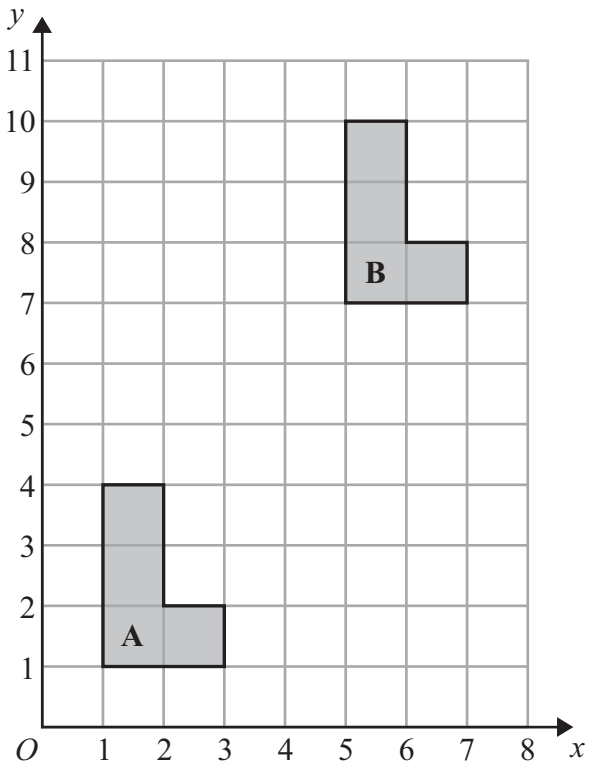
1. **[2 marks]**

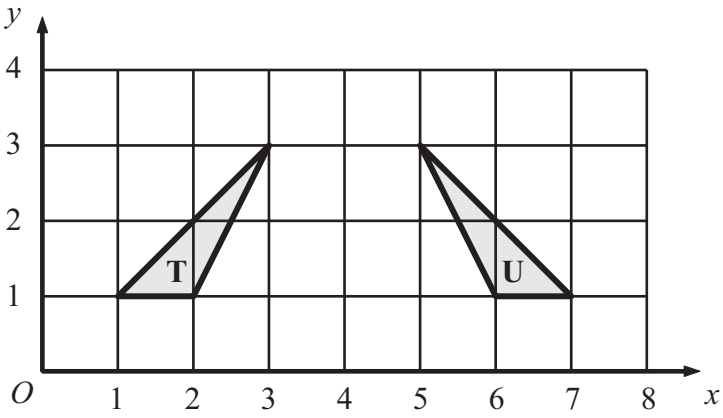


Describe fully the single transformation that maps shape **A** onto shape **B**.

.....

.....

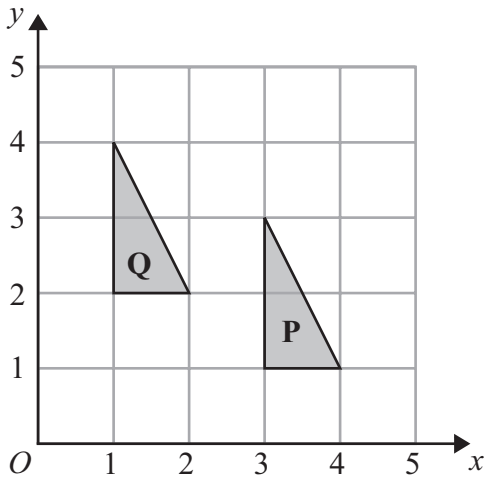
2. **[2 marks]**



Describe fully the single transformation which maps triangle **T** onto triangle **U**.

.....

3. **[2 marks]**

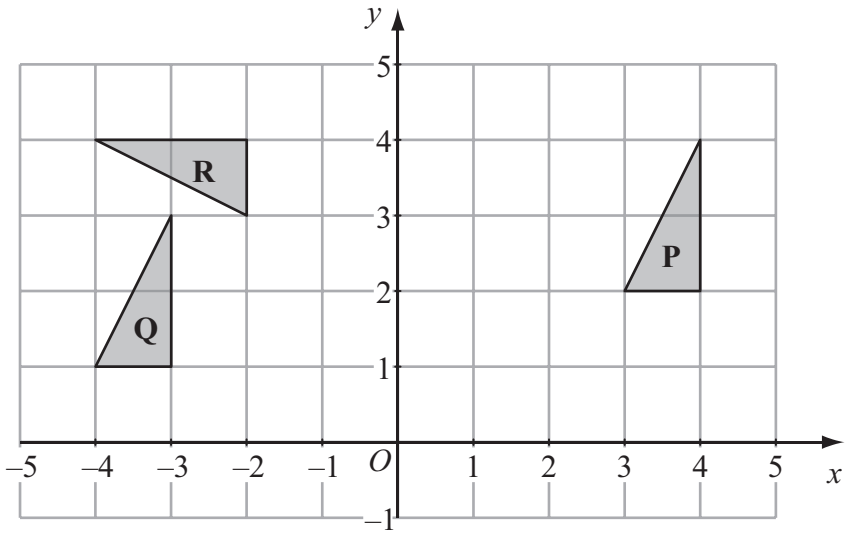


Describe fully the single transformation which maps triangle **P** onto triangle **Q**.

.....

.....

4. **[5 marks]**



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

.....

.....

(2)

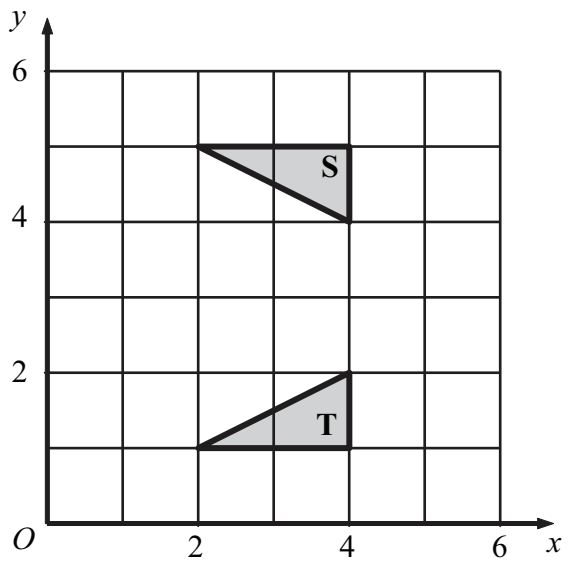
(b) Describe fully the single transformation which maps triangle **P** onto triangle **R**.

