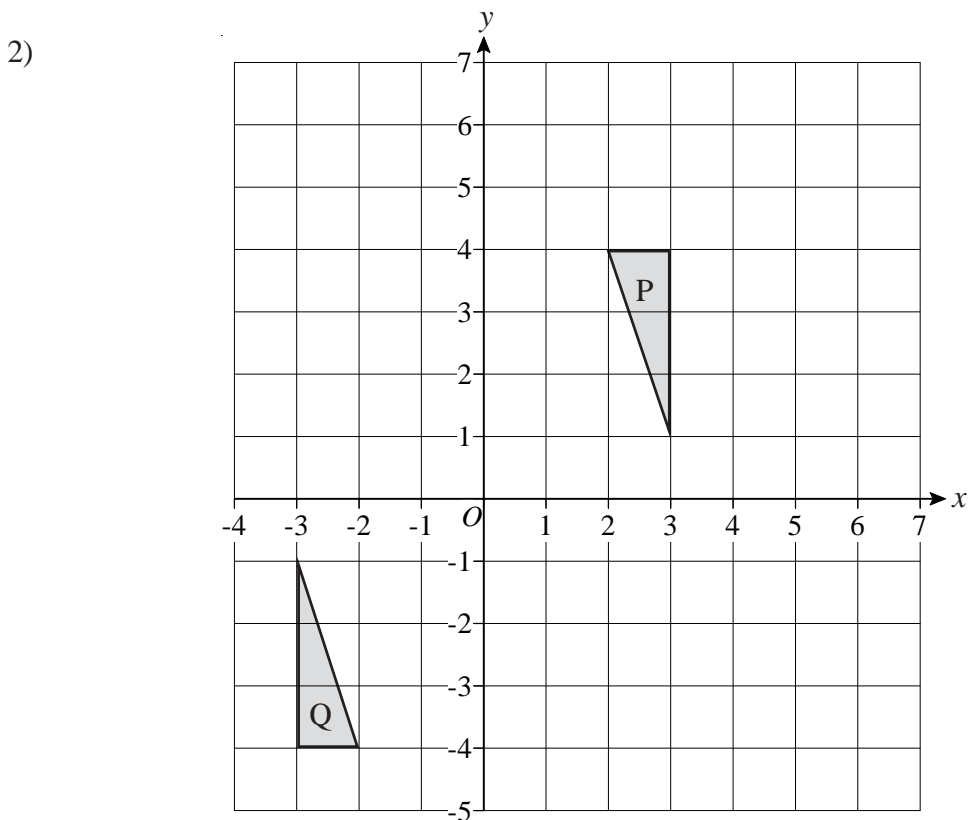
Triangle T has been drawn on the grid.

Rotate triangle T 180° about the point (1, 0)

Label the new triangle A.

