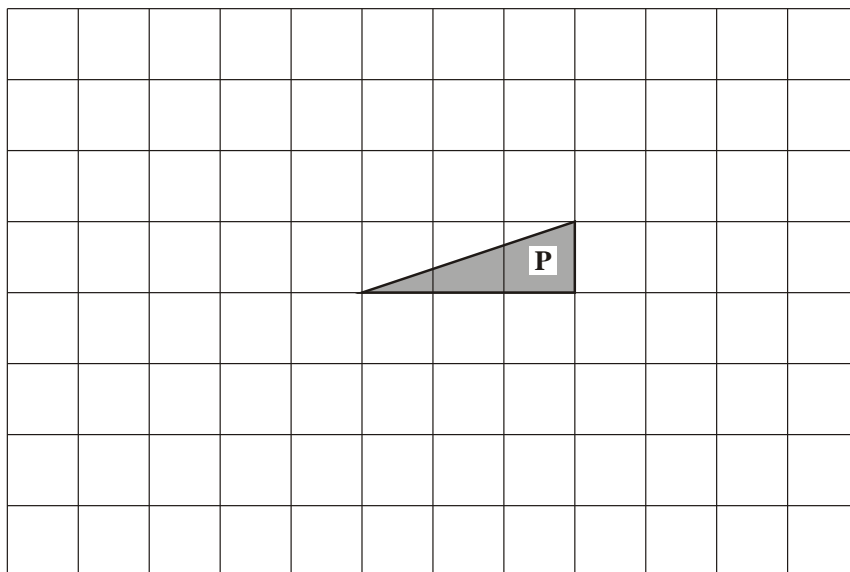


On the grid, translate the shaded shape **P** by 2 units to the right and 3 units up.

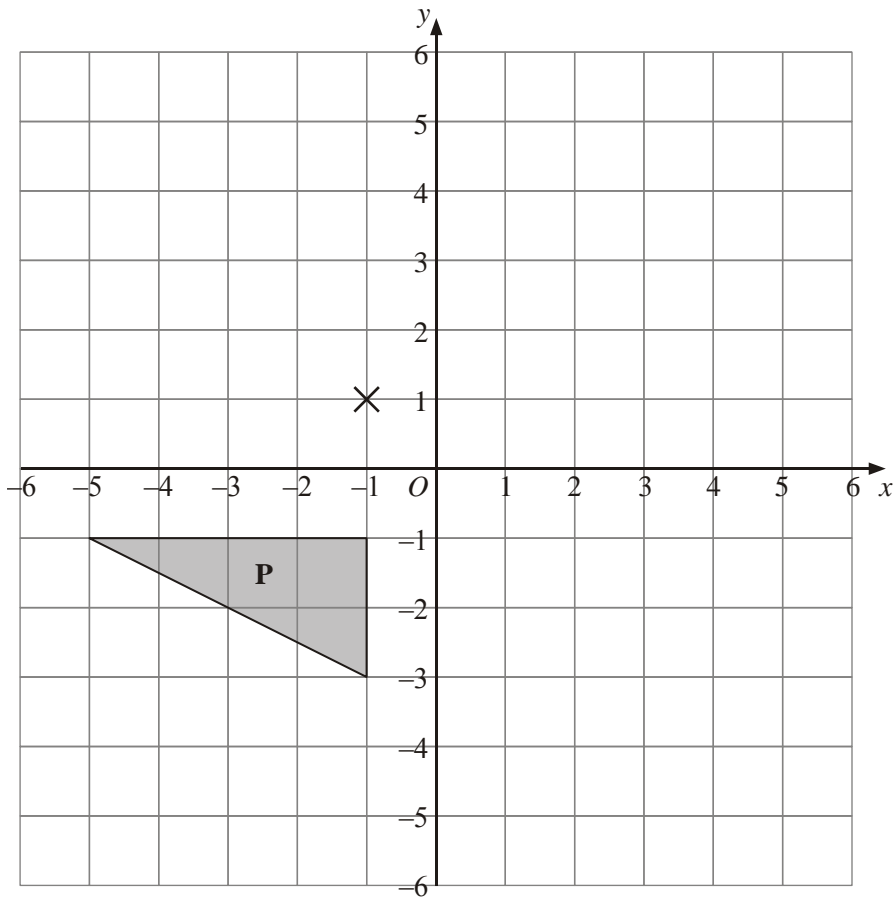
Label the new shape **R**.

**(Total 2 marks)**

Translate shape **P** 3 squares to the left and 2 squares down.



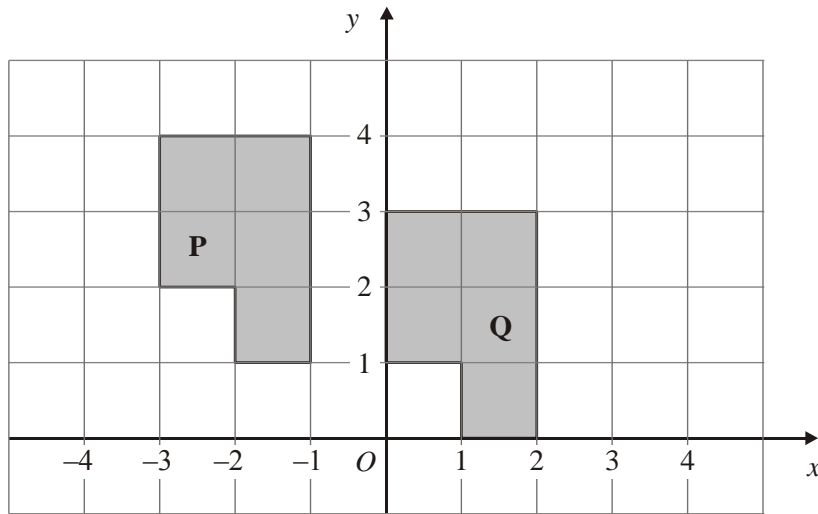
**(Total 1 mark)**



Translate triangle **P** by the vector  $\begin{pmatrix} 6 \\ -1 \end{pmatrix}$ .

Label the new triangle **B**.

(2)  
(Total 2 marks)



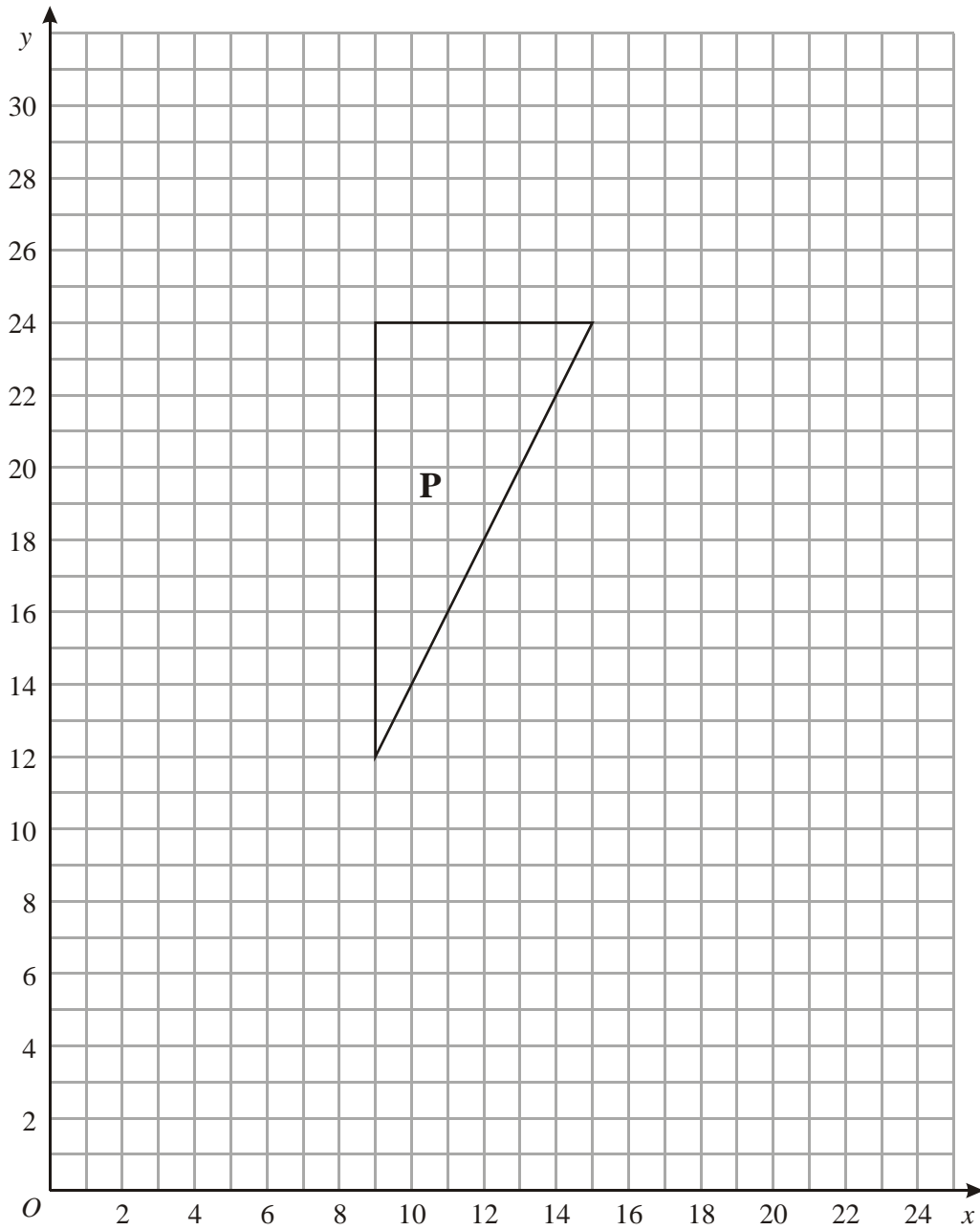
Describe fully the single transformation that will map shape **P** onto shape **Q**.

.....

.....

.....

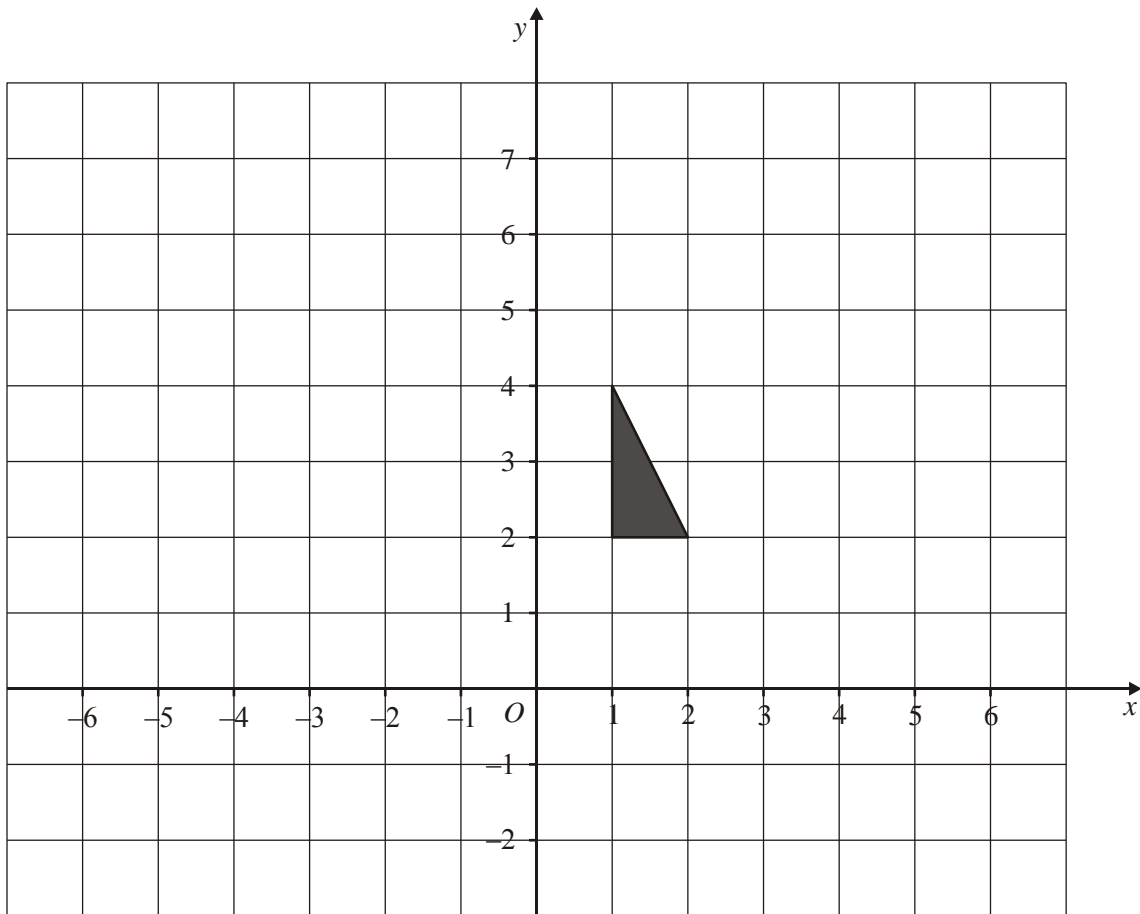
(2)  
(Total 2 marks)



On the grid, translate triangle **P** by the vector  $\begin{pmatrix} 8 \\ -3 \end{pmatrix}$

Label the new triangle **Q**.