.....

.....

(3)

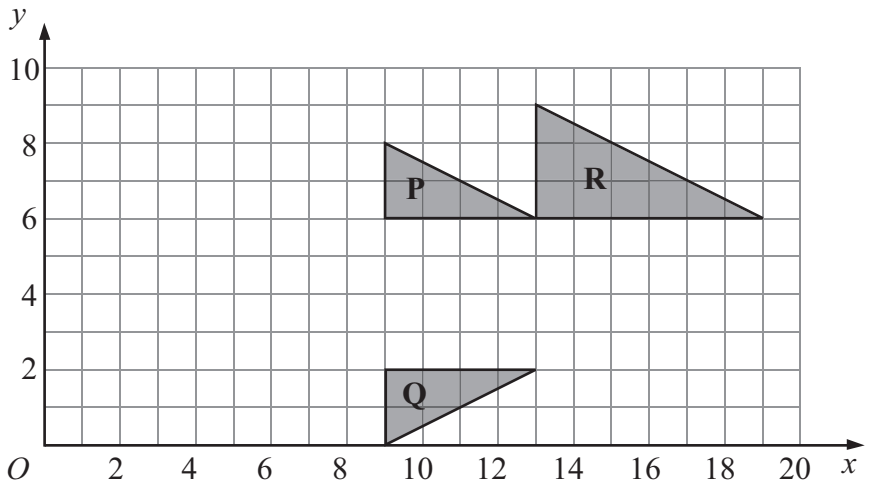
5. **[2 marks]**



Describe fully the single transformation that maps triangle **S** onto triangle **T**.

.....

6. **[5 marks]**



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

.....

(2)

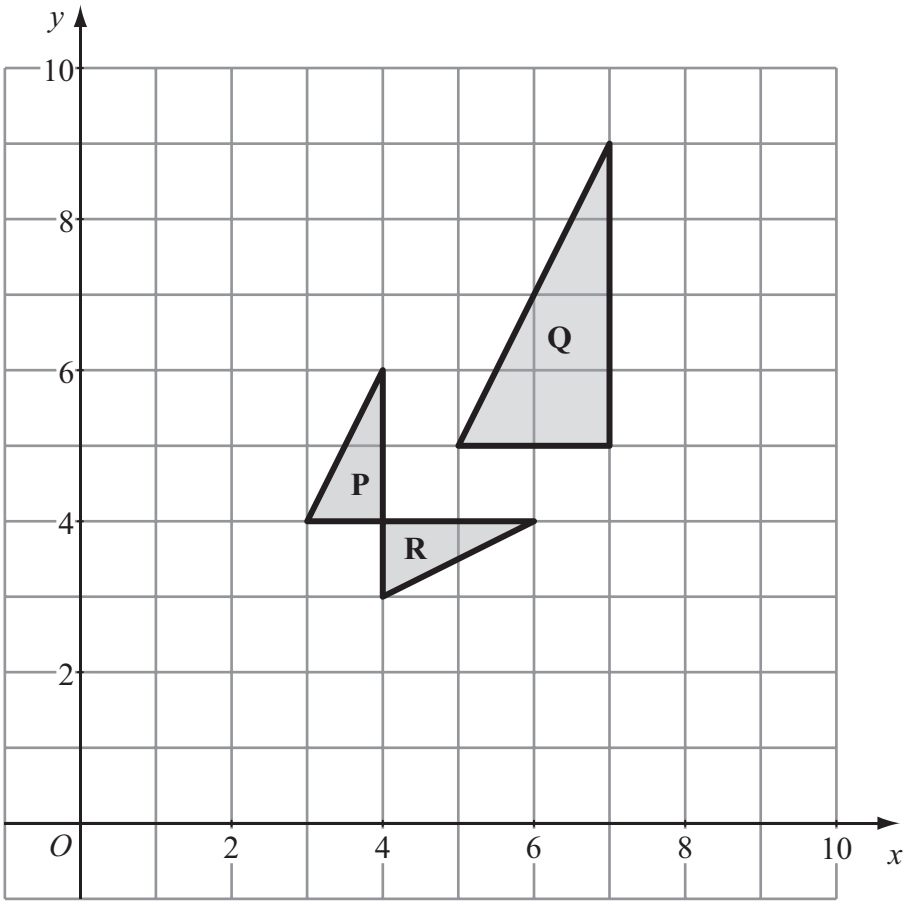
(b) Describe fully the single transformation which maps triangle **P** onto triangle **R**.

.....

.....

(3)

7. **[5 marks]**



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

.....