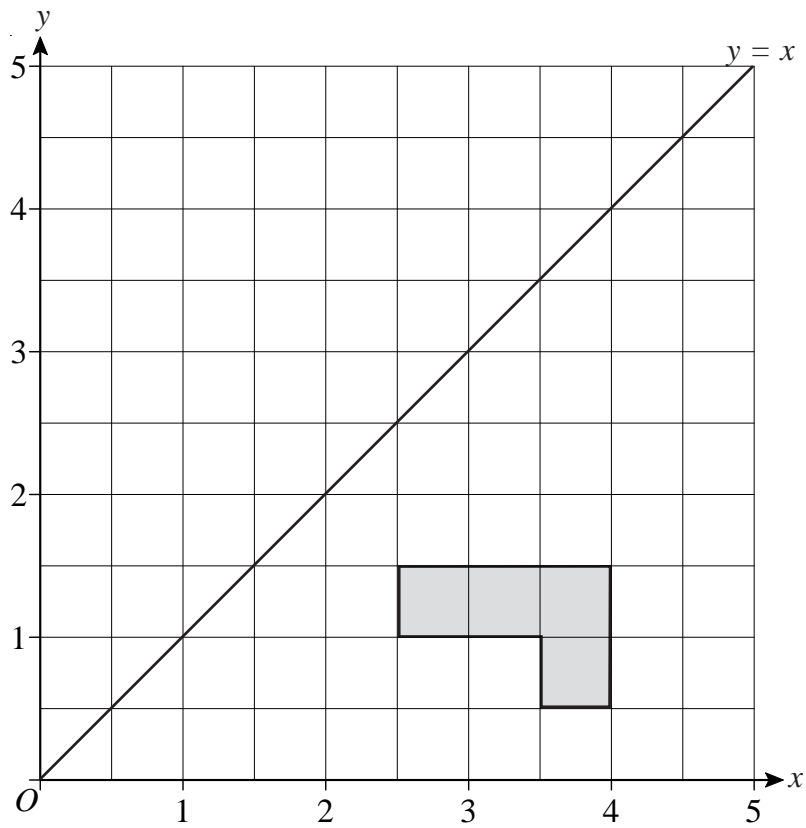


Describe fully the single transformation which maps shape S onto shape T.

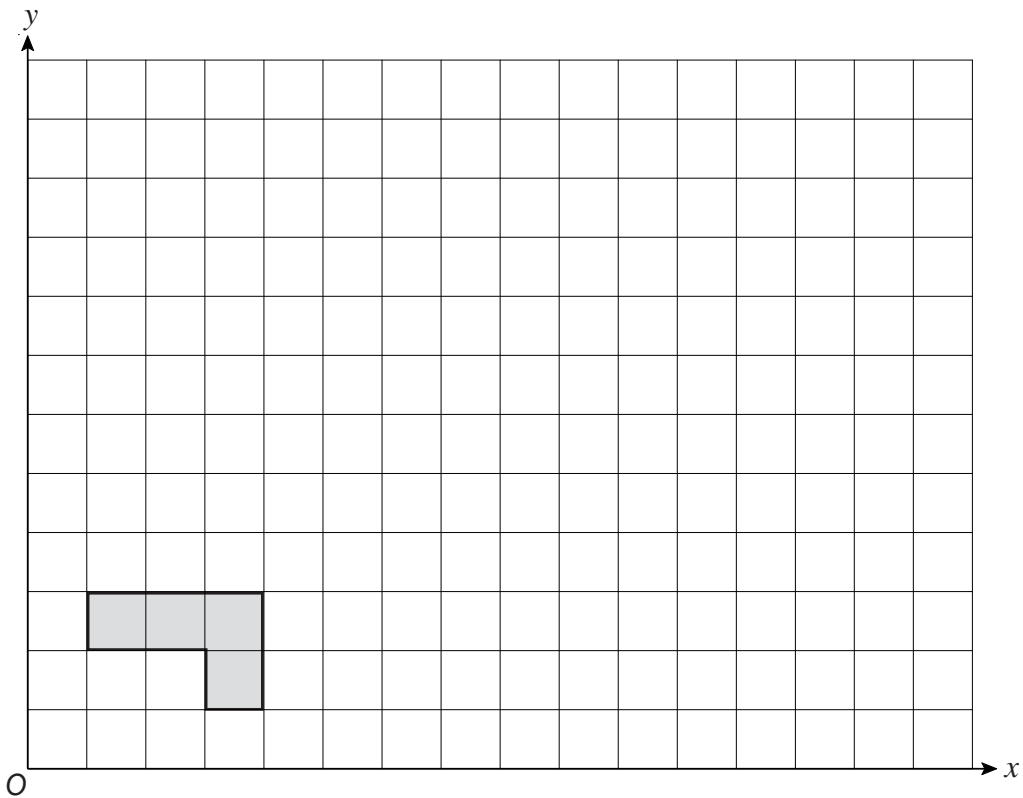


Triangle P and triangle Q are drawn on the grid.