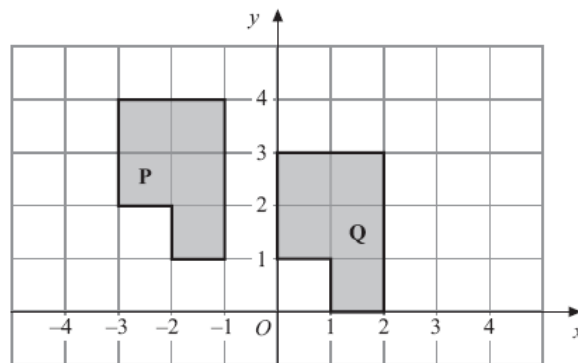
(2)  
(Total 2 marks)



Translate the triangle by the vector

$$\begin{pmatrix} 4 \\ -3 \end{pmatrix}$$

**(Total 2 mark)**

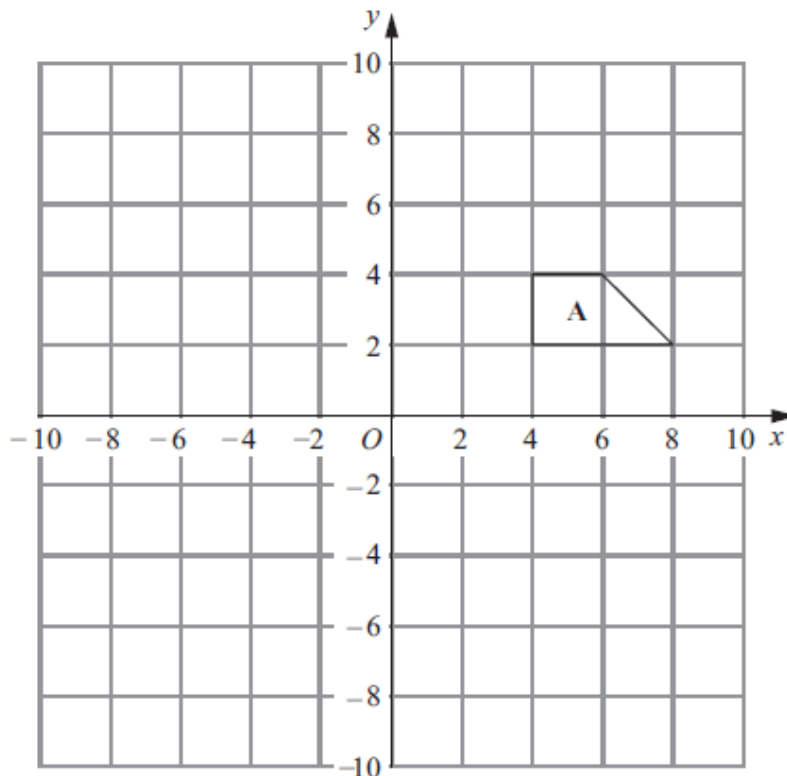


Describe fully the single transformation that will map shape **P** onto shape **Q**.

.....

.....

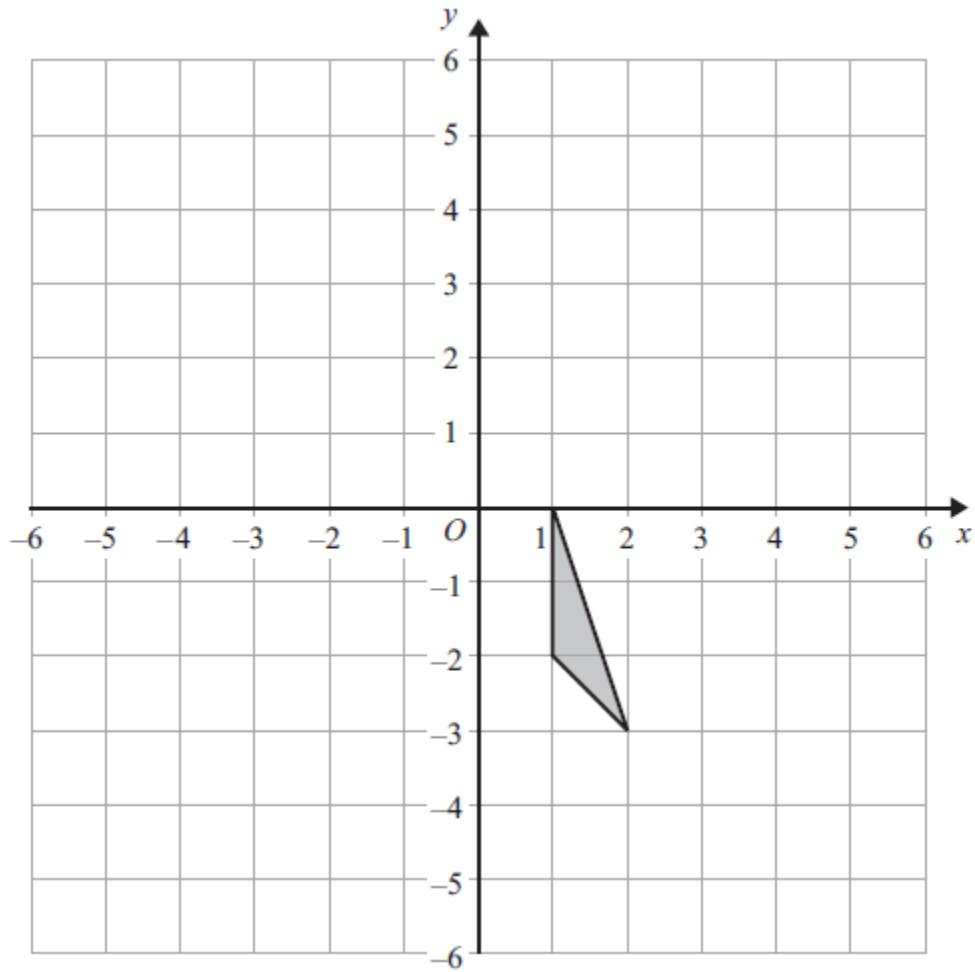
(2)  
(Total 2 marks)



Translate shape **A** by  $\begin{pmatrix} -8 \\ -2 \end{pmatrix}$ .

Label the new shape **B**.

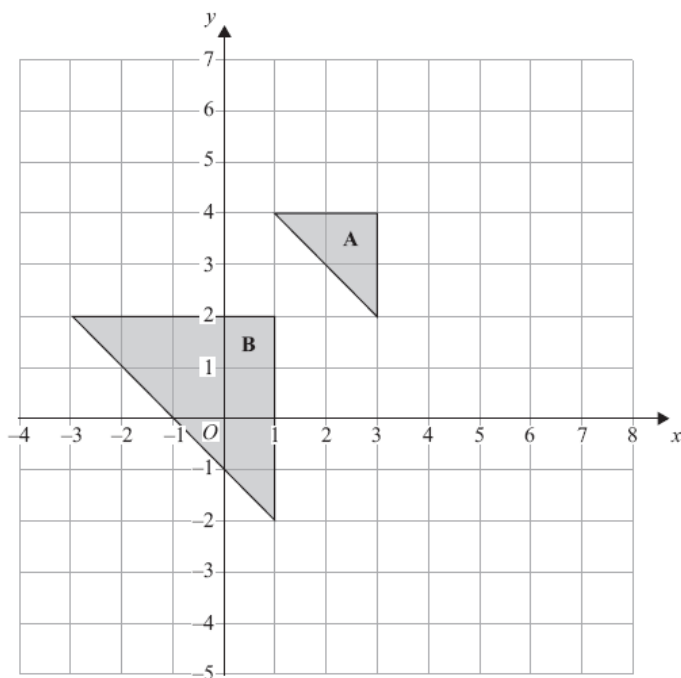
(Total 2 marks)



Translate the triangle by  $\begin{pmatrix} -3 \\ 2 \end{pmatrix}$

**(Total 2 marks)**

---



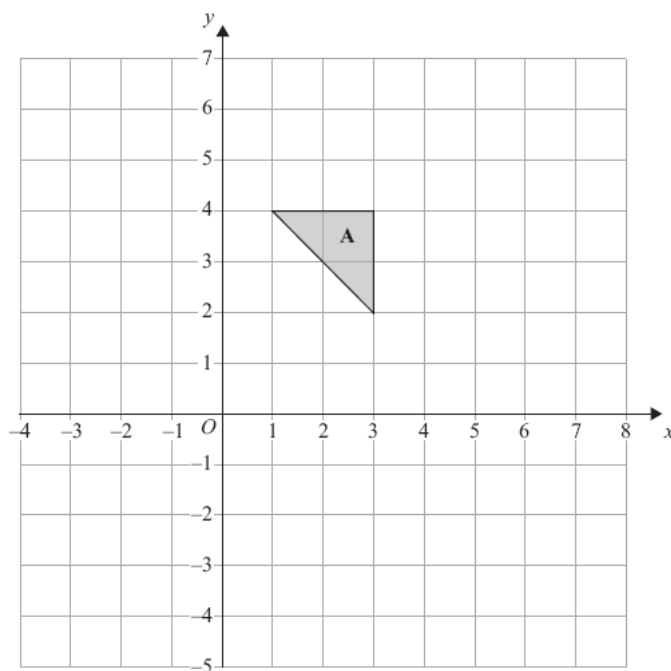
Triangle **A** and triangle **B** are drawn on the grid.

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

.....

.....

(3)

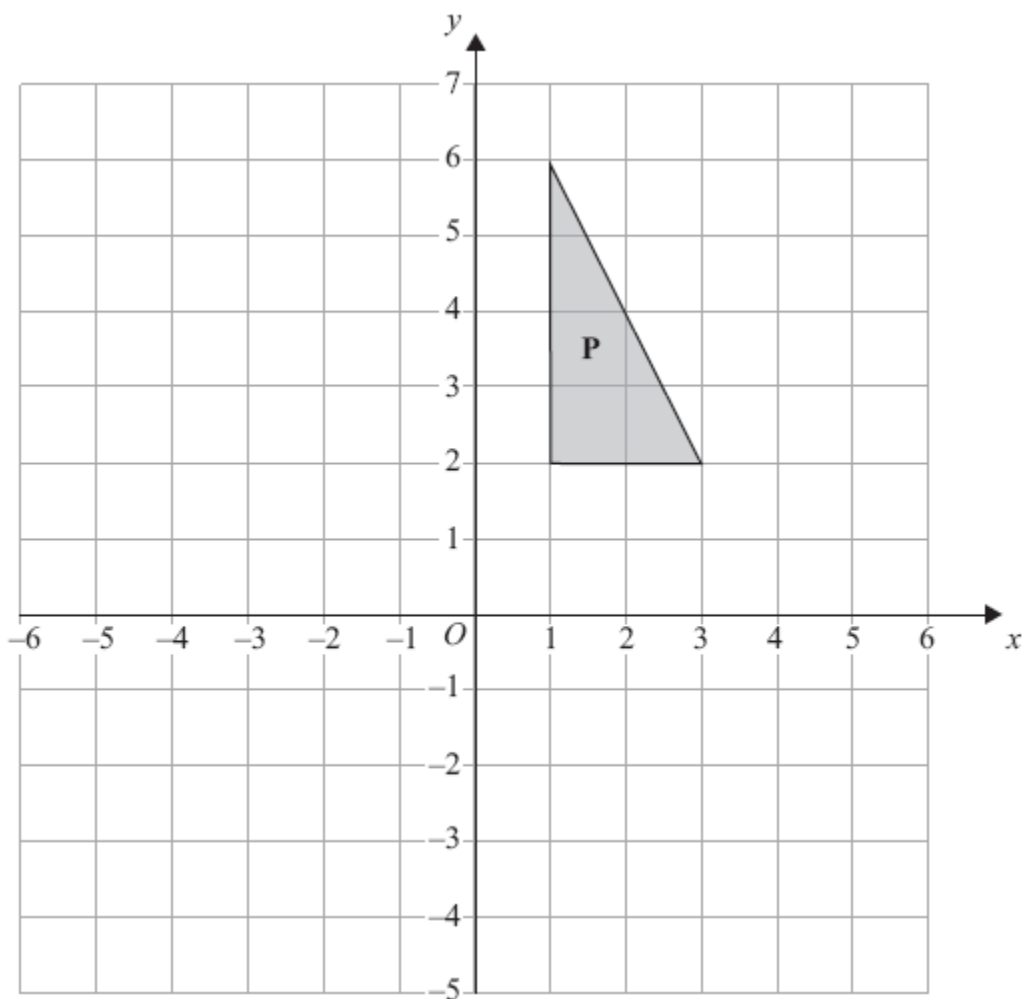


(b) Reflect triangle **A** in the line  $x = 4$

(2)

**(5 marks)**





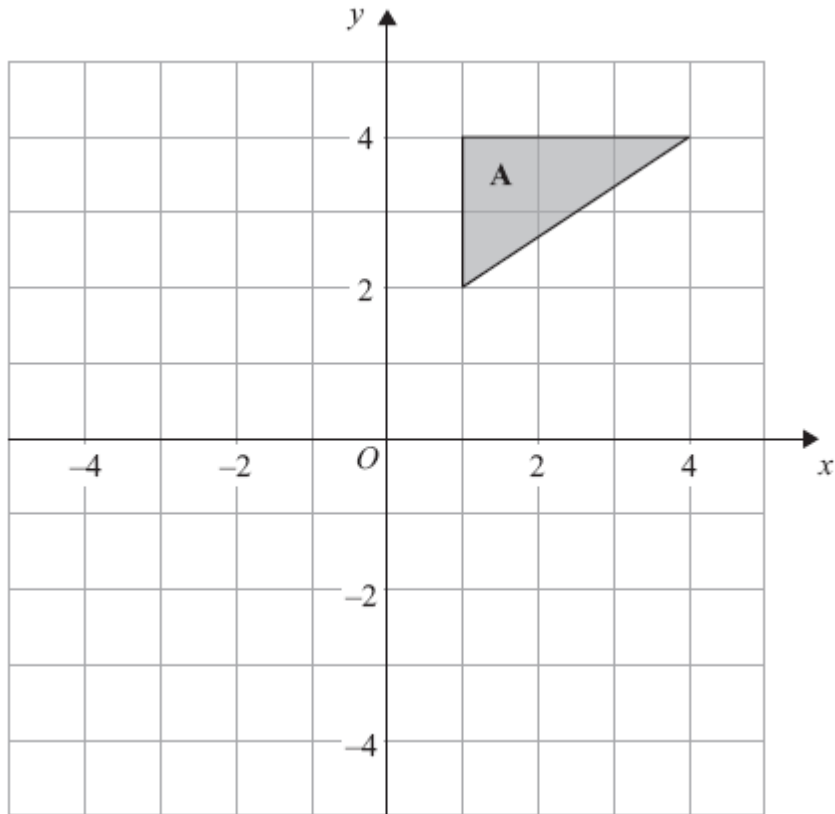
Triangle **P** is drawn on a coordinate grid.

