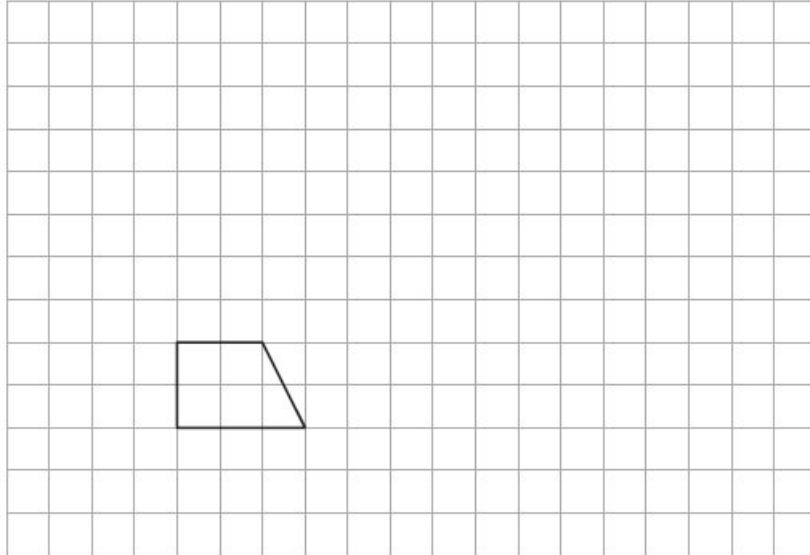


G174 Transformations 1

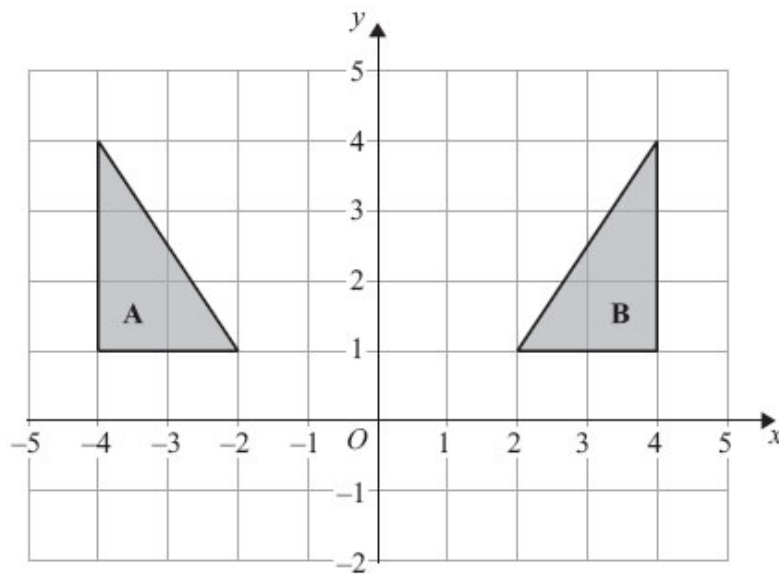
Q1.

Here is a shape drawn on a grid.



(a) On this grid, draw an enlargement of the shape with scale factor 3

(2)



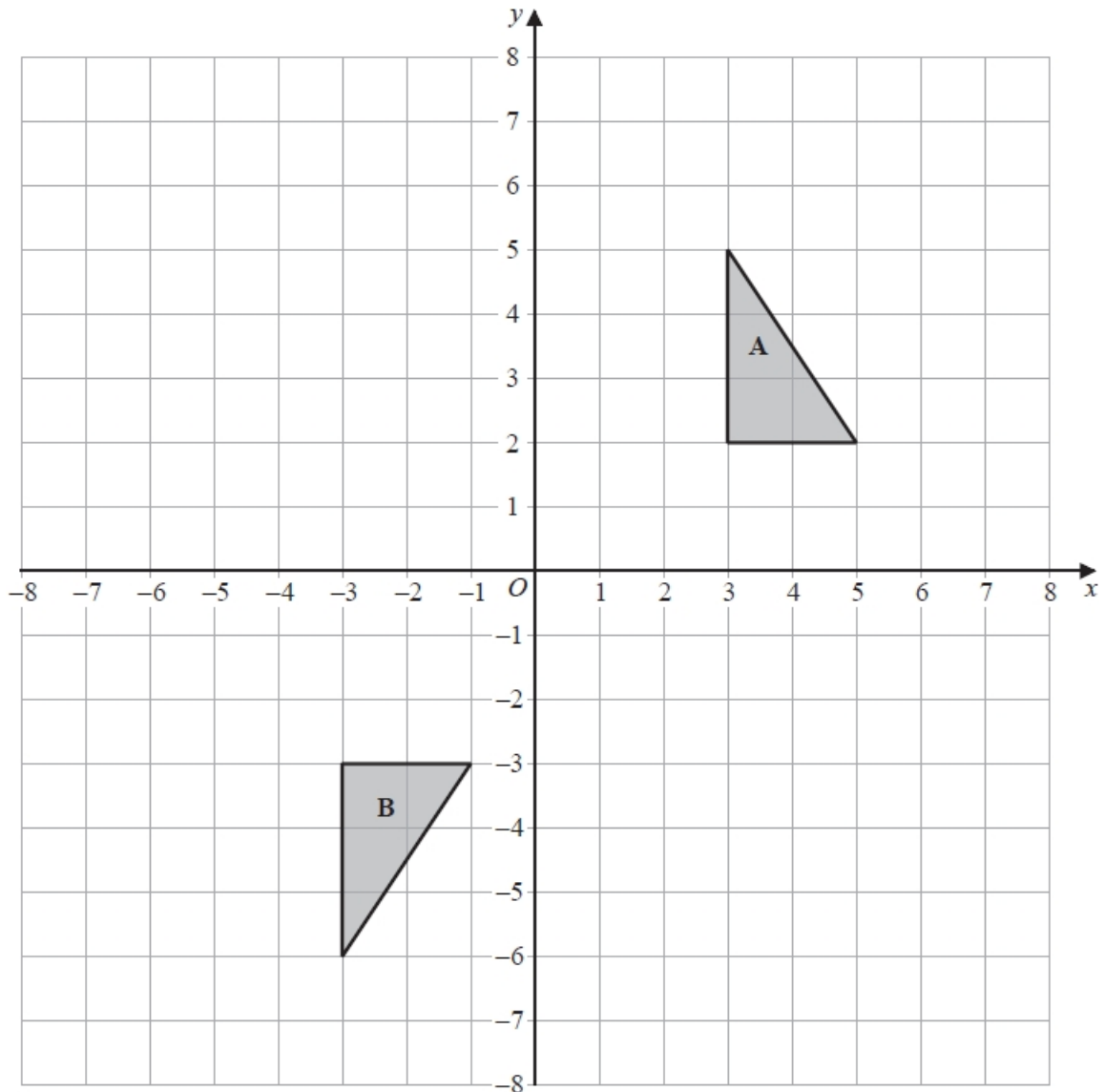
(b) Describe fully the single transformation that maps shape **A** onto shape **B**.