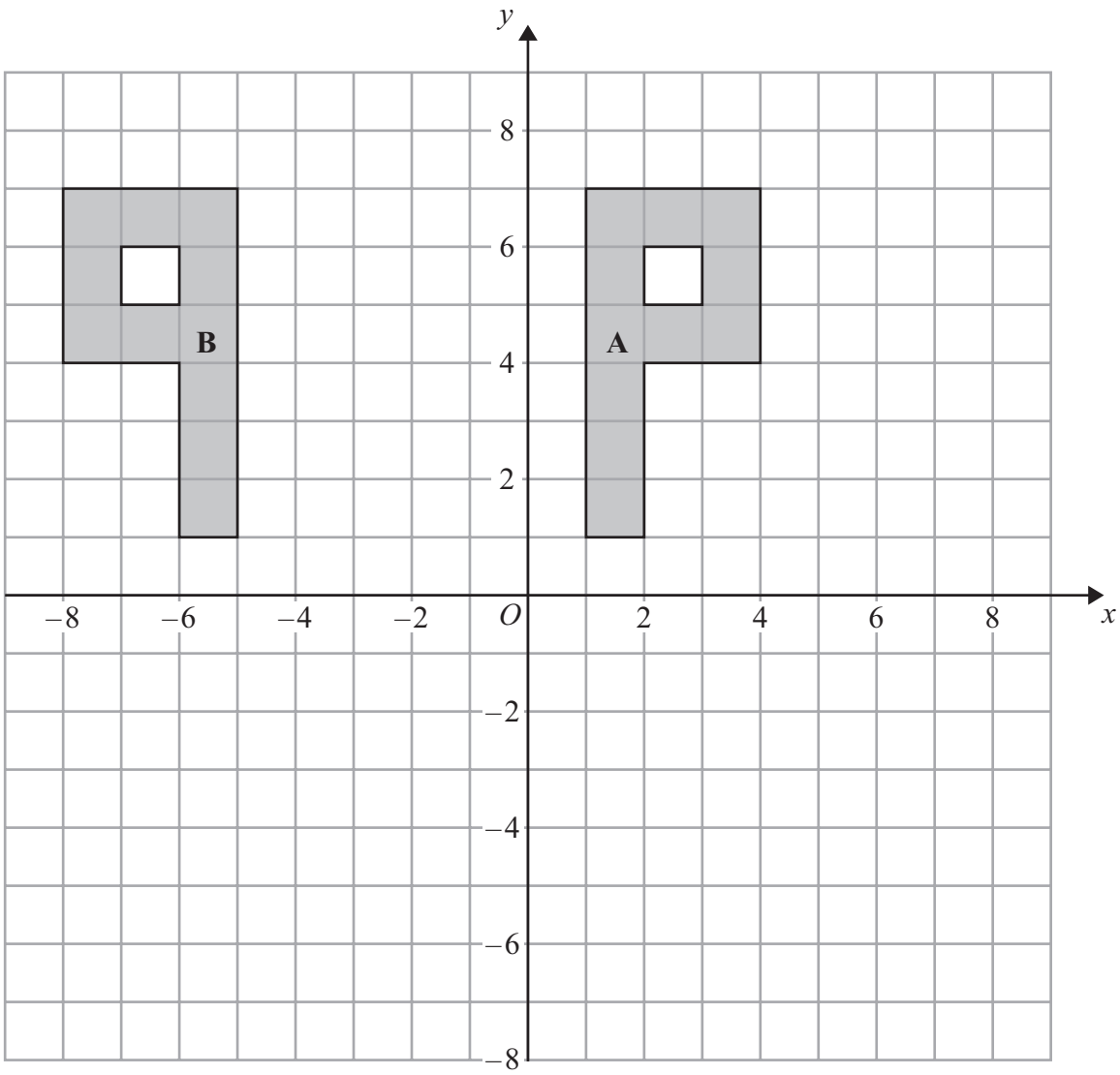
(3)

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

.....

(2)

8. **[4 marks]**



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

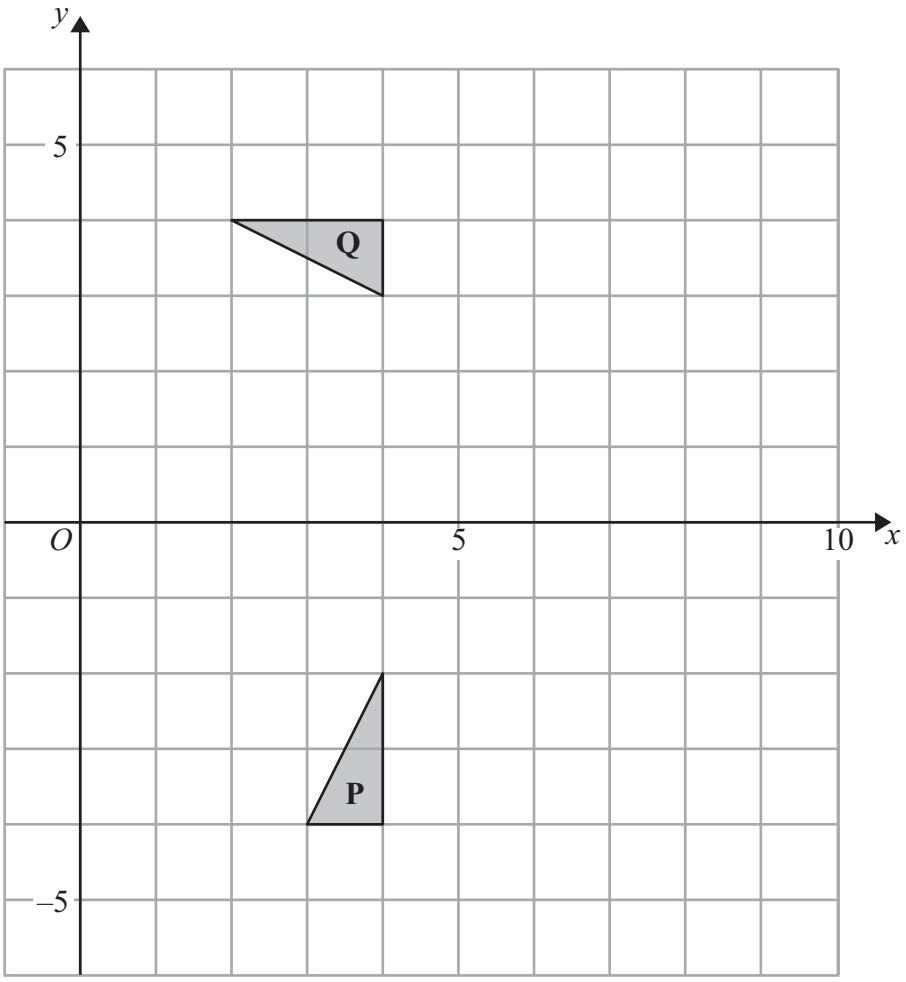
.....

(2)

(b) On the grid, rotate shape **A** 90° clockwise about the origin *O*.
Label the new shape **C**.

(2)

9. **[4 marks]**



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

.....