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**.

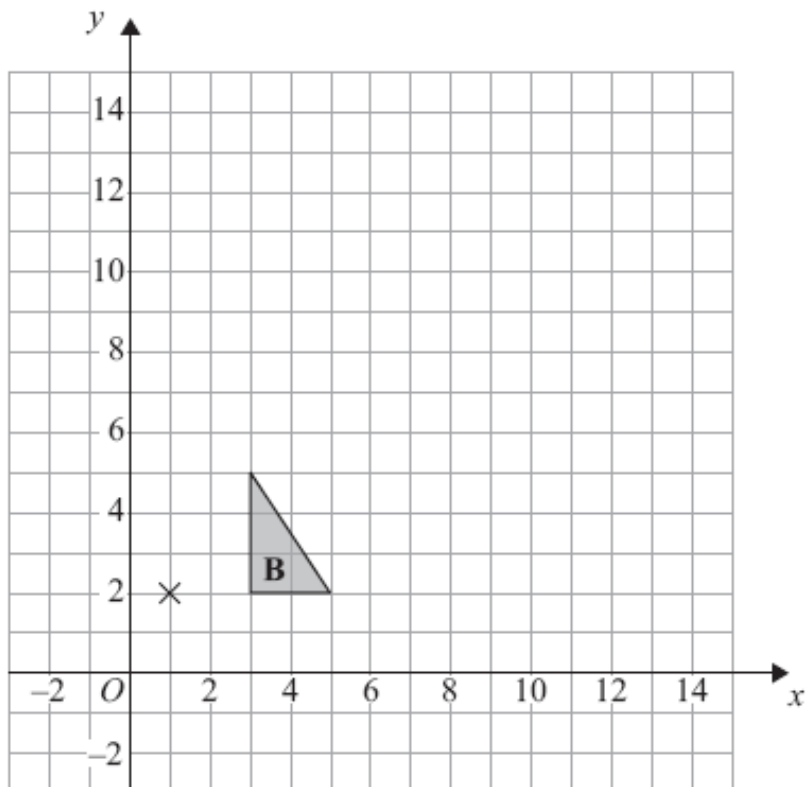
.....  
.....

**(3 marks)**



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

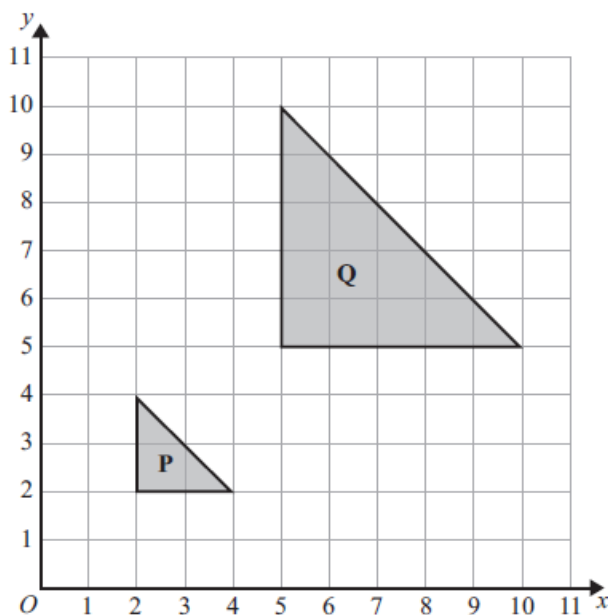
(2)



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

(3)

**(5 marks)**

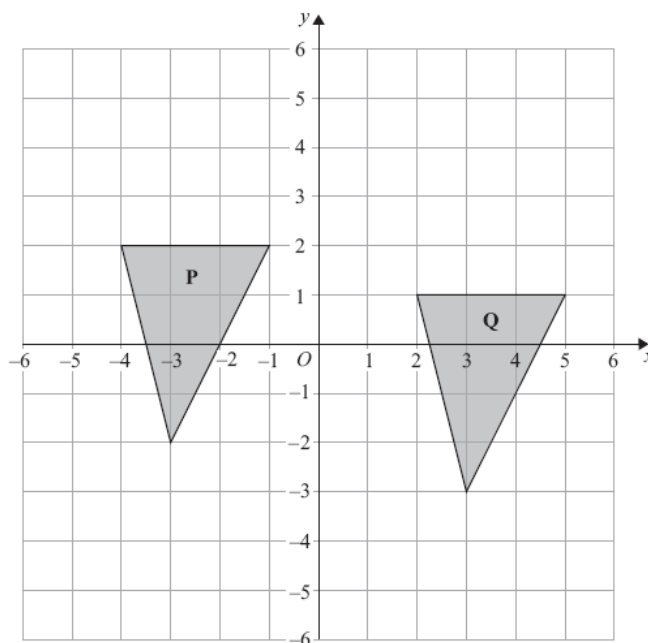


Describe fully the single transformation that maps shape **P** onto shape **Q**.

.....

.....

**(3 marks)**



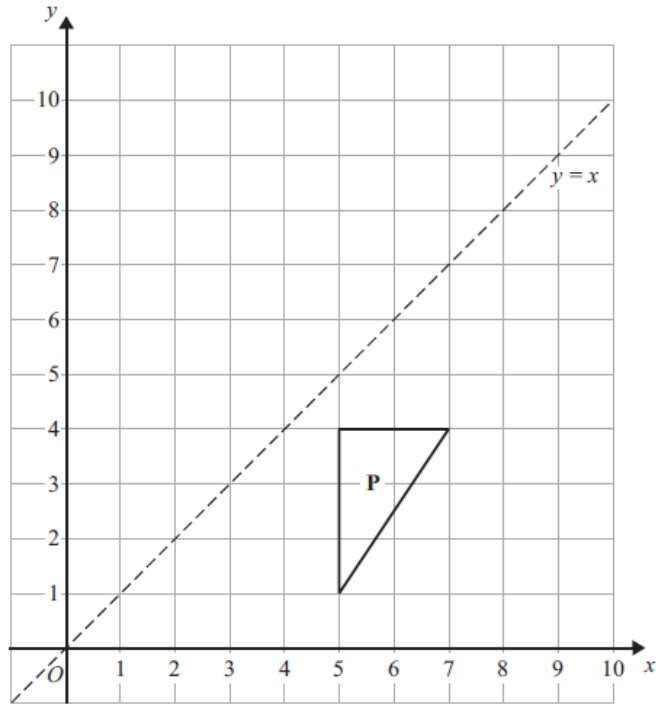
Describe fully the single transformation that maps triangle **P** onto triangle **Q**.

.....

.....

**(3 marks)**

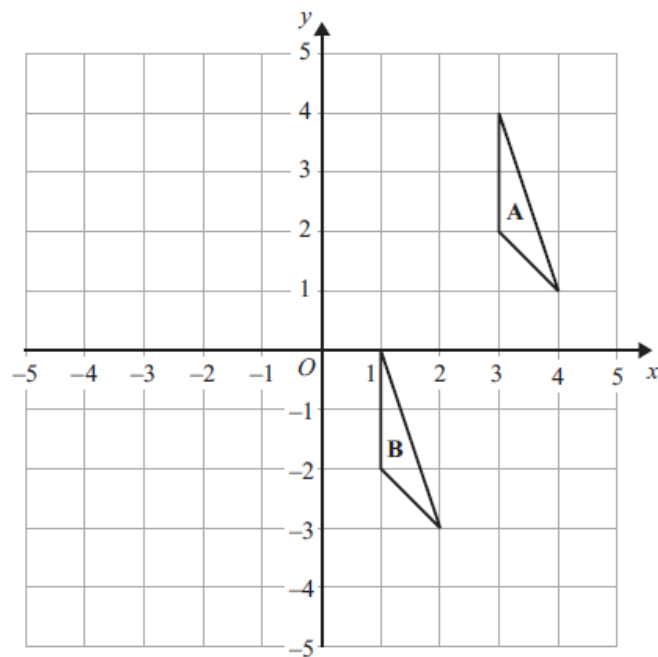
(a)



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

(2)

(b)



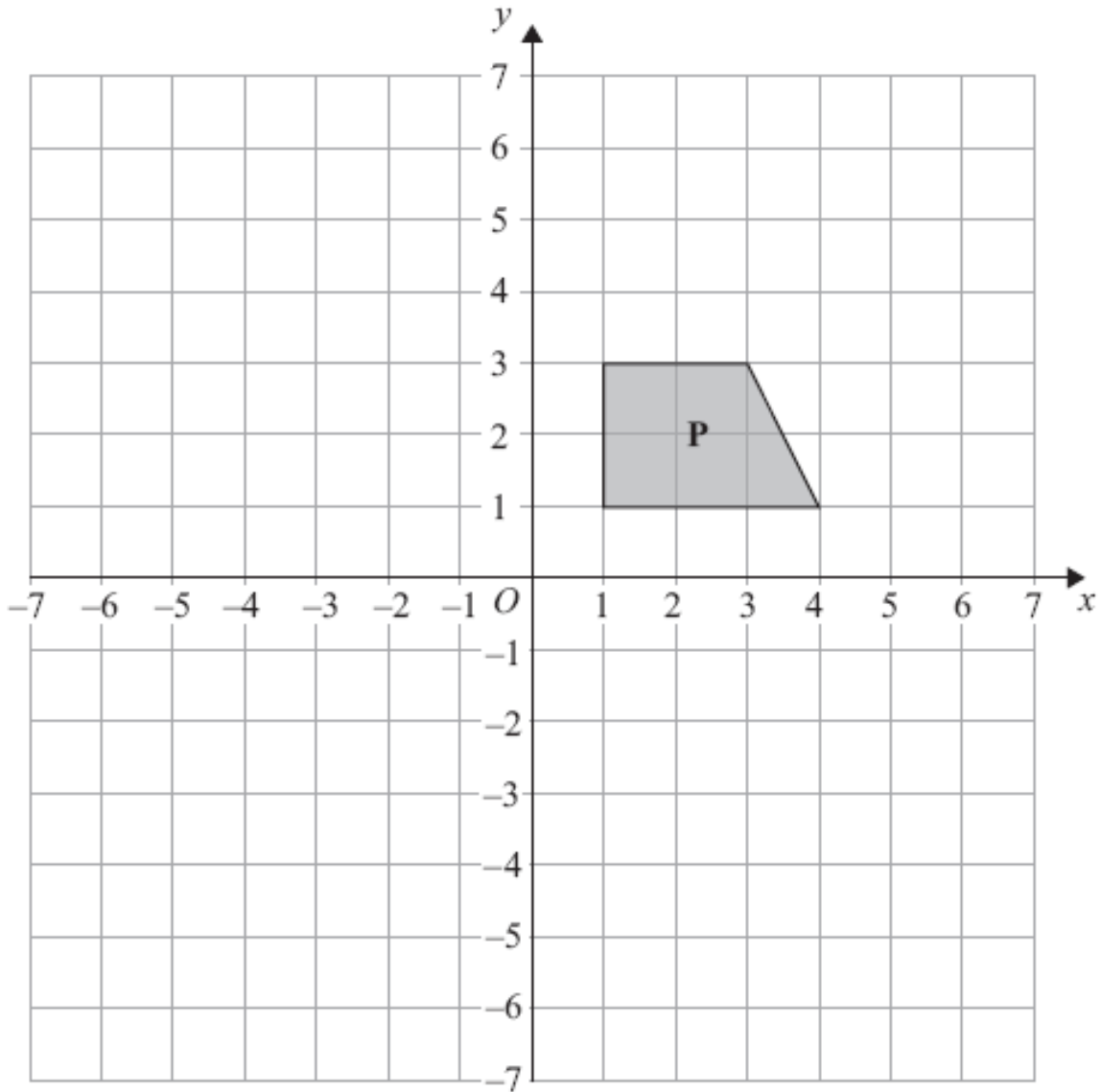
Describe fully the single transformation that maps triangle **A** onto triangle **B**.

.....

.....