.....
.....

(2)

(Total for Question is 4 marks)

Q2.



Shape **A** can be transformed to shape **B** by a reflection in the x -axis followed by a translation $\begin{pmatrix} c \\ d \end{pmatrix}$

Find the value of c and the value of d .

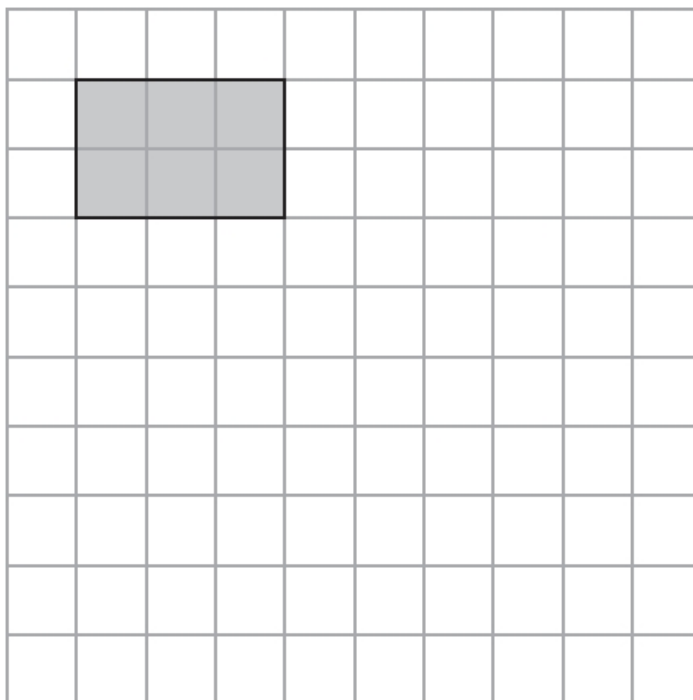
$c = \dots\dots\dots$

$d = \dots\dots\dots$

(Total for question = 3 marks)

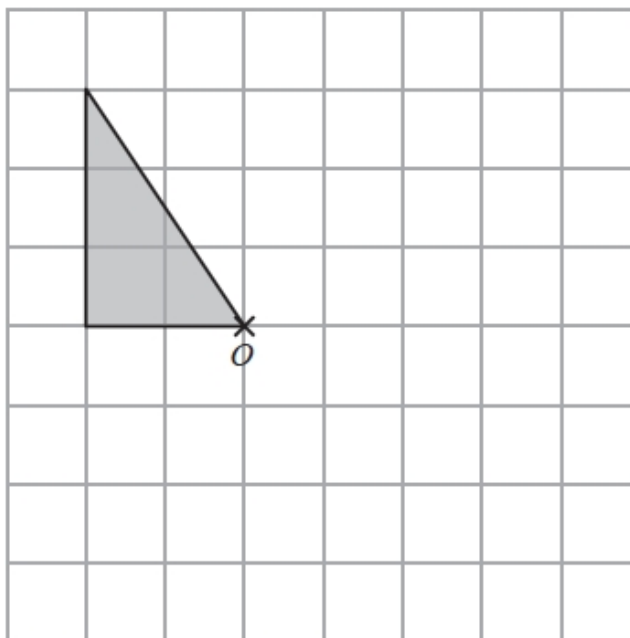
Q3.

(a) On the grid, draw an enlargement of the rectangle with scale factor 2



(1)

(b) On the grid, rotate the triangle 90° clockwise about the point O .

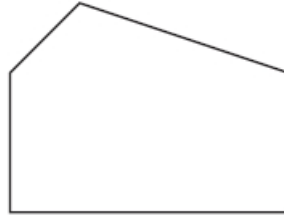


(2)

(Total for question = 3 marks)

Q4.

Here is a polygon with 5 sides.

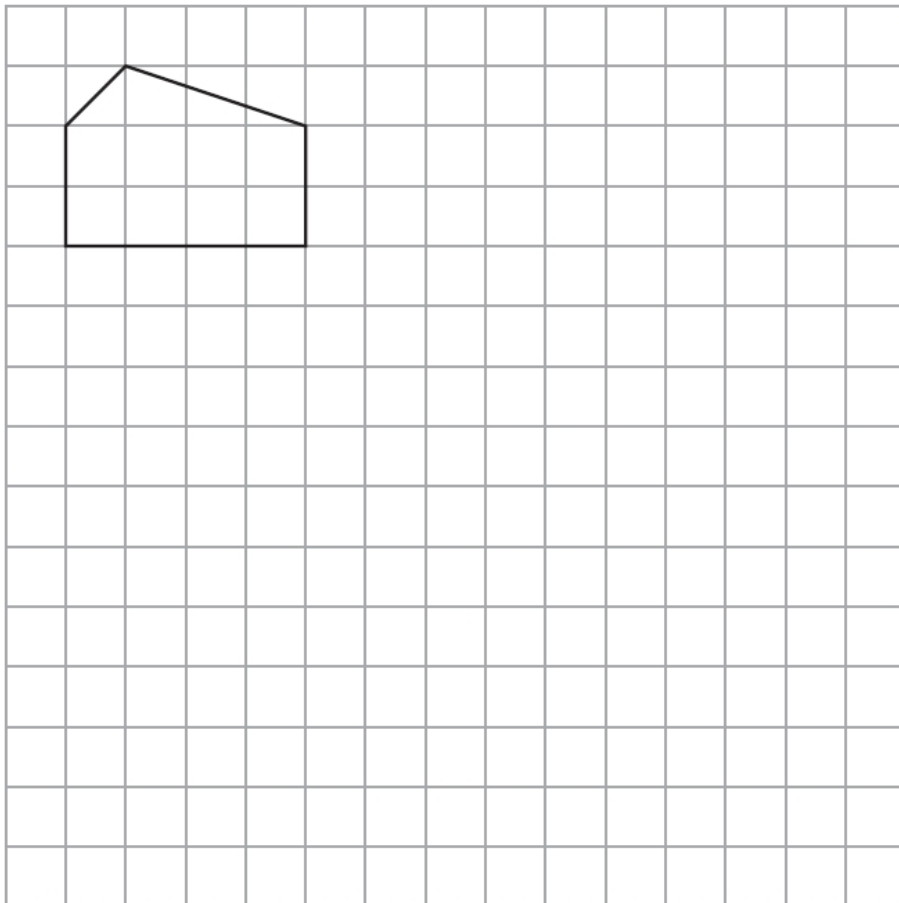


(a) Write down the mathematical name for this polygon.