- a) Describe fully the single transformation which maps triangle P onto triangle Q.
- b) Translate triangle P by the vector $\begin{pmatrix} 3 \\ -1 \end{pmatrix}$
Label the new triangle R.

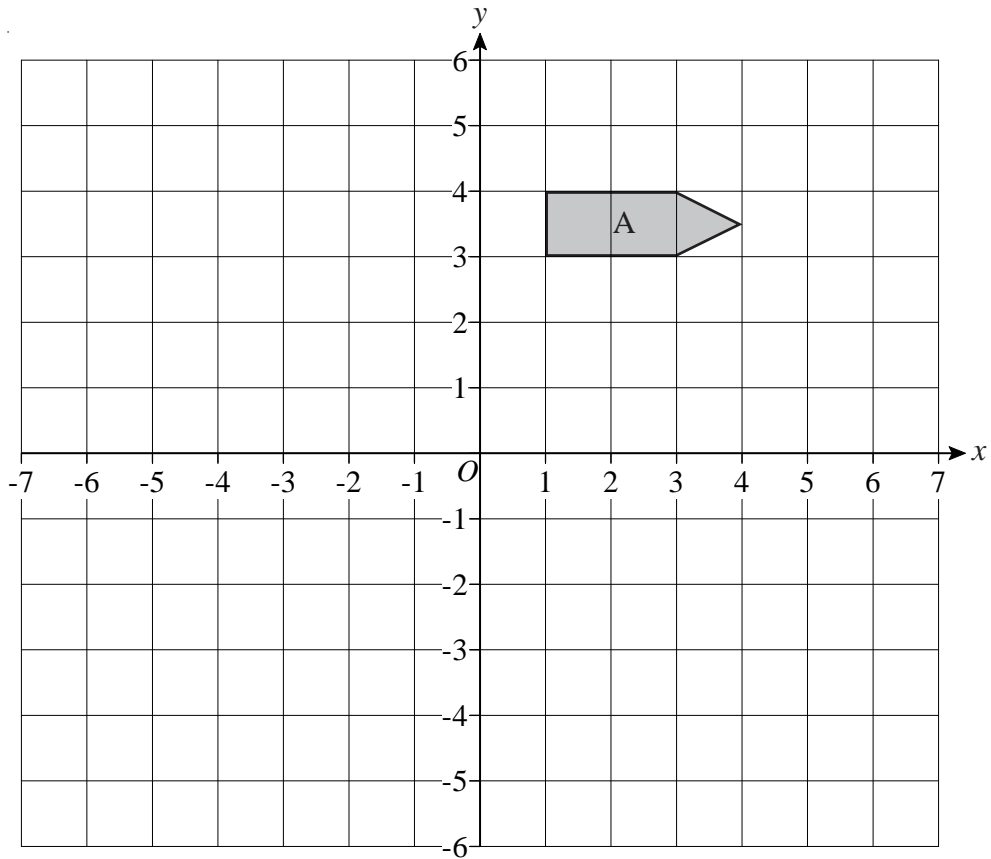


a) Reflect the shaded shape in the line $y = x$.