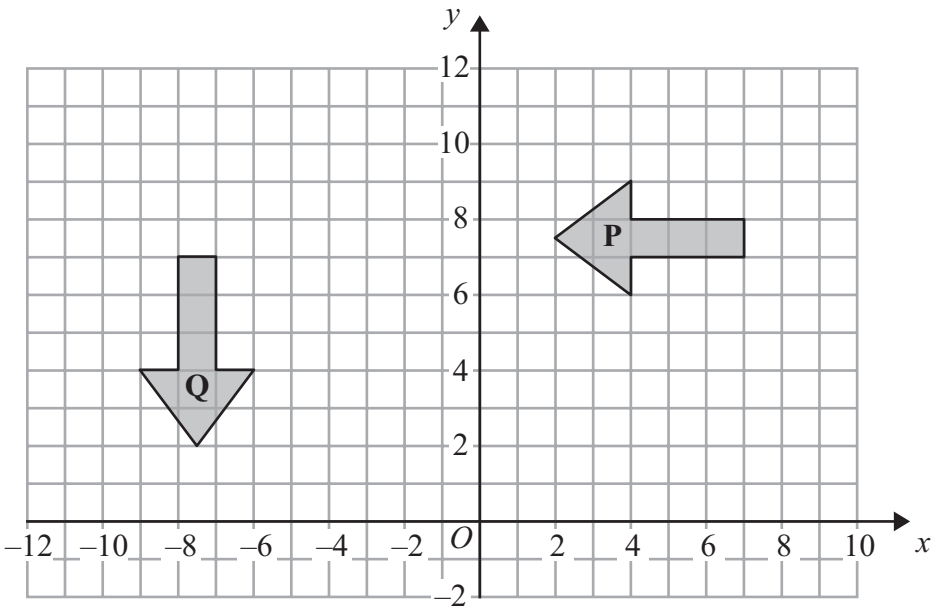
.....

(3)

(b) On the grid, translate triangle **P** 3 squares to the right and 5 squares up.
Label the new triangle **R**.

(1)

10. **[5 marks]**



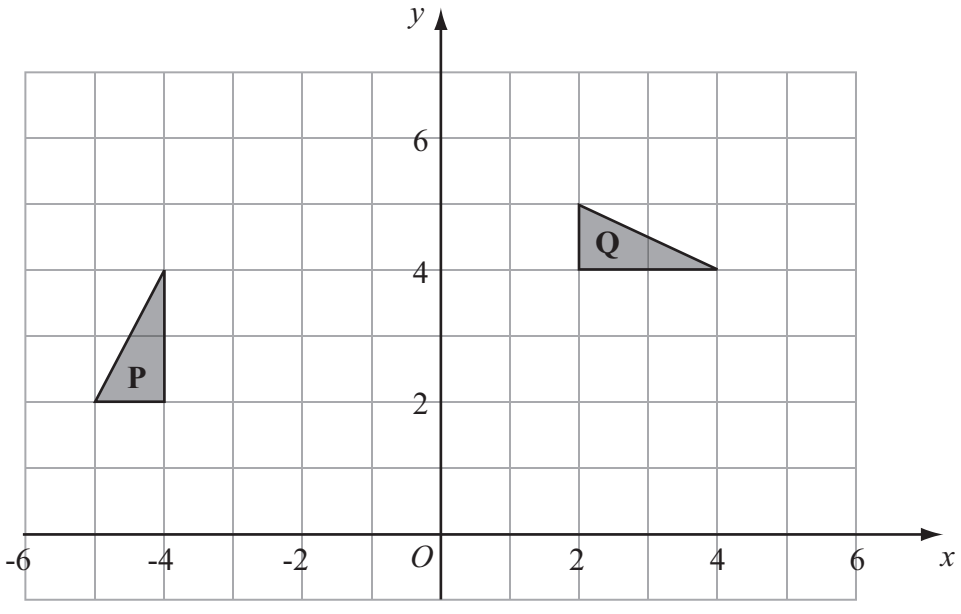
(a) Describe fully the single transformation that maps shape **P** onto shape **Q**.

.....

..... **(3)**

(b) On the grid, translate shape **P** by the vector $\begin{pmatrix} -6 \\ 2 \end{pmatrix}$
Label the new shape **R**. **(2)**

11. **[5 marks]**



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

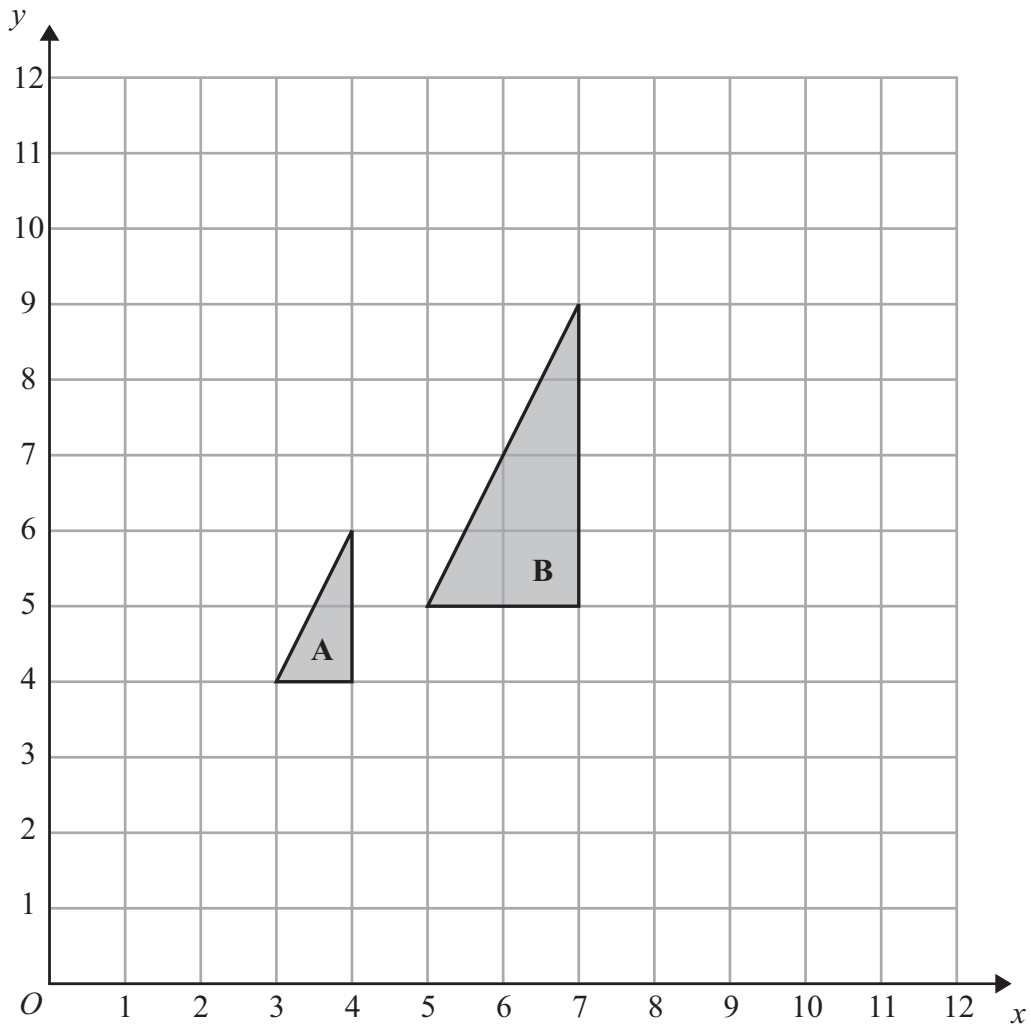
.....