.....

(1)

(b) On the grid, draw an enlargement of the polygon with scale factor 2

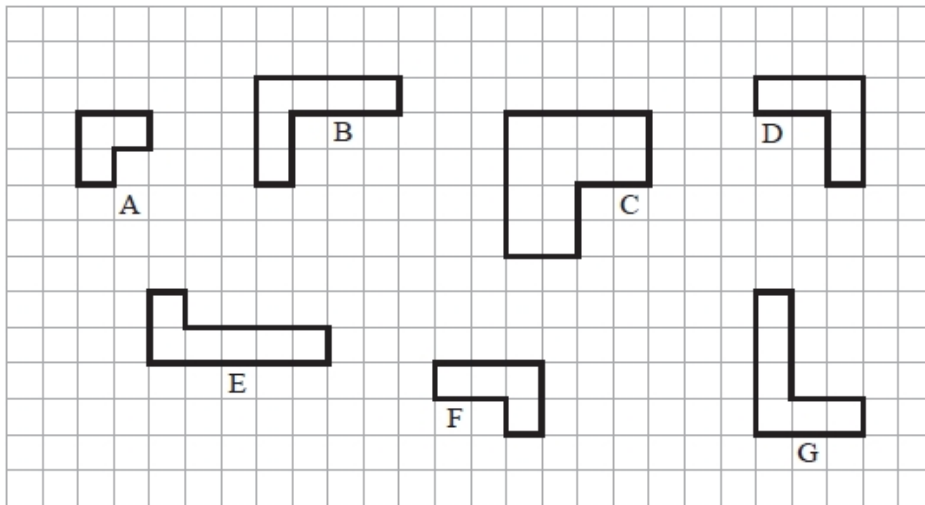


(2)

(Total for question = 3 marks)

Q5.

Here are seven shapes shown on a grid.



Two of the shapes are congruent.

(a) Write down the letters of these two shapes.

..... and

(1)

One of the shapes is similar to shape A.

(b) Write down the letter of the shape.

.....

(1)

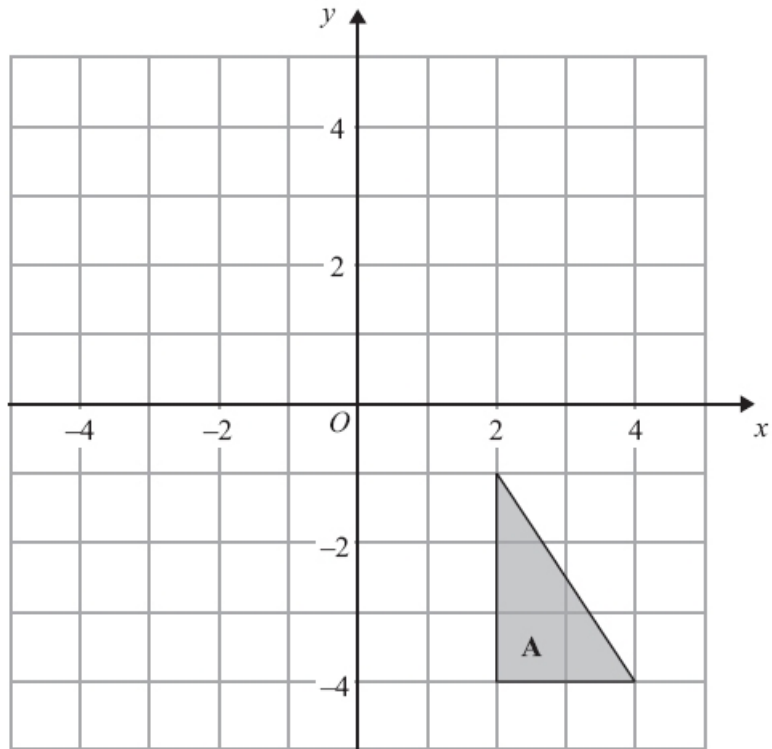
(c) On the grid below, draw an enlargement of shape F with scale factor 3



(2)

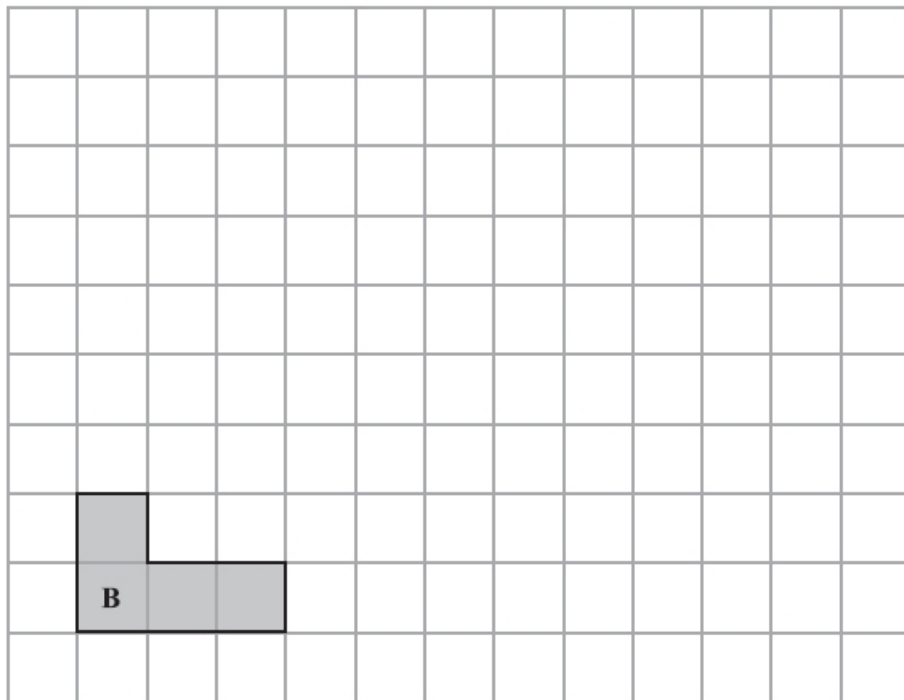
(Total for question = 4 marks)

Q6.



(a) Reflect triangle **A** in the x -axis.