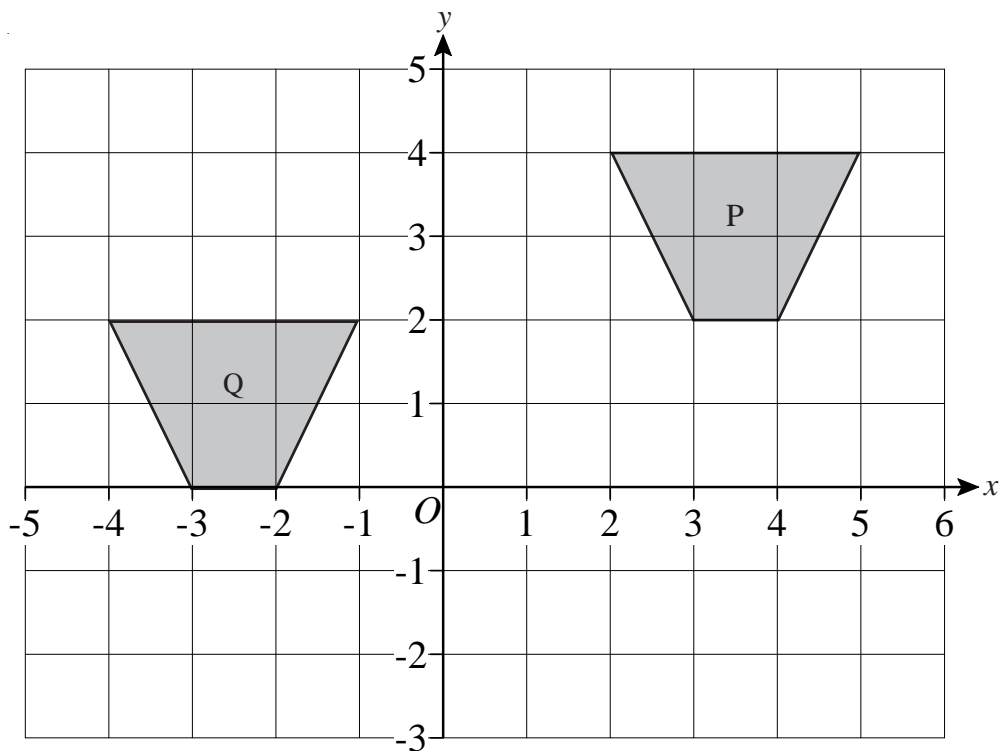


b) On the grid, enlarge the shaded shape by a scale factor of 3, centre O .