(3)

(b) Reflect triangle **Q** in the line $y = x$.

Label the new triangle **R**. **(2)**

12. **[4 marks]**



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

.....

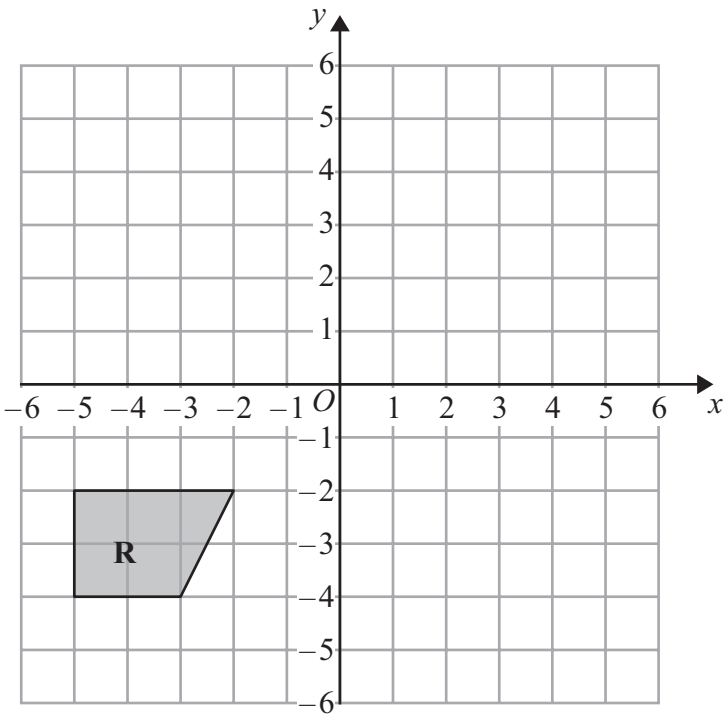
.....

(3)

(b) On the grid, translate triangle **A** by the vector $\begin{pmatrix} 5 \\ -2 \end{pmatrix}$

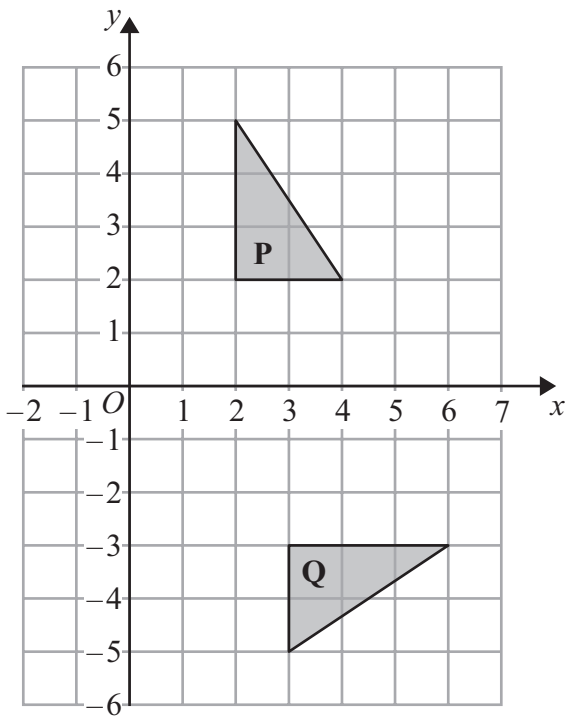
(1)

13. **[5 marks]**



(a) On the grid above, reflect shape **R** in the line $y = -x$

(2)



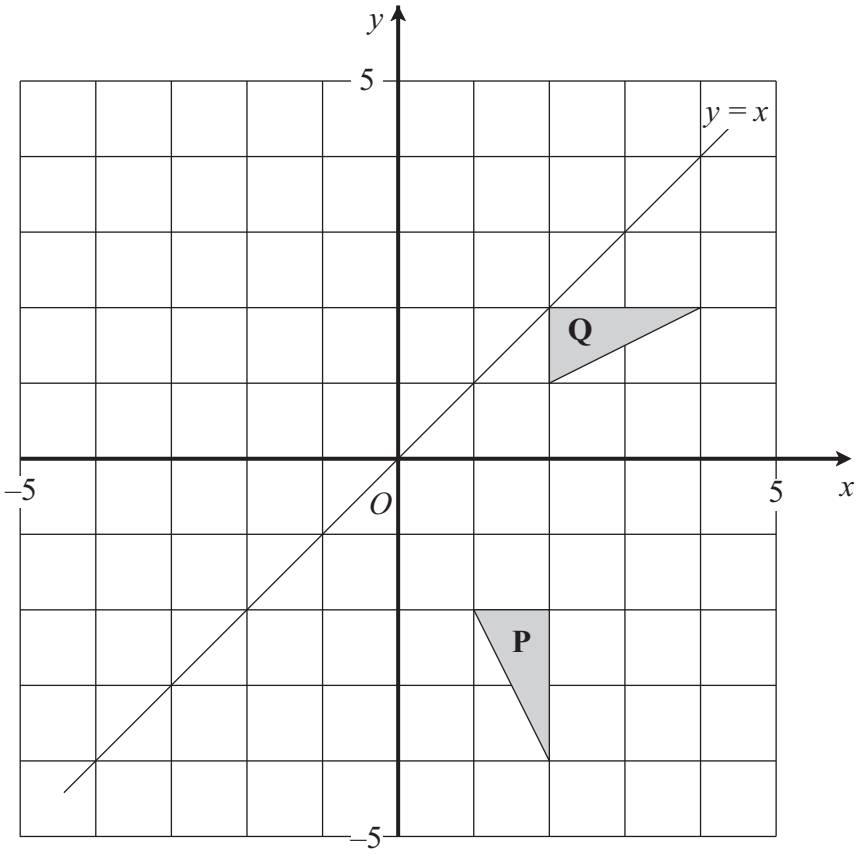
(b) Describe fully the single transformation that maps triangle **P** onto triangle **Q**.