(2)



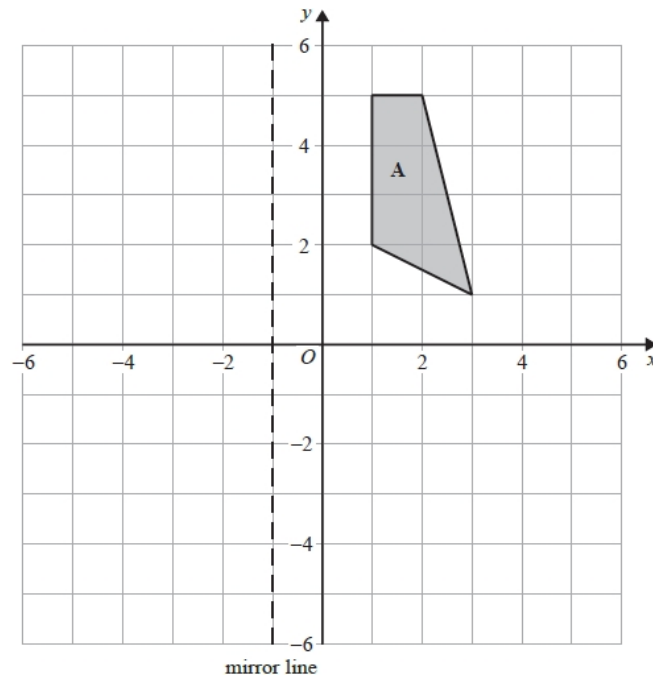
(b) Draw an enlargement, scale factor 3, of shape **B**.

(2)

(Total for Question is 4 marks)

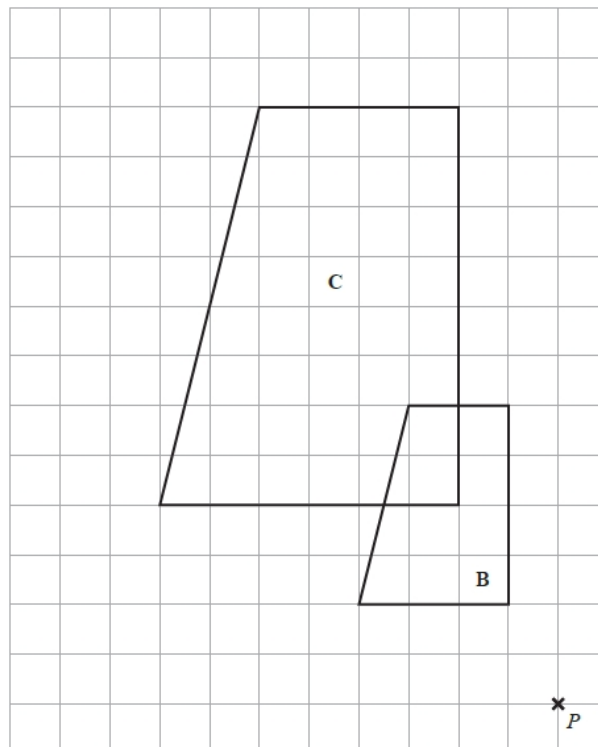
Q7.

(a) On the grid, reflect shape **A** in the mirror line.



(2)

(b)



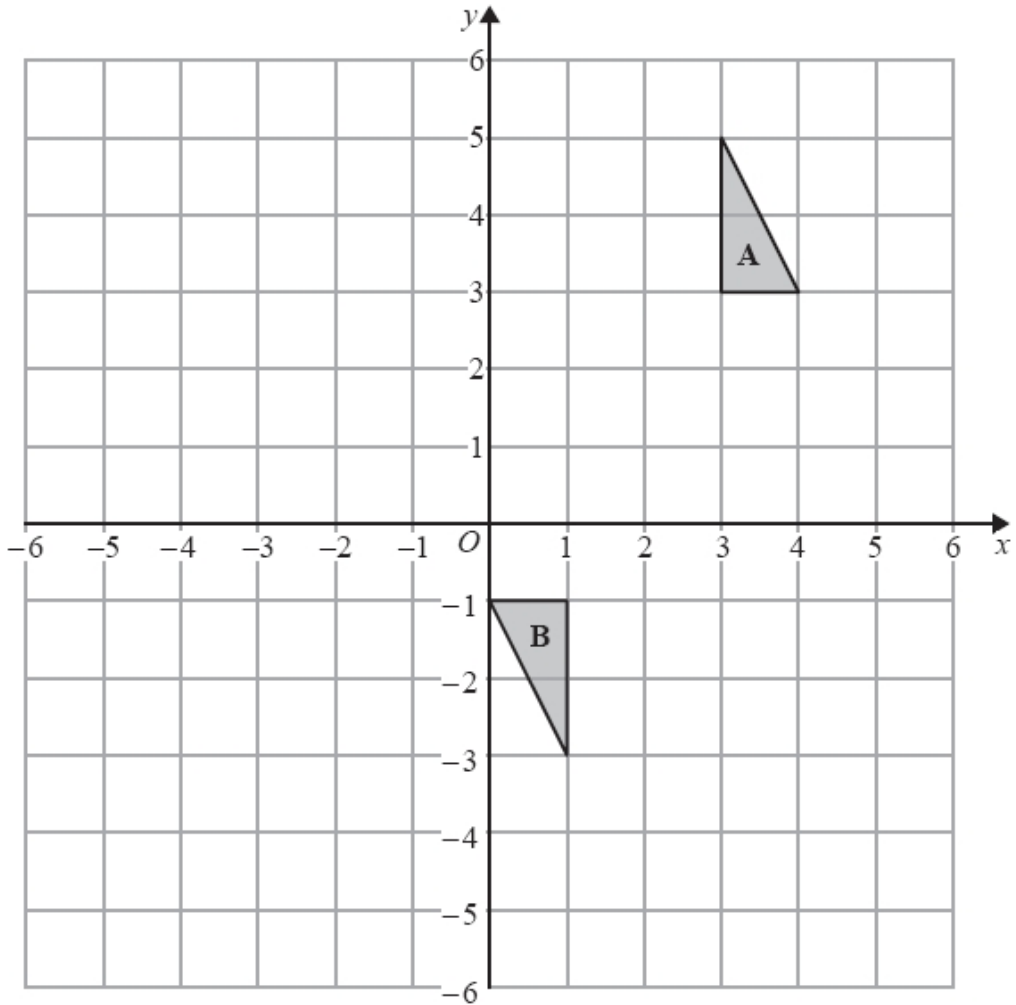
Describe fully the single transformation that maps trapezium **B** onto trapezium **C**.

.....

(2)

(Total for question = 4 marks)

Q8.