(2)

**(4 marks)**



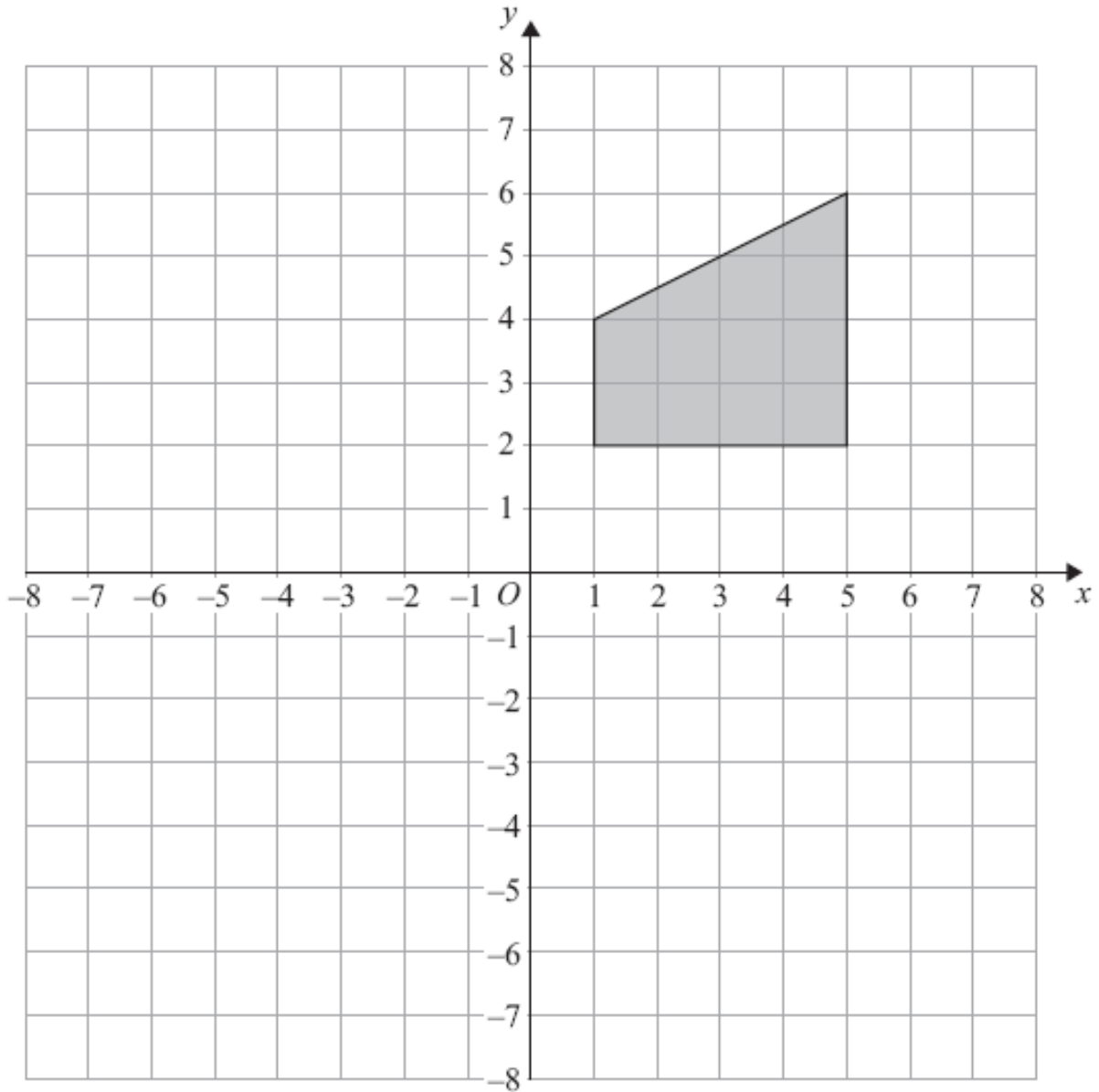
Shape **P** is reflected in the line  $x = -1$  to give shape **Q**.

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**.

.....  
.....

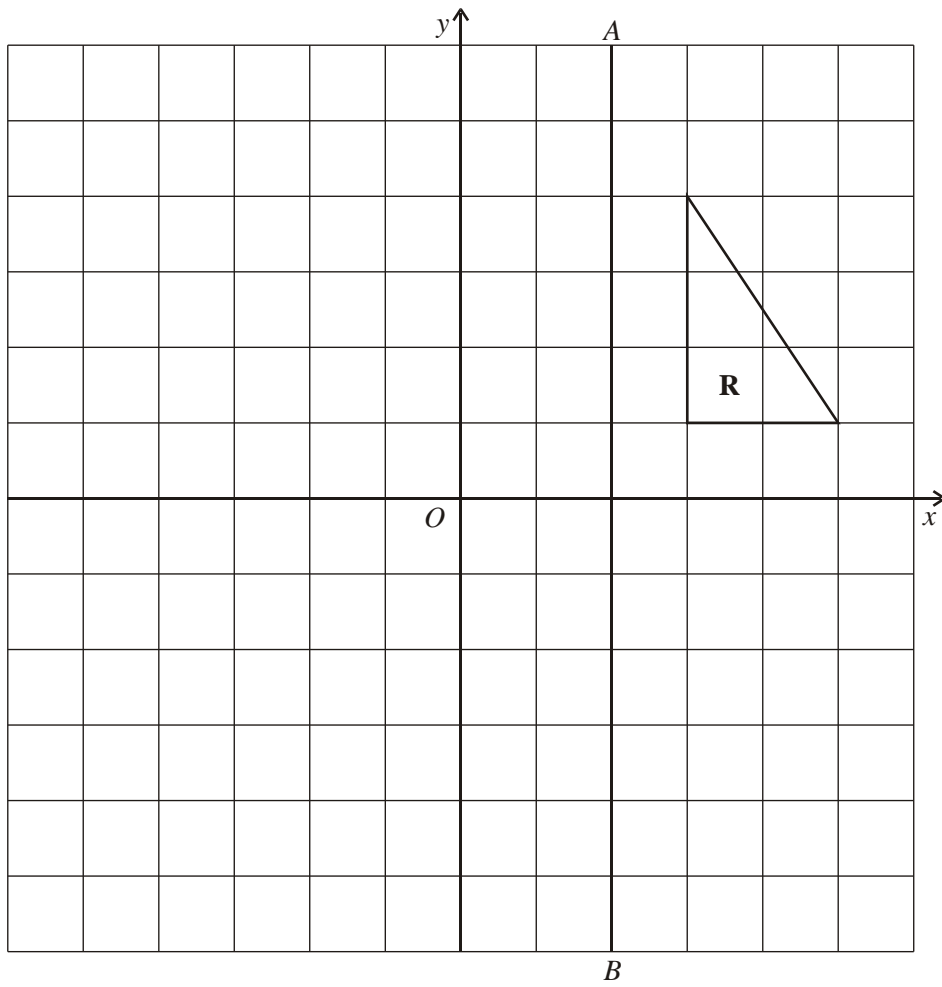
**(3 marks)**



Rotate the shaded shape  $90^\circ$  clockwise about the point (1, -1).

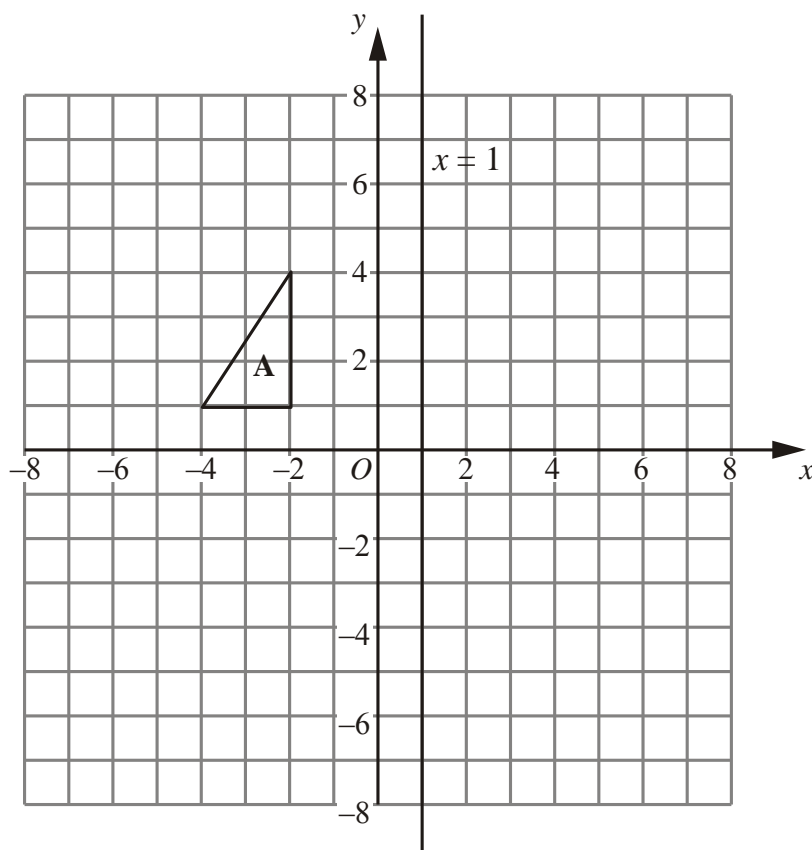
**(3 marks)**

---



Reflect triangle **R** in the line **AB**.  
Label the new triangle **S**.

(2)  
(Total 2 marks)



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

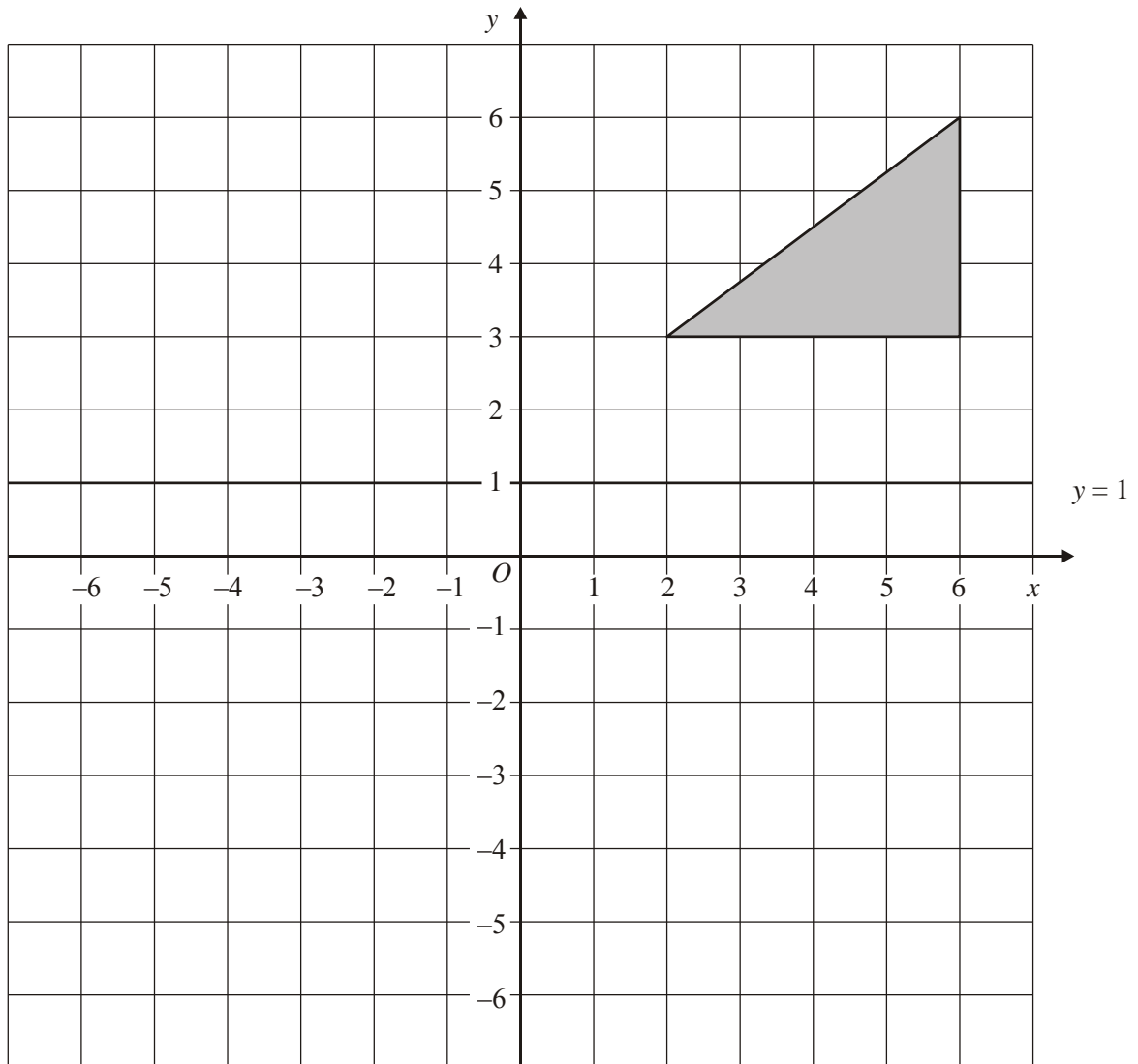
Draw the triangle **B** and label it **B**.

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

Draw the triangle **C** and label it **C**.