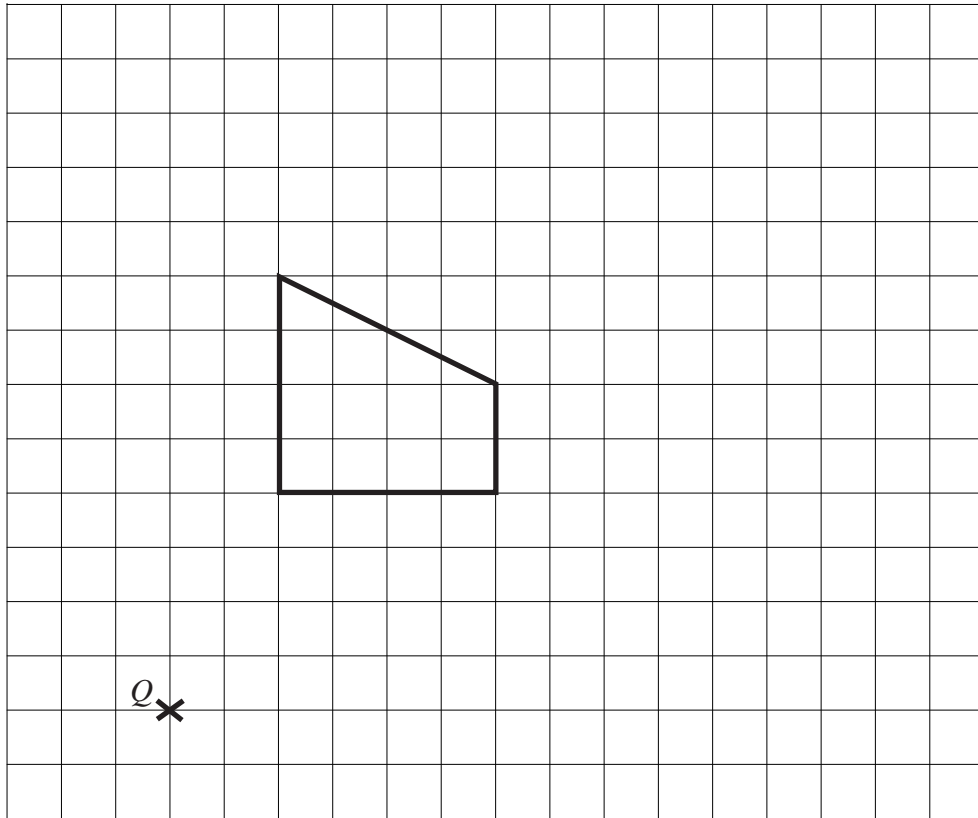
Combinations of Transformations



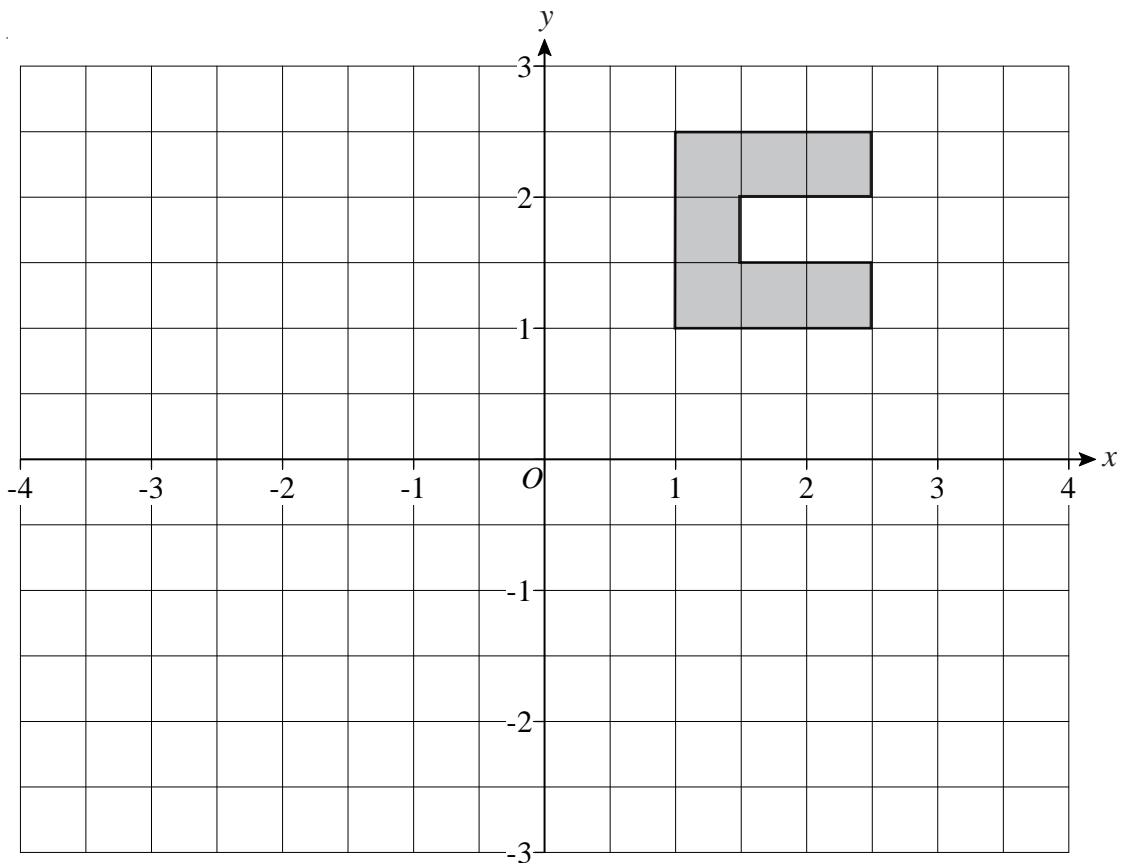
- a) On the grid above, reflect shape A in the line $x = -1$



- b) Describe fully the single transformation that will map shape P onto shape Q.



- a) On the grid, enlarge the shape with scale factor $\frac{1}{2}$, centre Q .



- b) Rotate the shape 90° clockwise, centre O .