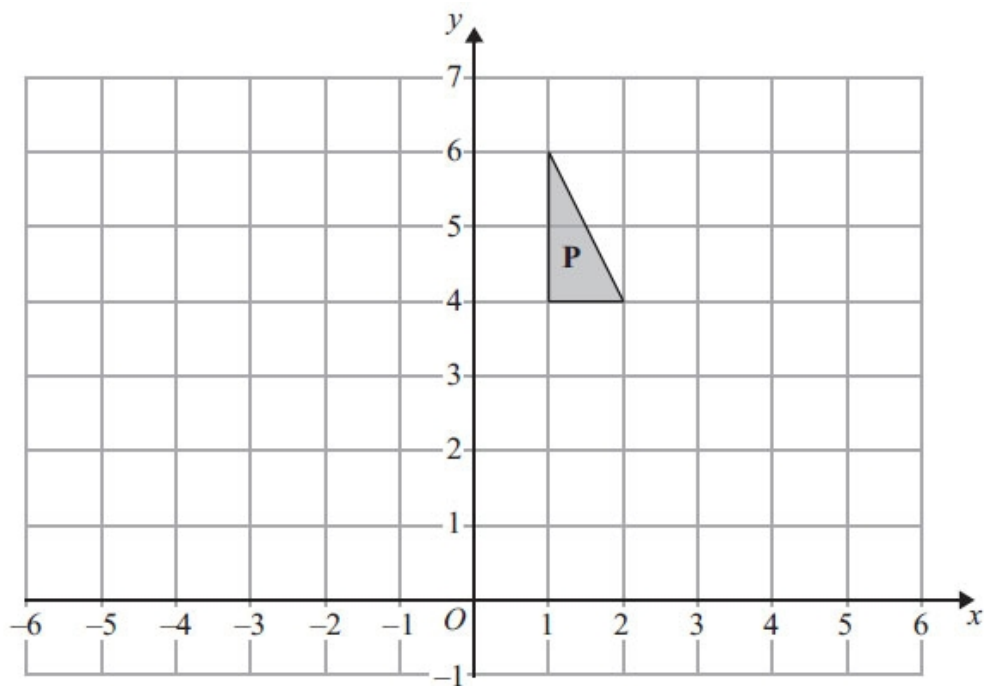


Describe fully the single transformation that maps triangle **A** onto triangle **B**.

.....
.....
.....

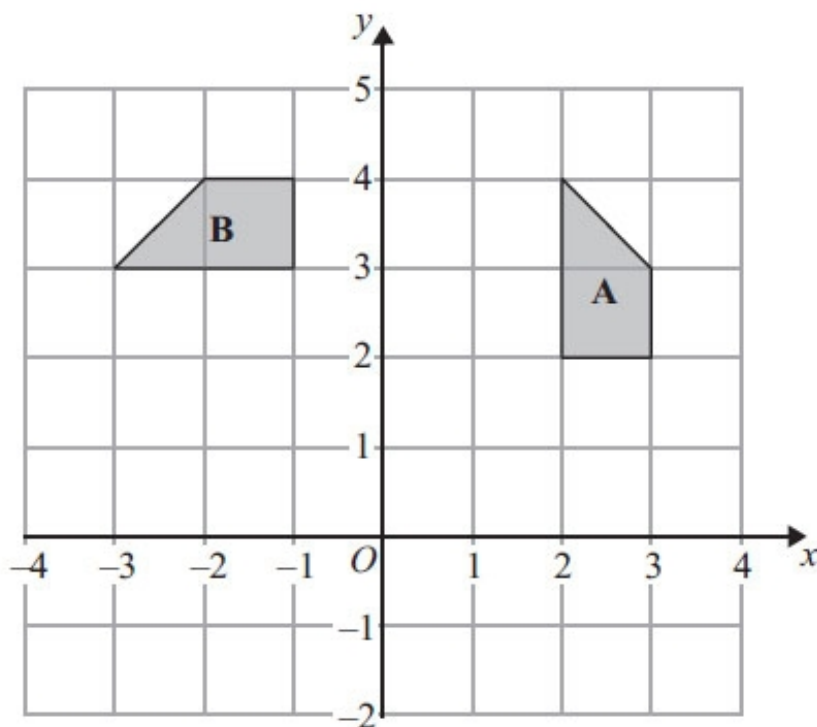
(Total for question = 3 marks)

Q9.



(a) Reflect shape **P** in the line $x = 3$

(2)



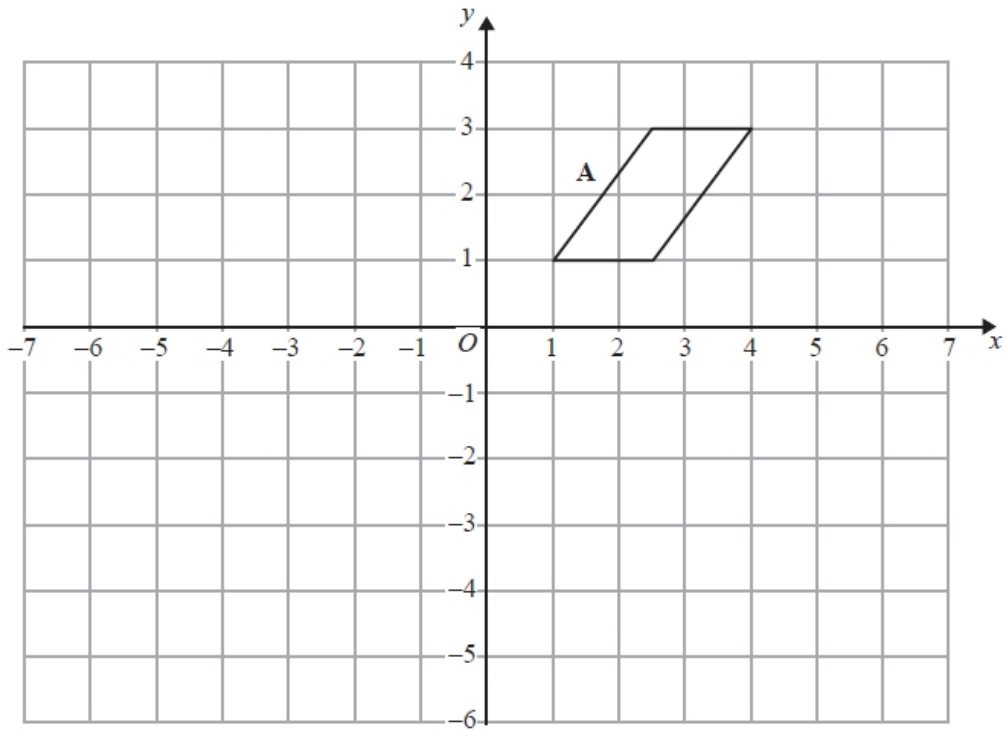
(b) Describe fully the single transformation that maps shape **A** onto shape **B**.