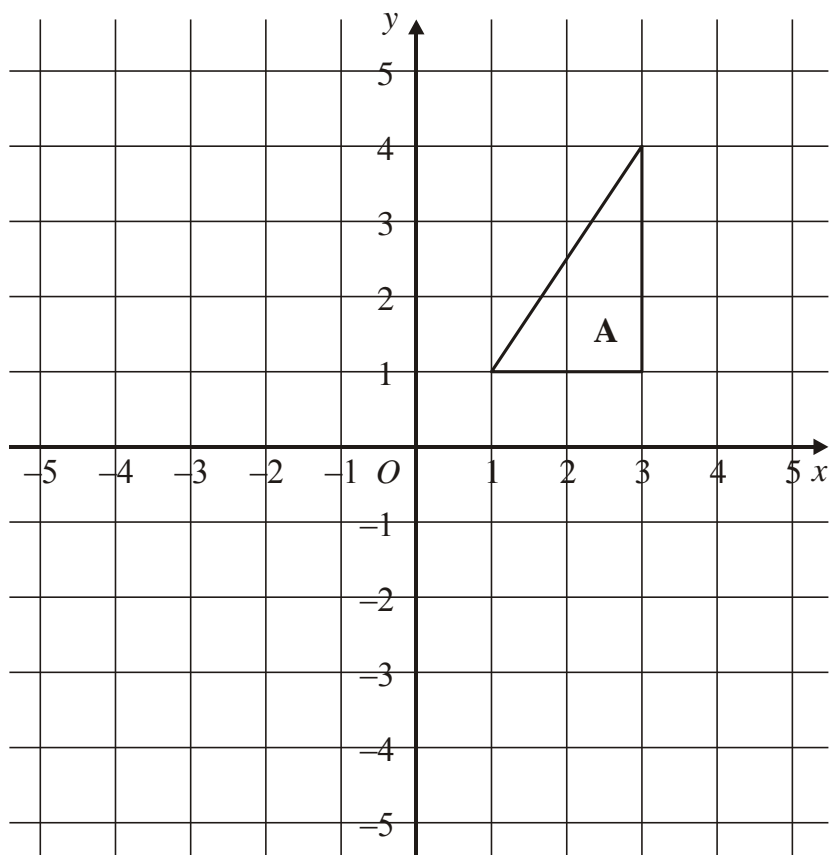
**(Total 4 marks)**





Reflect the triangle in the line  $y = 1$

**(Total 2 marks)**



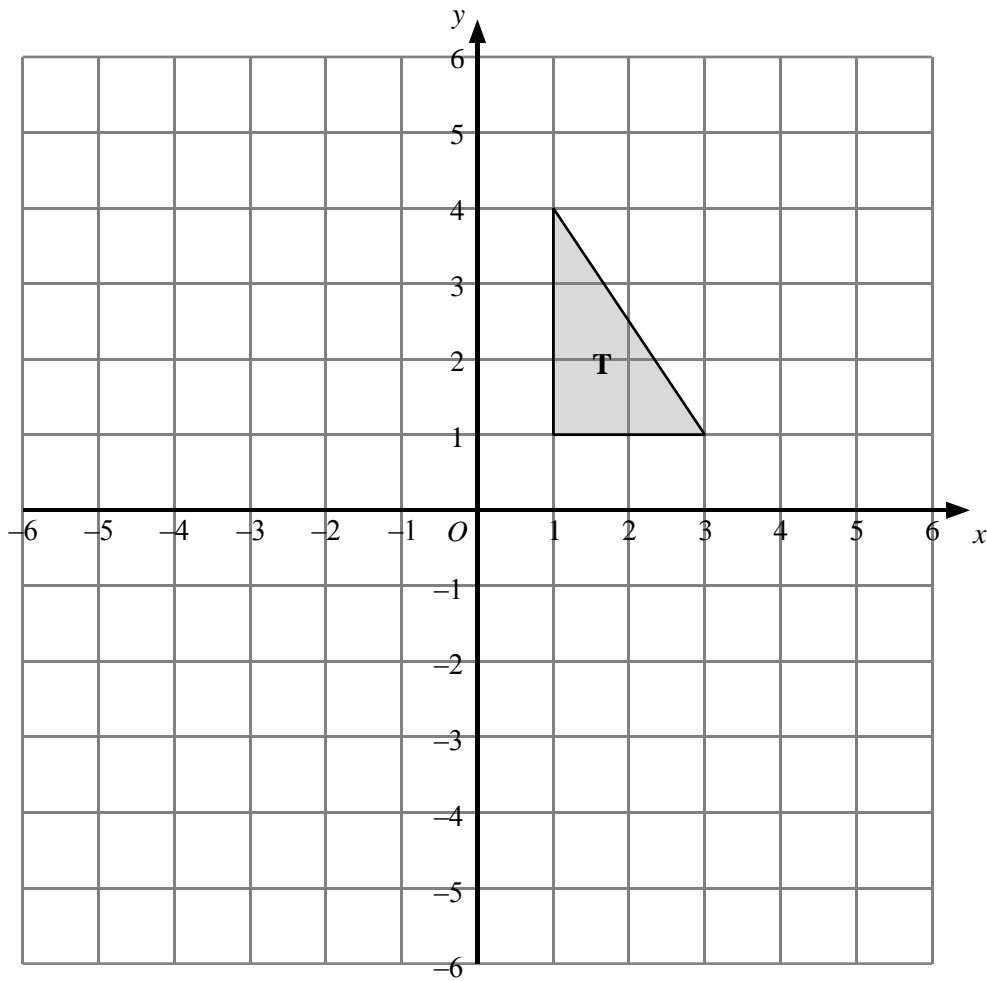
Triangle **A** is reflected in the  $y$  axis to give triangle **B**.

Draw the triangle **B** and label it **B**.

Triangle **B** is then reflected in the  $x$  axis to give triangle **C**.

Draw the triangle **C** and label it **C**.

**(Total 4 marks)**

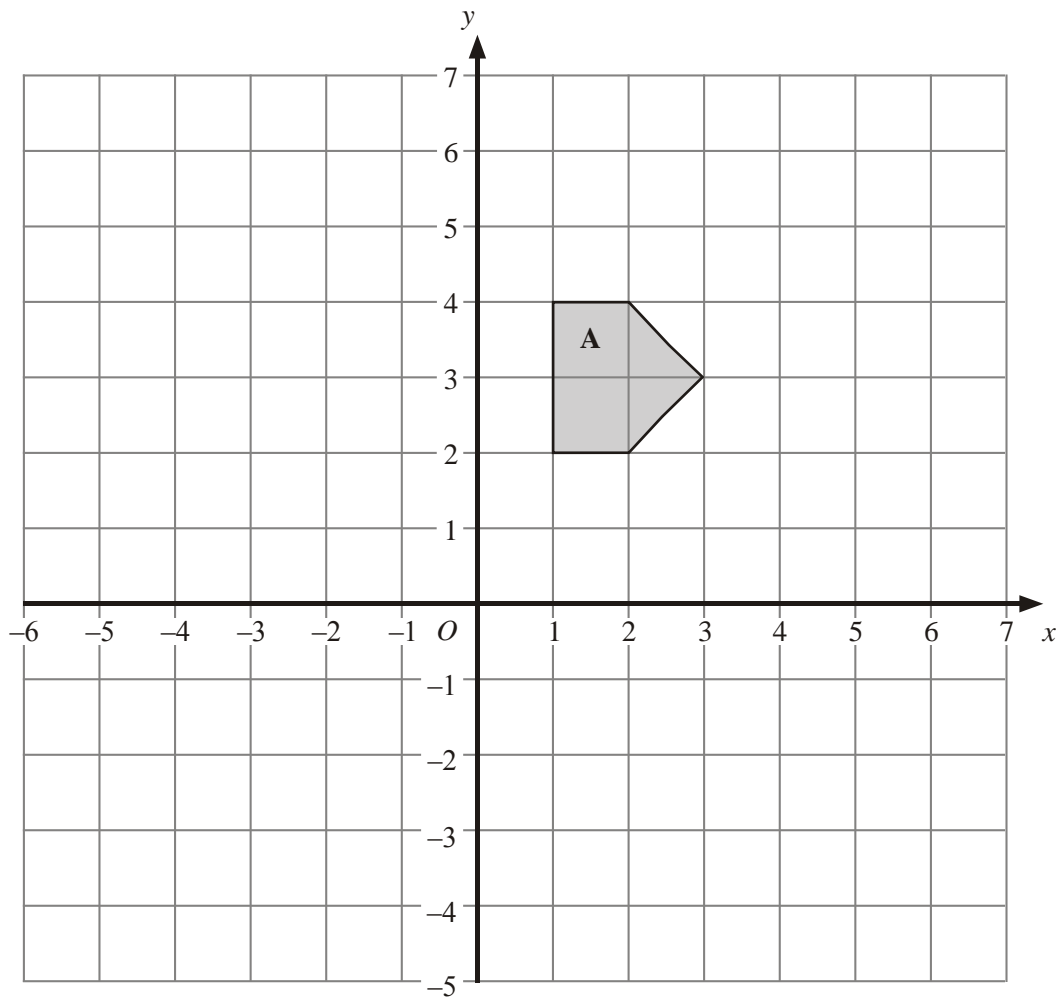


Triangle **T** has been drawn on the grid.

Reflect triangle **T** in the y-axis.  
Label the new triangle **A**.

(2)

**(Total 2 marks)**

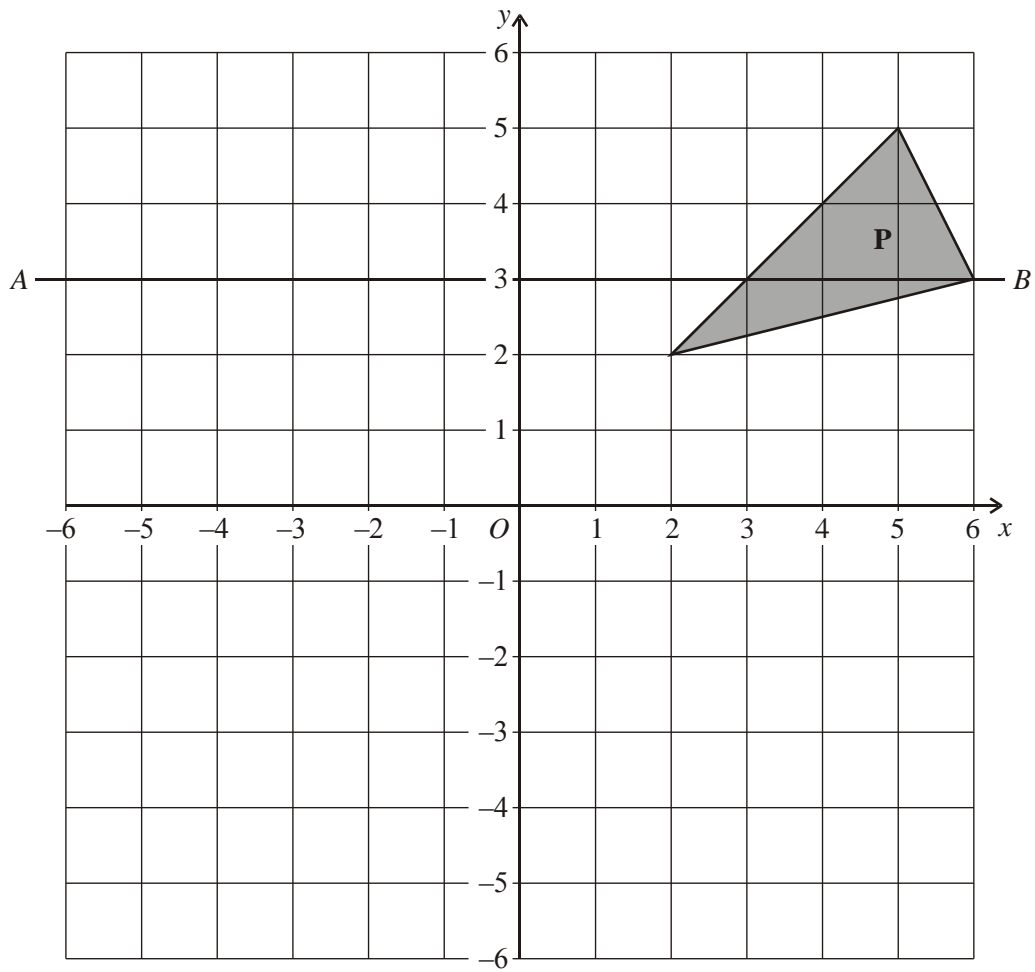


Reflect Shape **A** in the  $y$  axis.

Label your new shape **B**.

(2)

**(Total 2 marks)**



On the grid, reflect triangle **P** in the  $y$ -axis.

Label the new shape, **Q**.

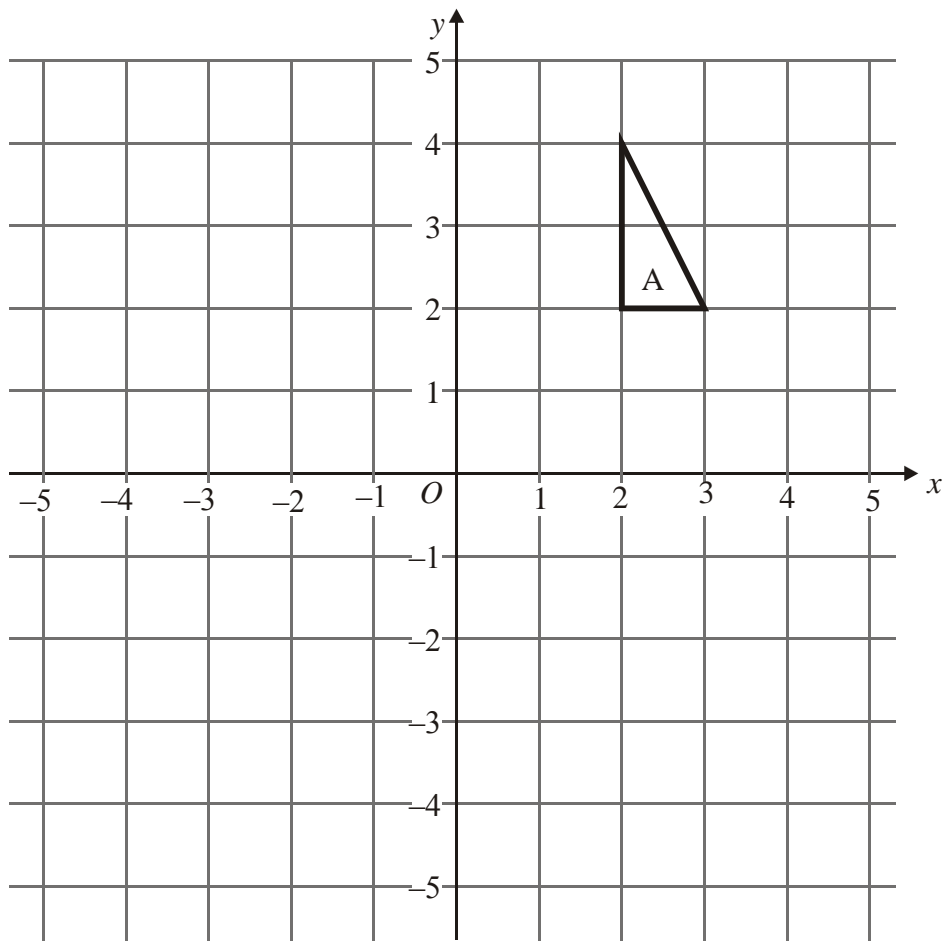
(1)

The line  $AB$  is drawn on the grid.