.....

.....

(3)

14. **[5 marks]**



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

.....

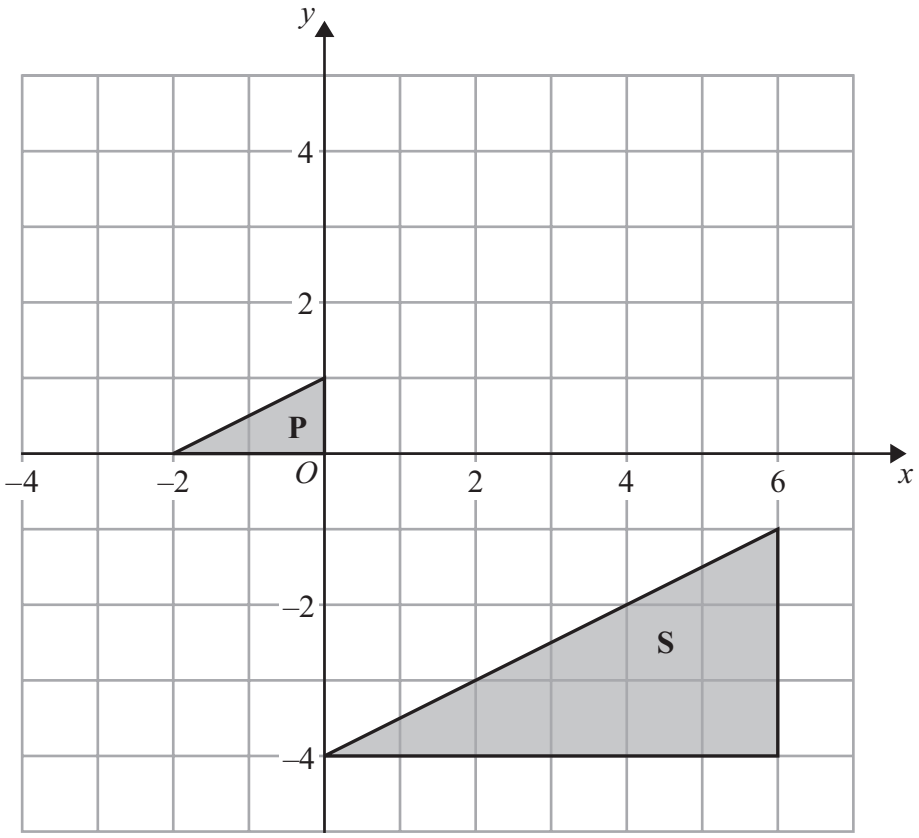
.....

(3)

(b) Reflect triangle **Q** in the line with equation $y = x$.

(2)

15. **[4 marks]**



(a) On the grid, translate triangle **P** by the vector $\begin{pmatrix} 2 \\ -1 \end{pmatrix}$

Label the new triangle **Q**.

(1)

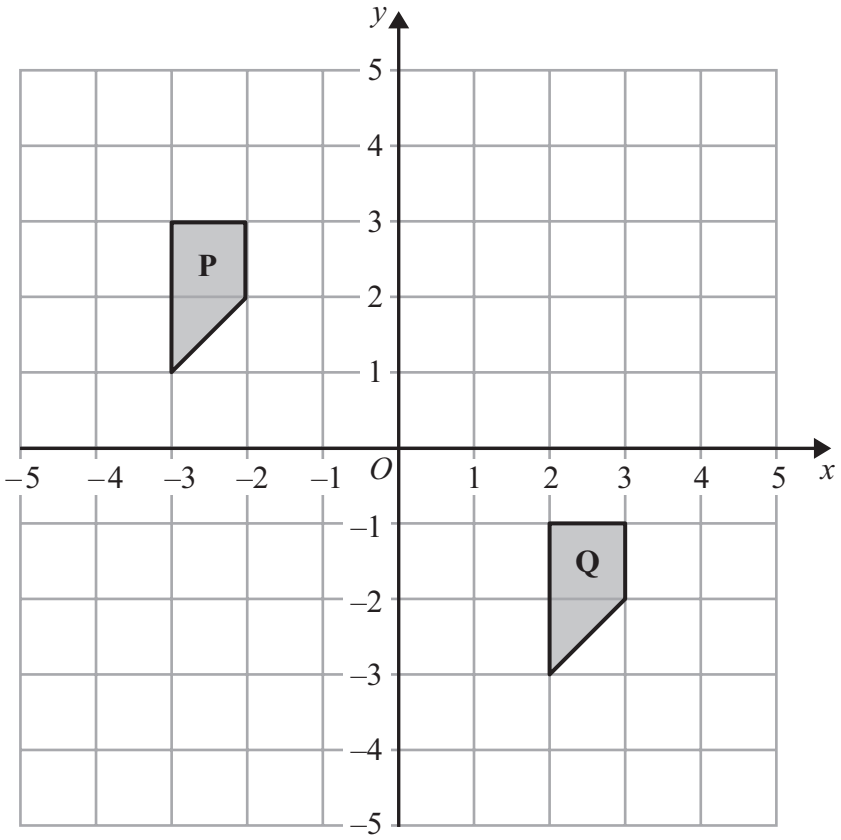
(b) Describe fully the single transformation that maps triangle **P** onto triangle **S**.