.....
.....
.....

(3)

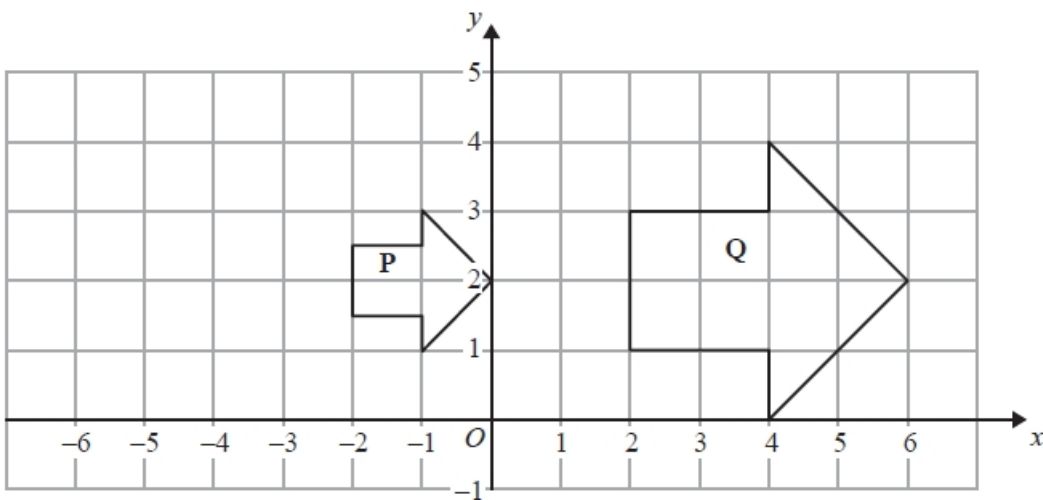
(Total for Question is 5 marks)

Q10.



(a) Reflect shape **A** in the line $x = -1$

(2)



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

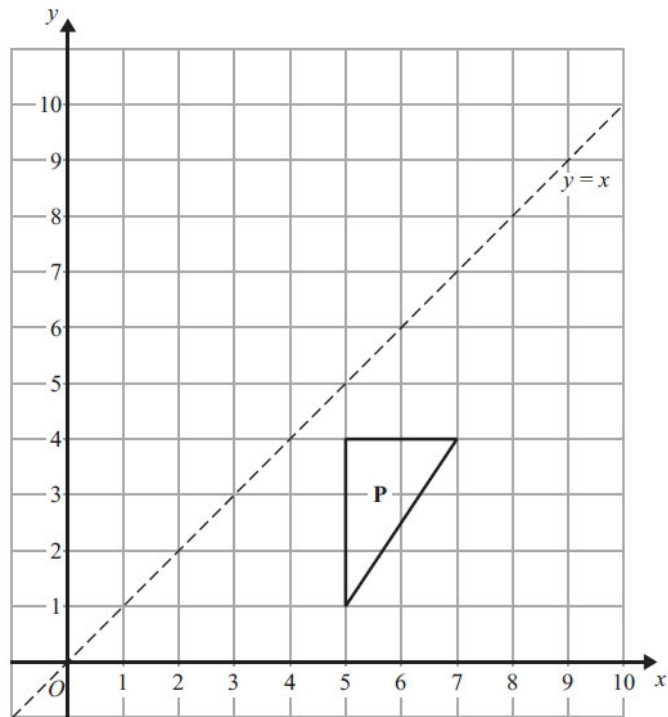
.....
.....

(3)

(Total for question = 5 marks)

Q11.

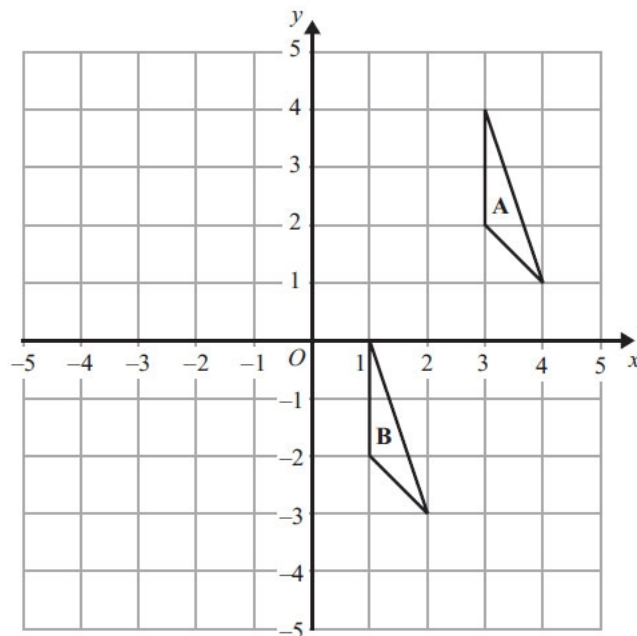
(a)



Reflect shape **P** in the line $y = x$

(2)

(b)



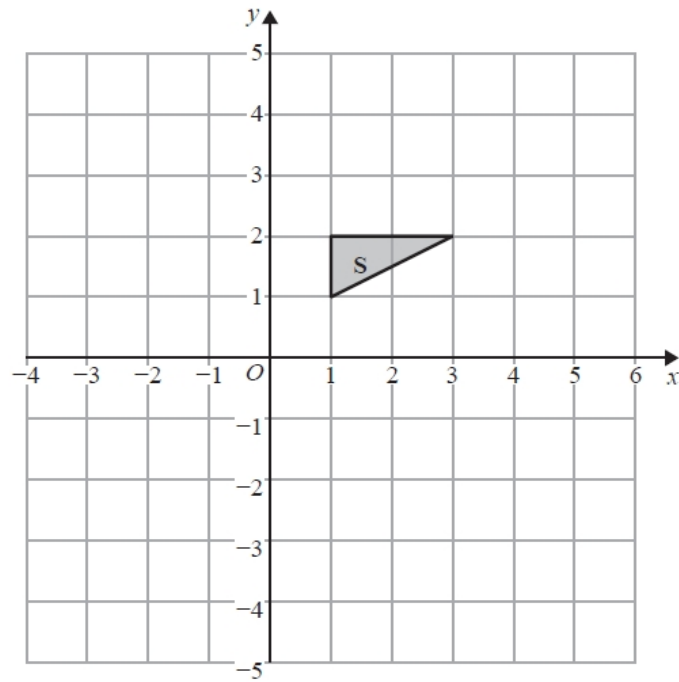
Describe fully the single transformation that maps triangle **A** onto triangle **B**.