(b) On the grid, reflect triangle **P** in the line  $AB$ .  
Label the new shape, **R**.

(1)

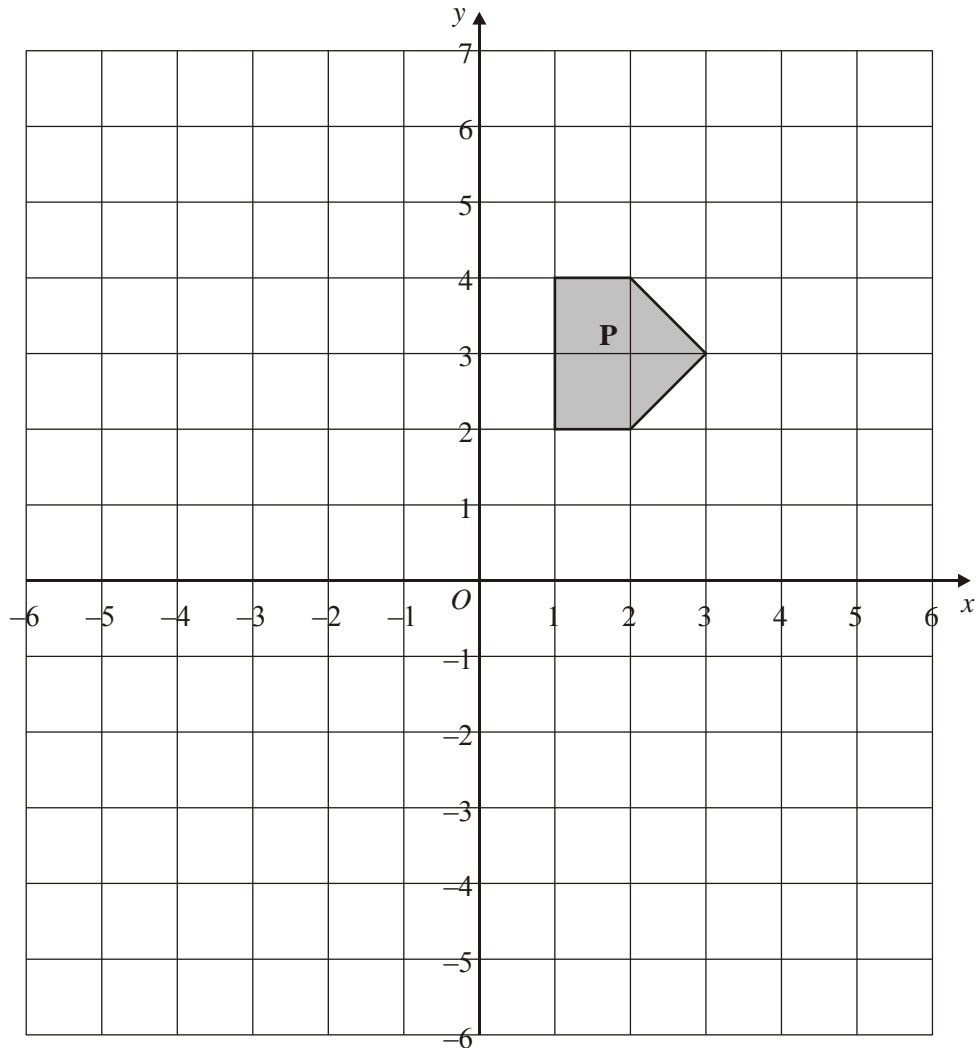
(Total 2 marks)



On the grid, rotate triangle **A**  $180^\circ$  about *O*.

Label your new triangle **B**.

(2)  
(Total 2 marks)

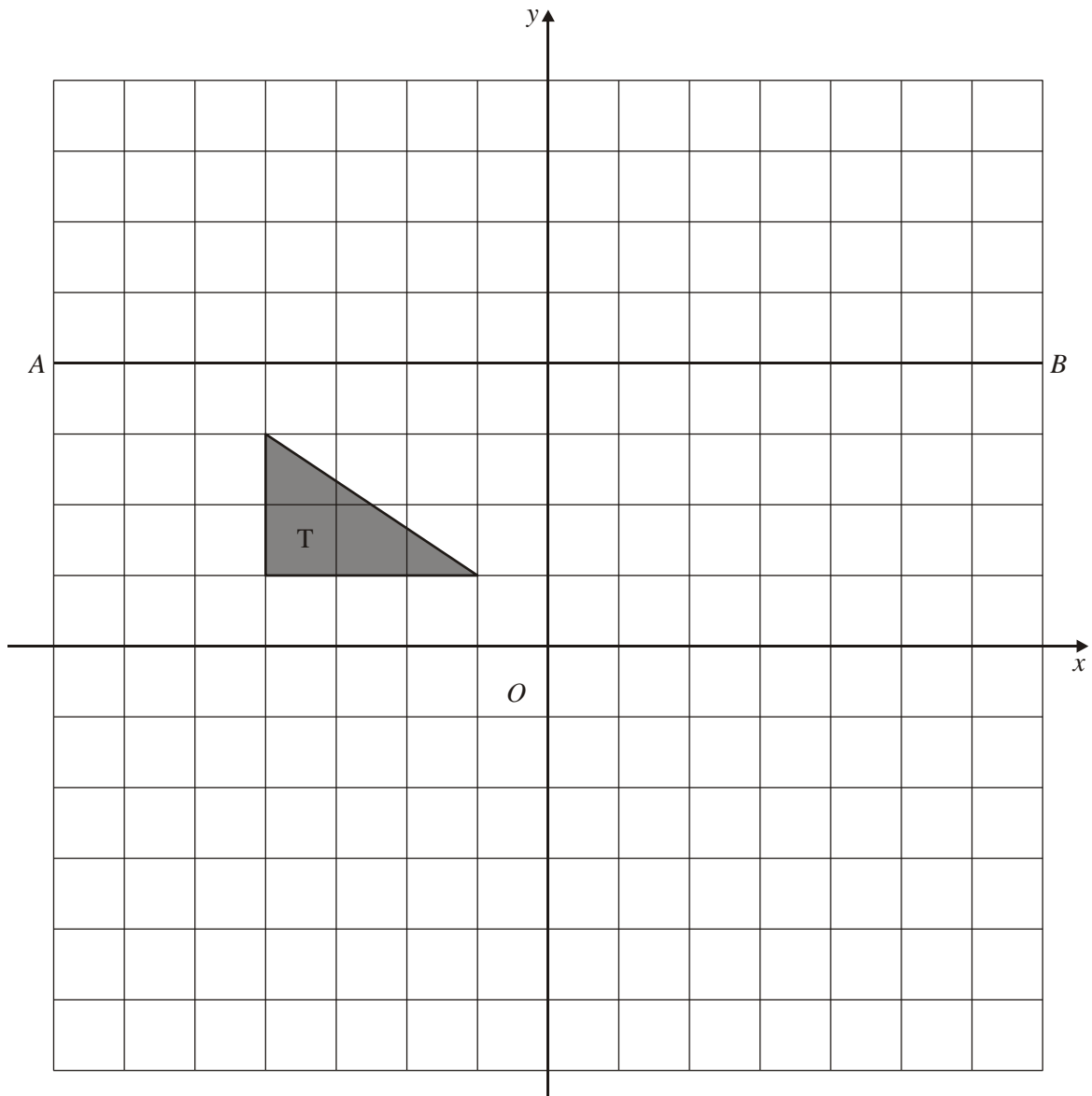


On the grid, rotate the shaded shape **P** one quarter turn anticlockwise about *O*.

Label the new shape **Q**.

(3)

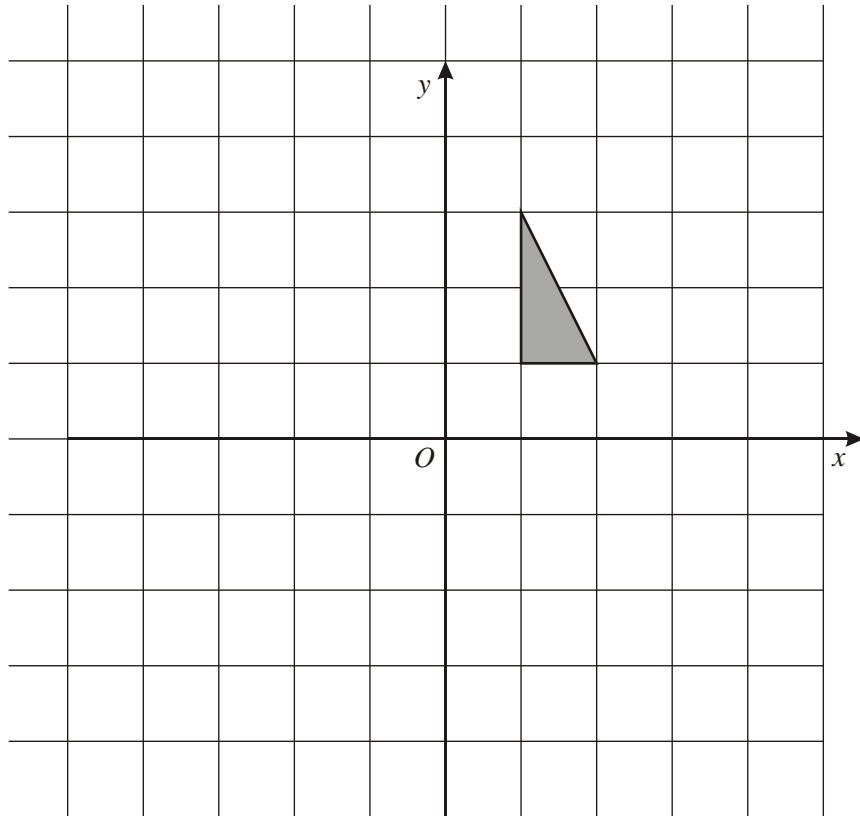
**(Total 3 marks)**



Rotate the triangle a quarter turn anticlockwise, centre  $O$ .