.....

.....

(3)

16. **[4 marks]**



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

.....

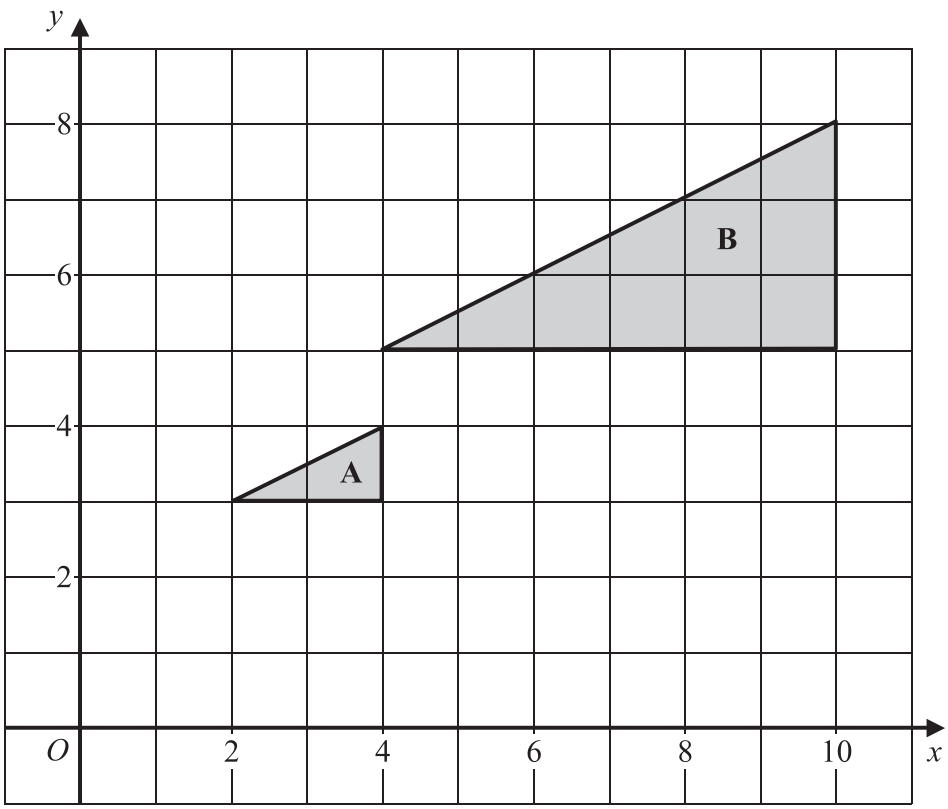
.....

(2)

(b) Rotate shape **Q** 90° clockwise about (1, 0)
Label the new shape **R**.

(2)

17. **[5 marks]**



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

.....

.....

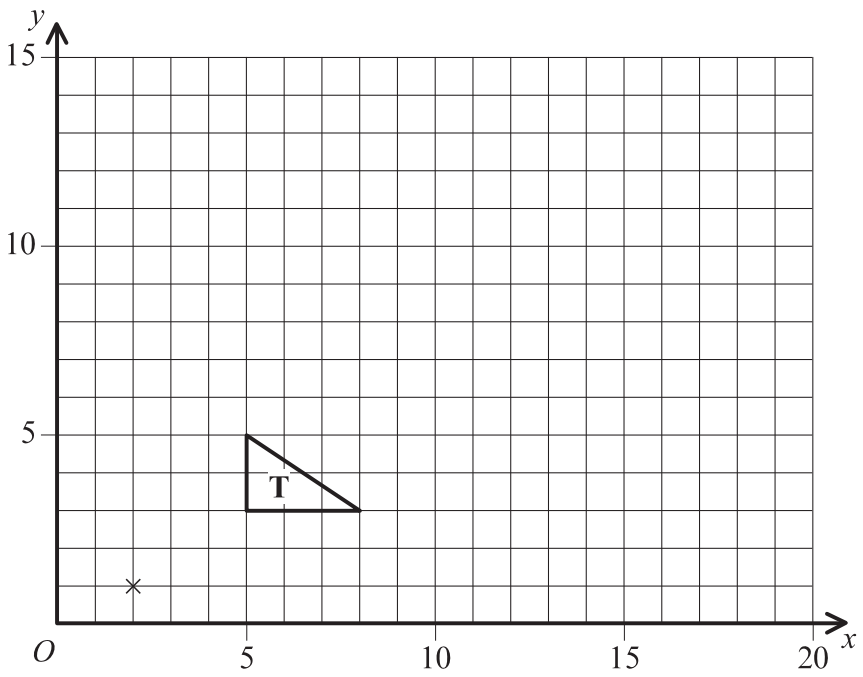
(3)

(b) On the grid, translate triangle **A** by the vector $\begin{pmatrix} -1 \\ 3 \end{pmatrix}$.

Label the new triangle **C**.