.....
.....

(2)

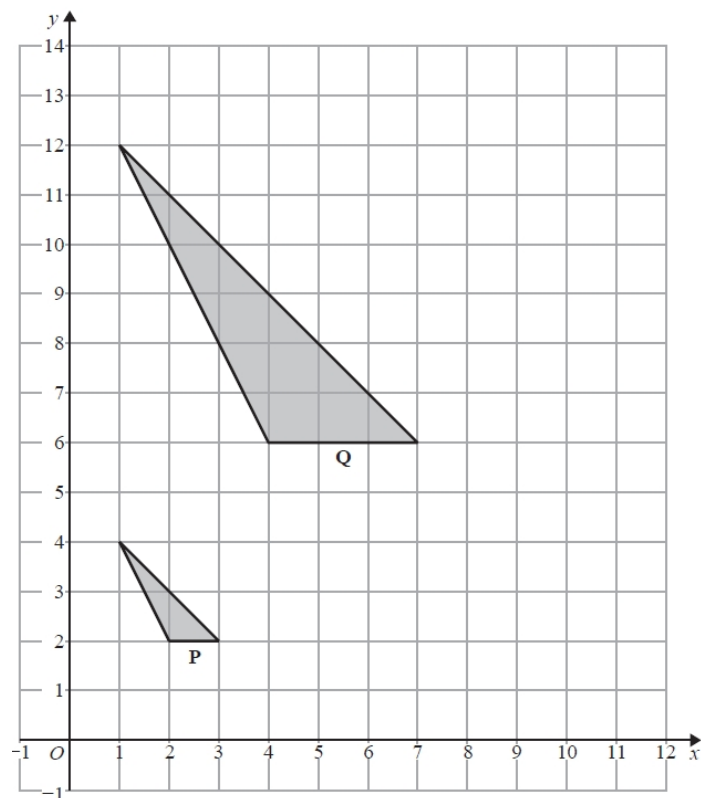
(Total for Question is 4 marks)

Q12.



(a) On the grid, rotate shape **S** by 90° anticlockwise about the origin.

(2)



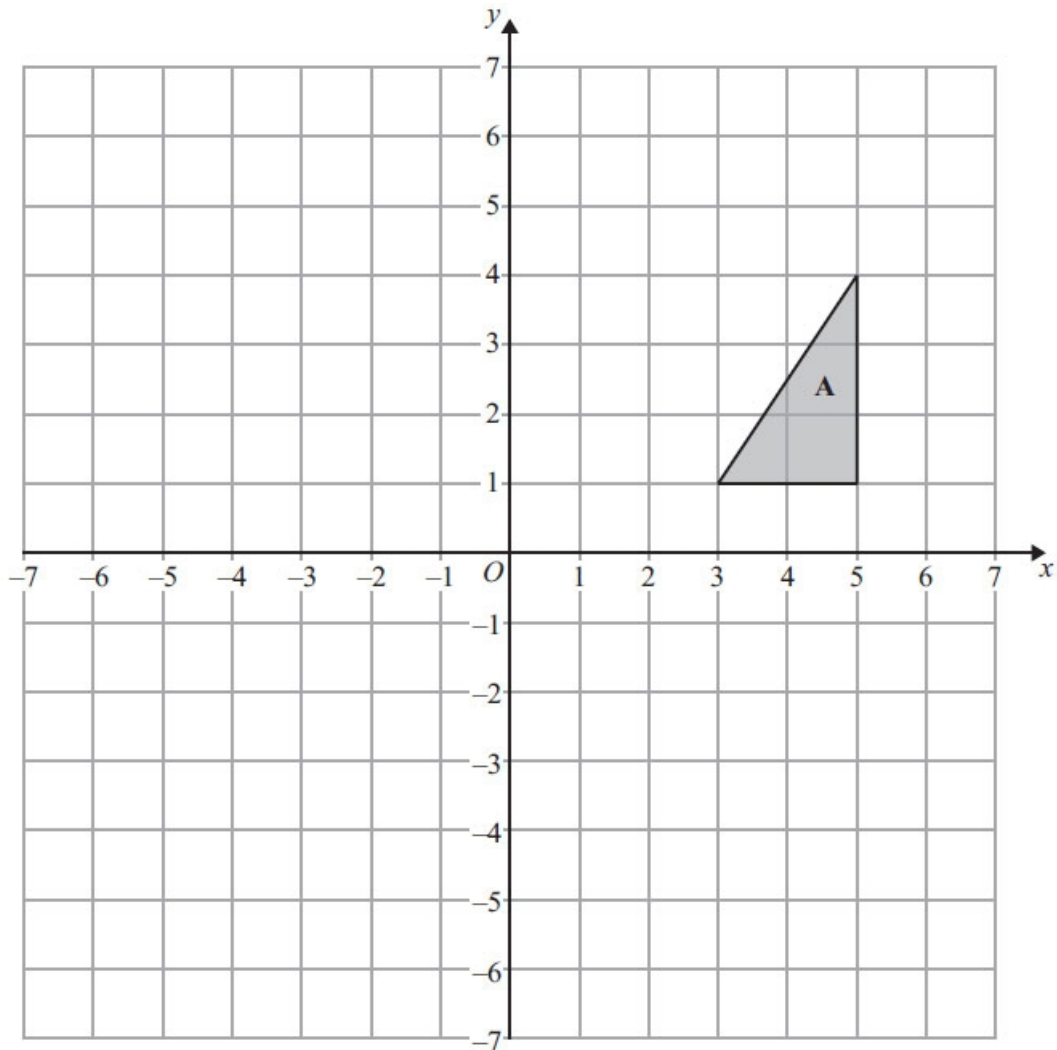
(b) Describe fully the single transformation that maps shape **P** onto shape **Q**.

.....
.....

(3)

(Total for question = 5 marks)

Q13.