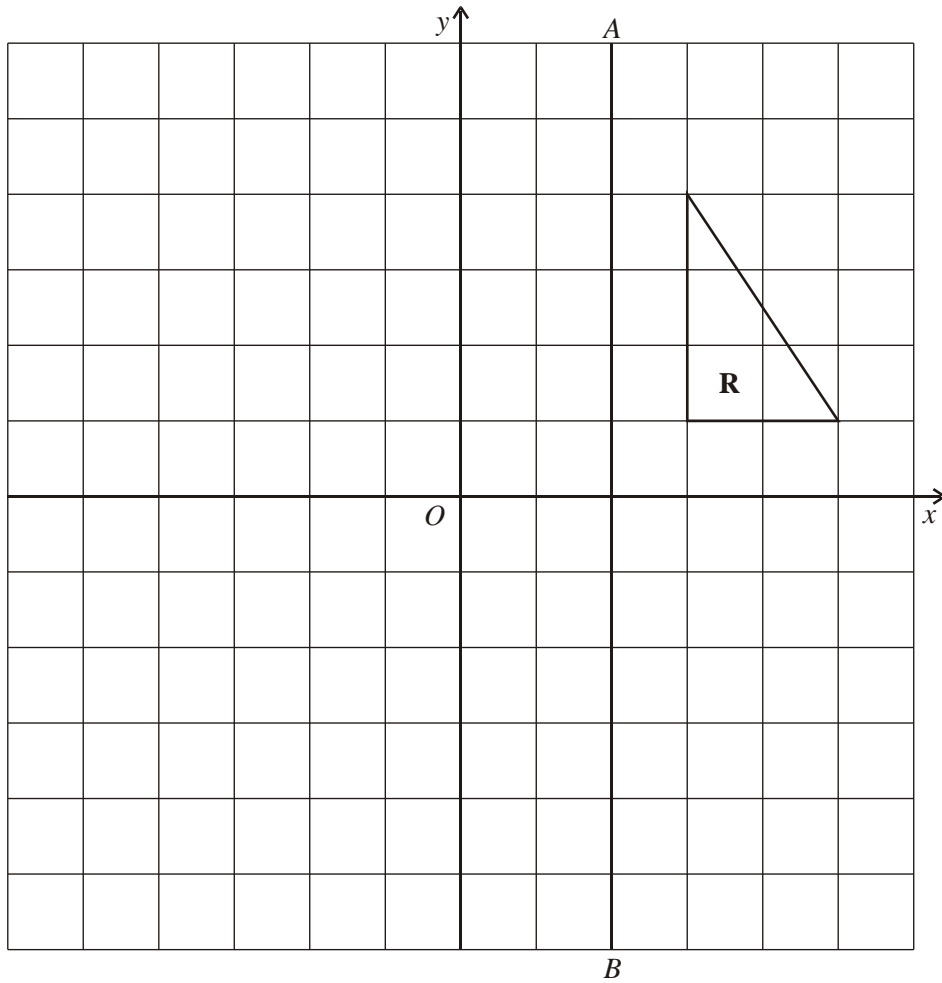
**(Total 2 marks)**





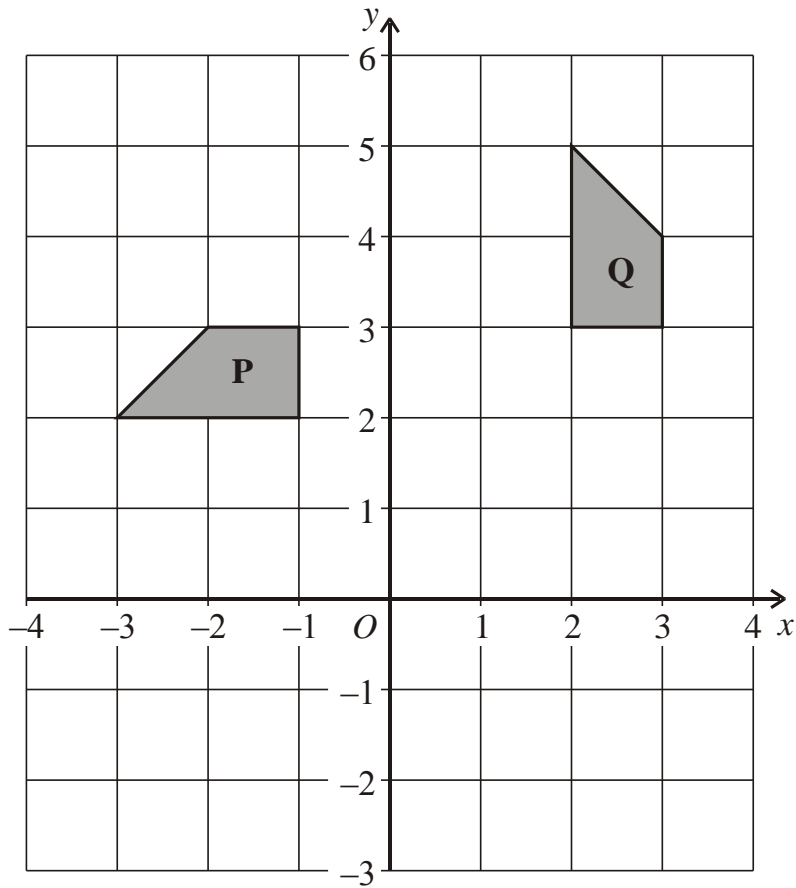
Rotate the triangle a half turn about the point  $O$ .

**(Total 2 marks)**



Rotate triangle **R** a half turn about the point  $O$ .  
Label the new triangle **T**.

(2)  
(Total 2 marks)



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

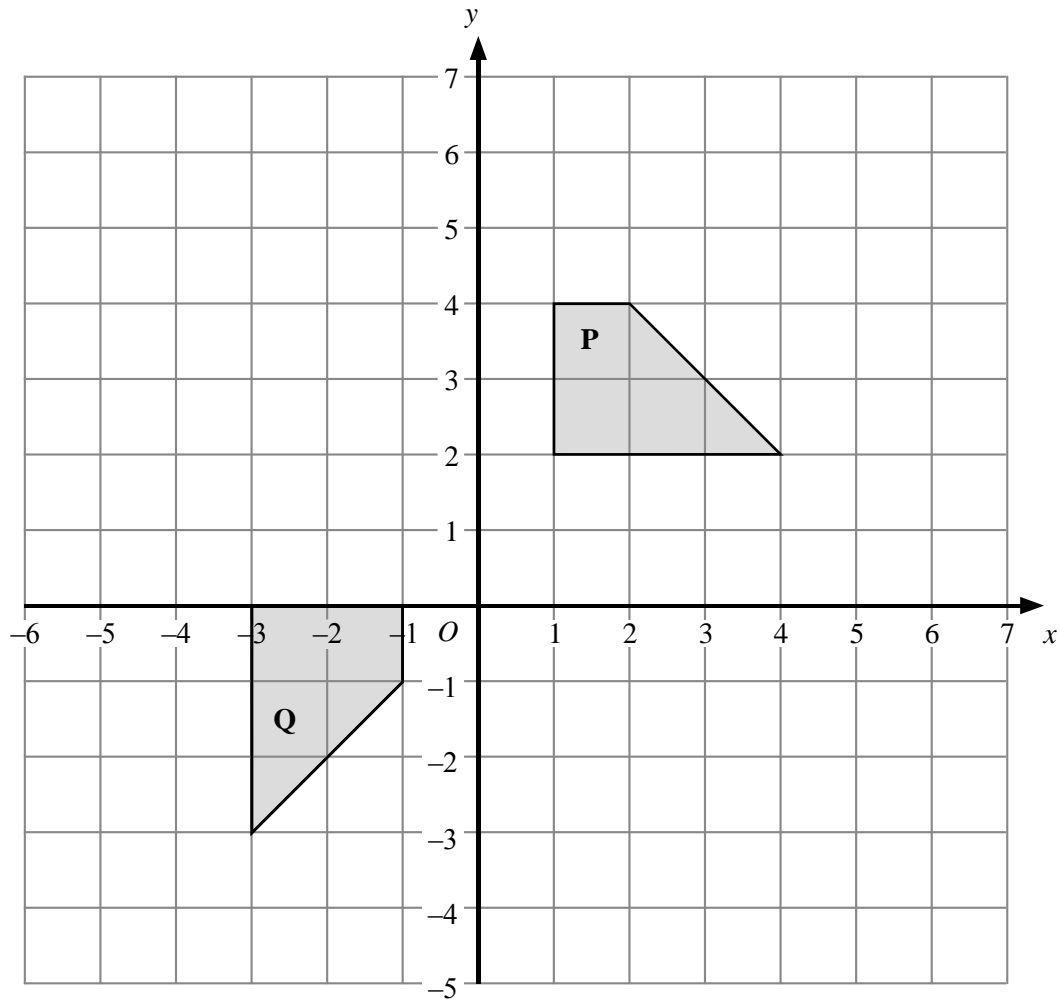
.....

.....

.....

.....

**(Total 3 marks)**



Describe fully the single transformation that will map shape **P** onto shape **Q**.

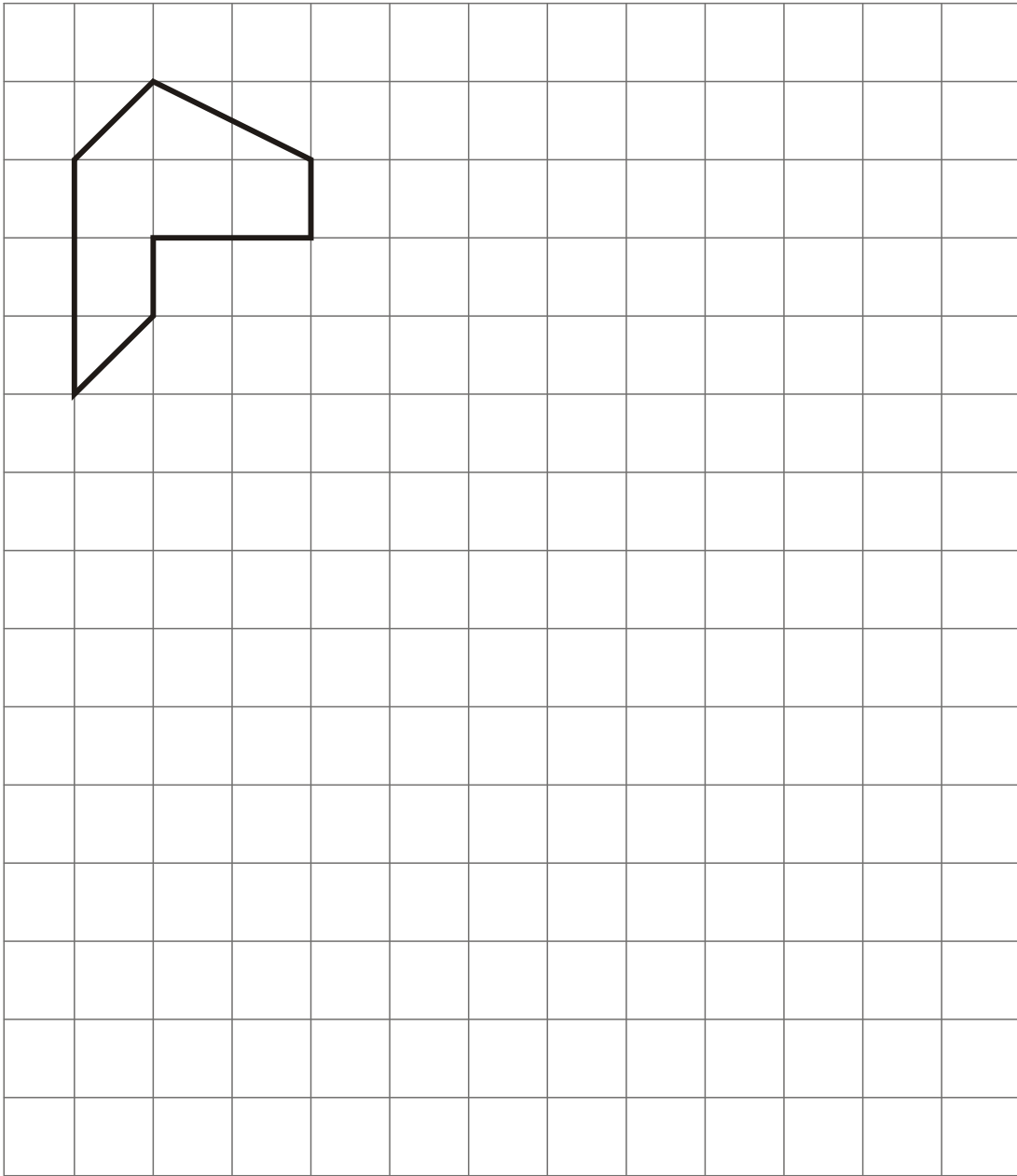
.....

.....

.....