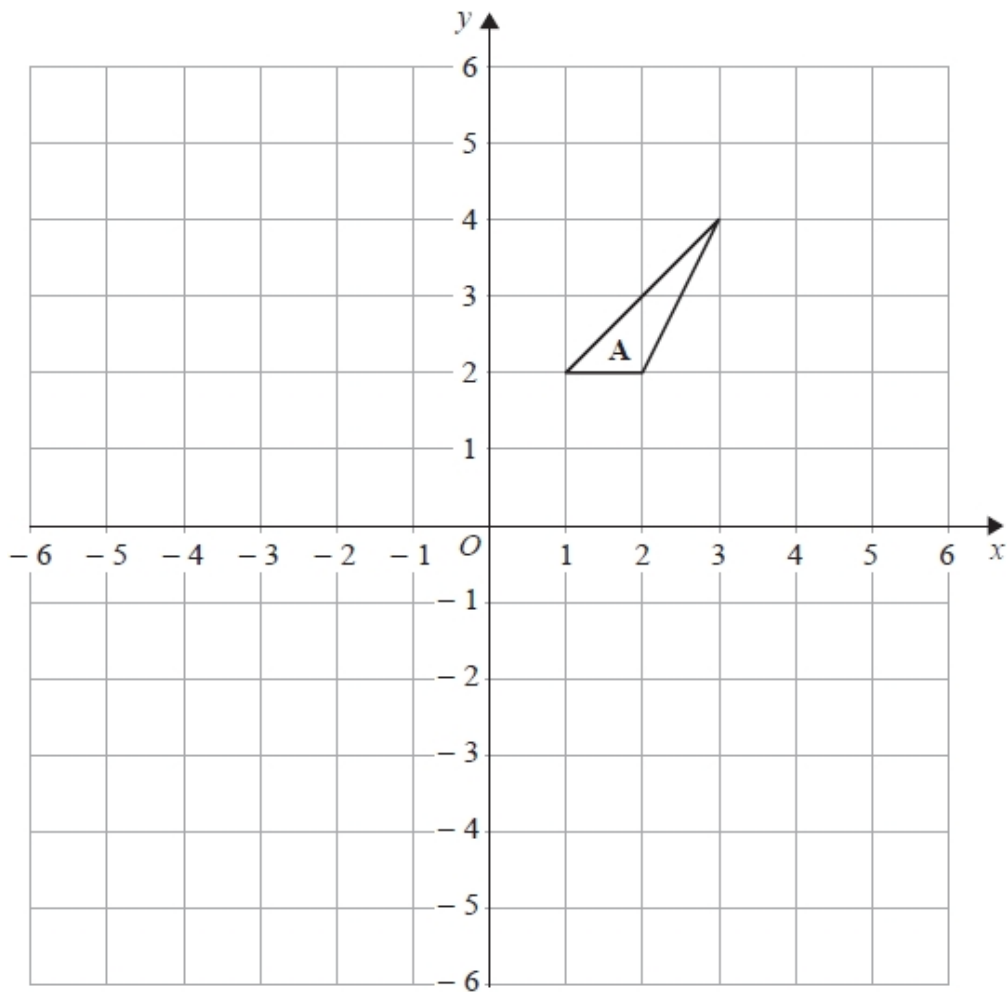
Triangle **A** is reflected in the x -axis to give triangle **B**.
Triangle **B** is then reflected in the line $x = 1$ to give triangle **C**.

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

.....
.....
.....

(Total for Question is 3 marks)

Q14.



Triangle **A** is rotated 90° clockwise about the point $(0, 1)$ to give triangle **B**.

Triangle **B** is translated by the vector $\begin{pmatrix} -3 \\ -1 \end{pmatrix}$ to give triangle **C**.

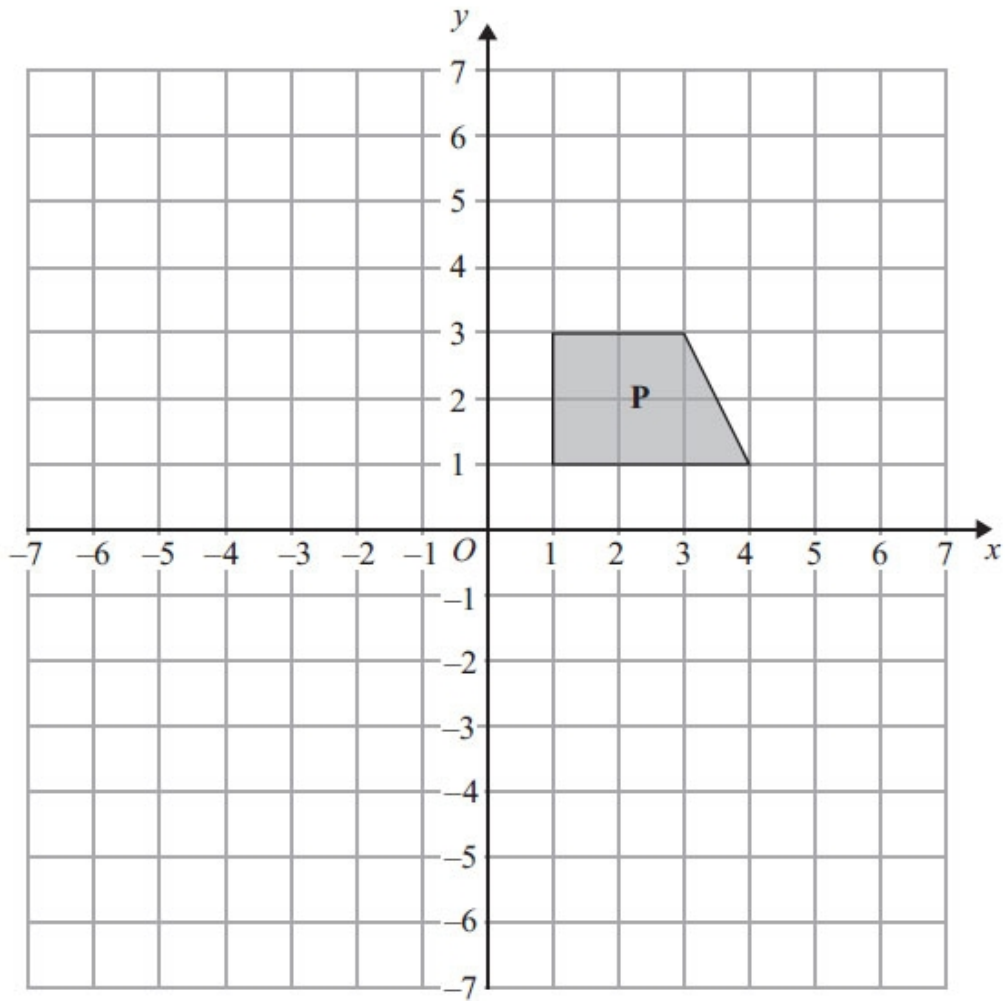
Describe fully the single transformation that maps triangle **A** onto triangle **C**.

.....
.....

(3)

(Total for question = 3 marks)

Q15.



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**.

.....
.....

(Total for Question is 3 marks)