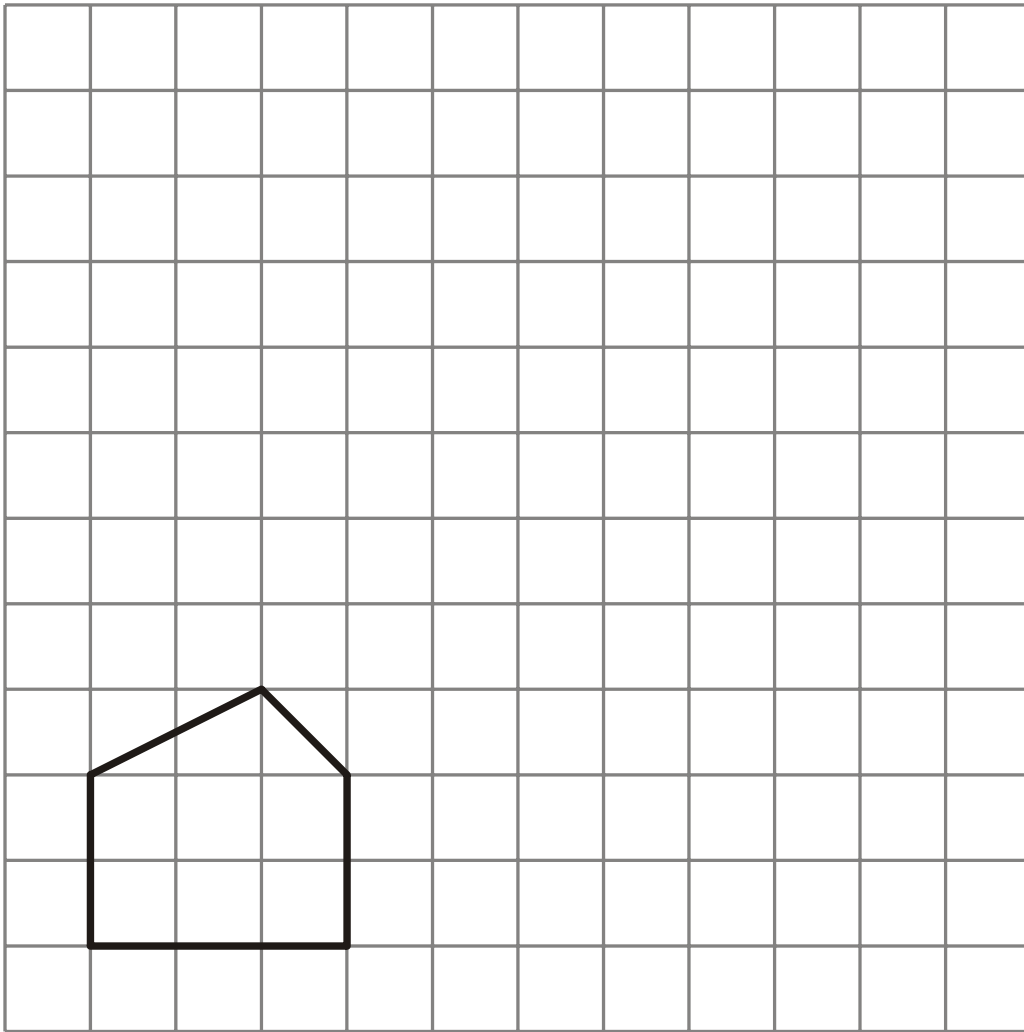
**(Total 3 marks)**

1. On the grid, enlarge the shape with a scale factor of 2.



**(Total 2 marks)**

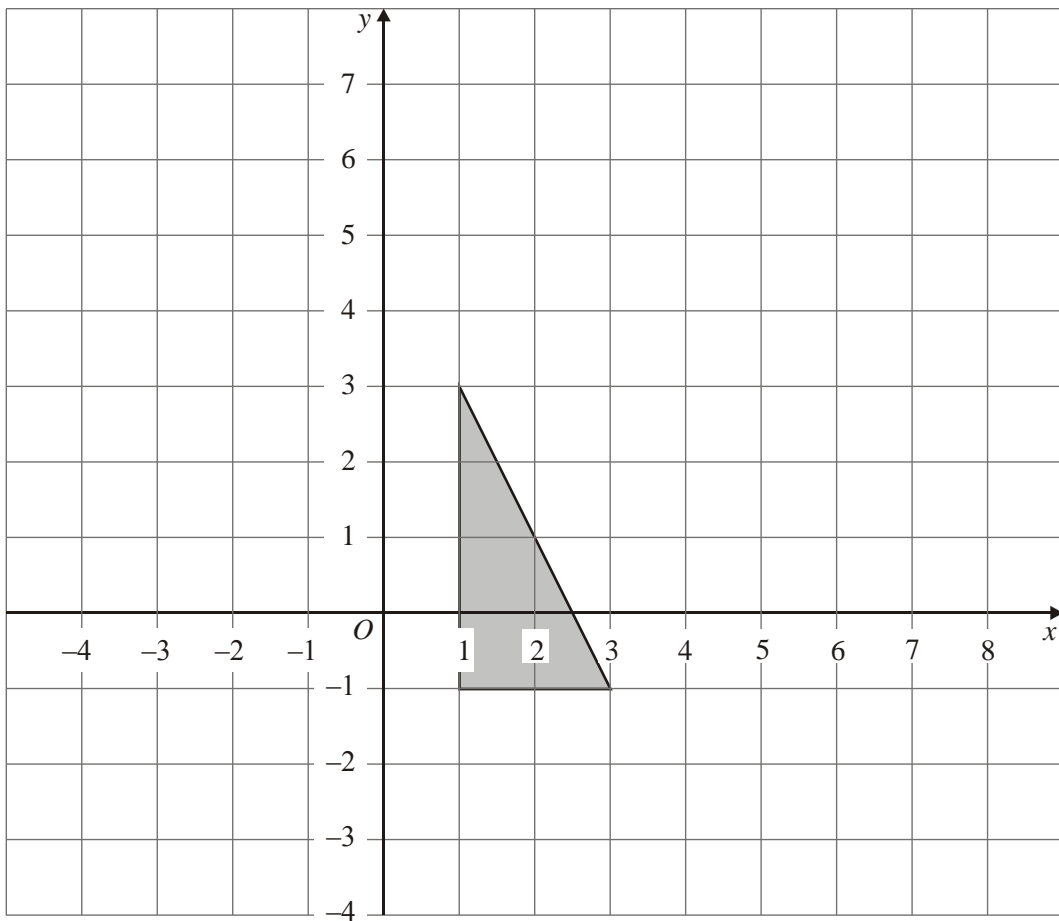
2.



On the grid, enlarge the shape with a scale factor of 2

**(Total 2 marks)**

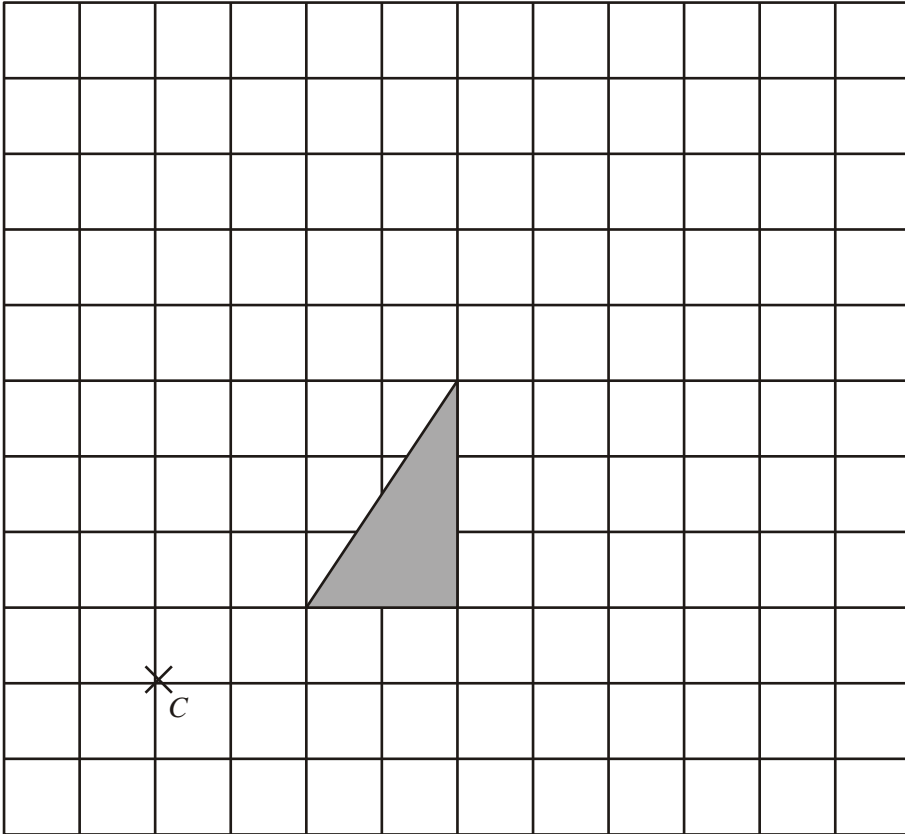
3.



Enlarge the shaded triangle by a scale factor 2, centre 0.

**(Total 3 marks)**

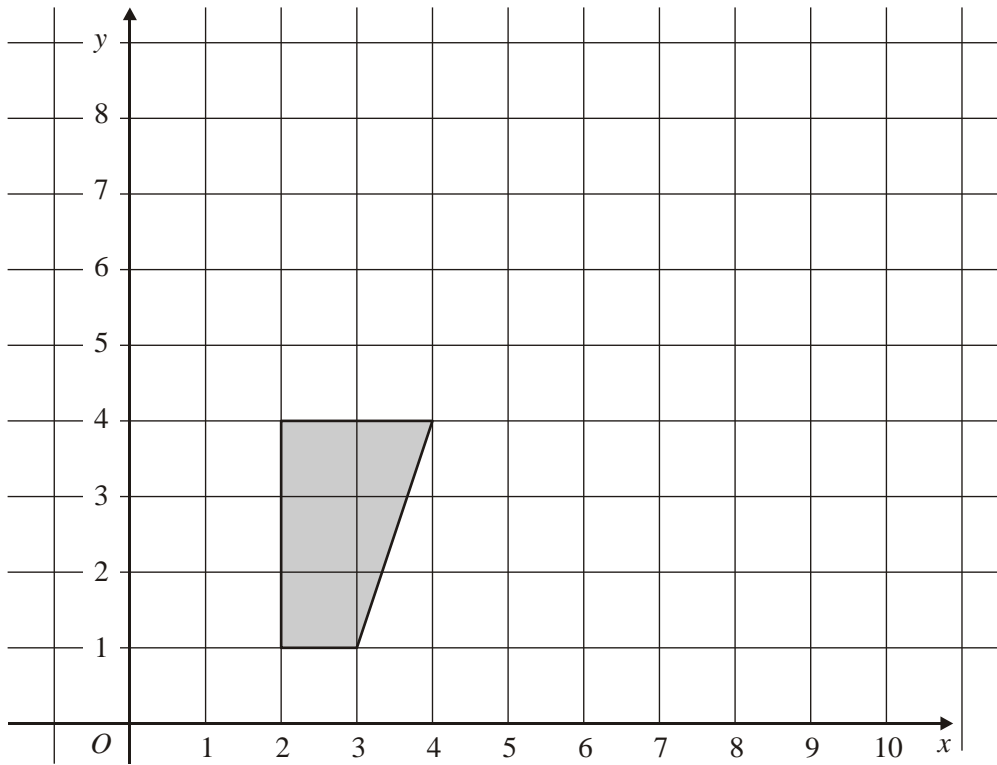
4.



On the grid, enlarge the shaded triangle by a scale factor of 2, centre  $C$ .  
**(Total 3 marks)**

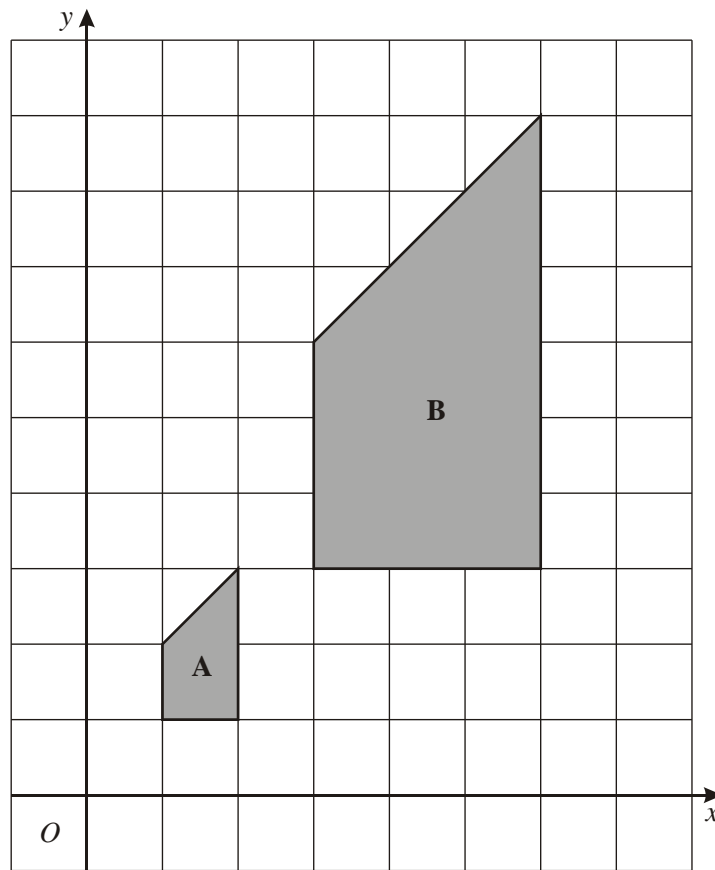


5.



On the grid, enlarge the shaded shape by scale factor of 2, centre (1,1).  
**(Total 3 marks)**

6.

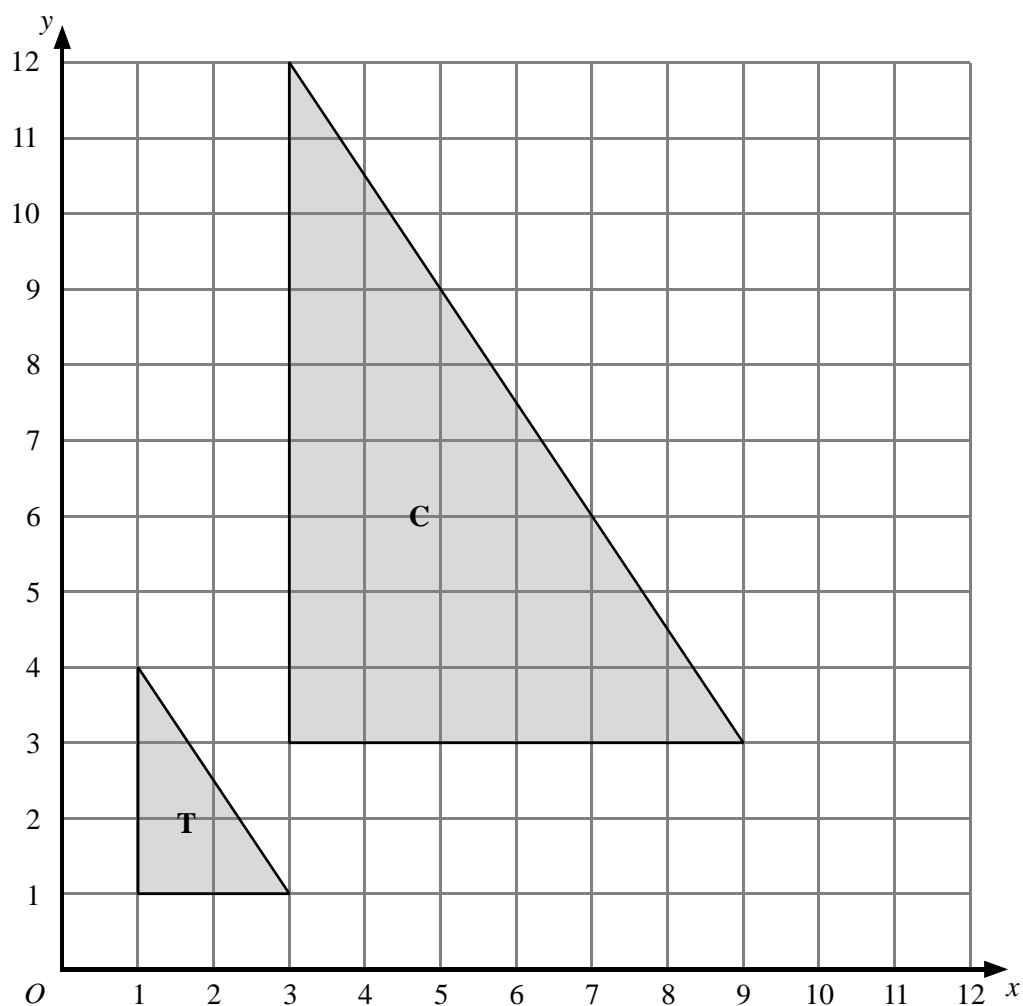


Describe fully the single transformation which takes shape A onto shape B.

.....  
.....

**(Total 3 marks)**

7.



(c) Describe fully the single transformation which maps triangle **T** onto triangle **C**.

.....

.....

(3)  
(Total 3 marks)