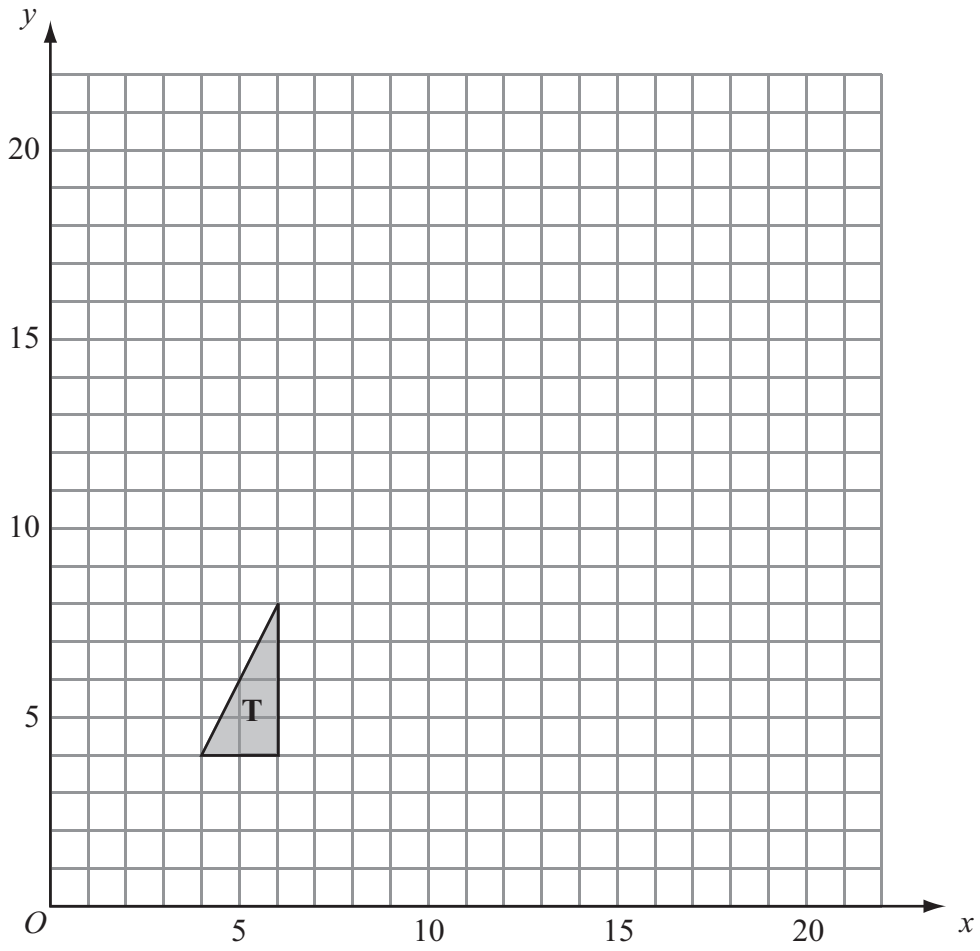
(2)

18. **[3 marks]**



On the grid, enlarge triangle **T** with a scale factor of 3 and centre (2, 1).

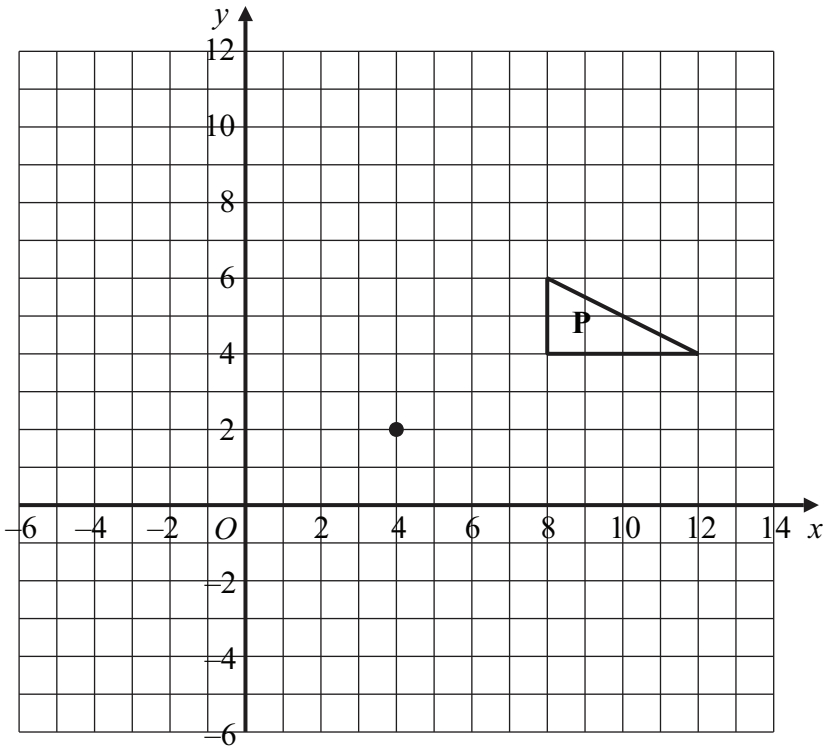
19. **[3 marks]**



On the grid, enlarge triangle **T** with a scale factor of $2\frac{1}{2}$ and centre (0, 0).

20. **[4 marks]**

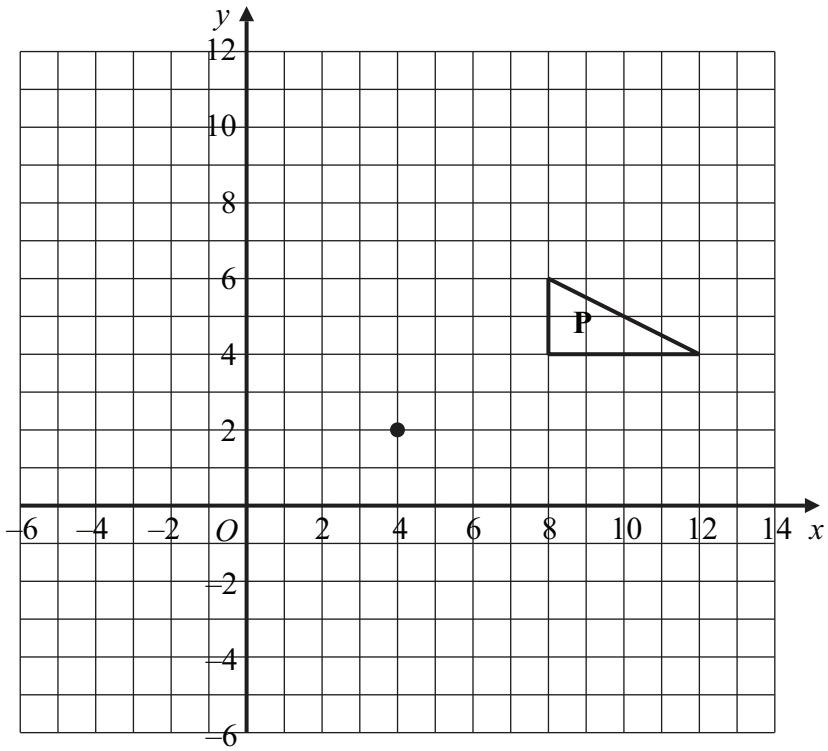
(a)



On the grid, rotate triangle **P** 90° anti-clockwise about the point (4, 2).

(2)

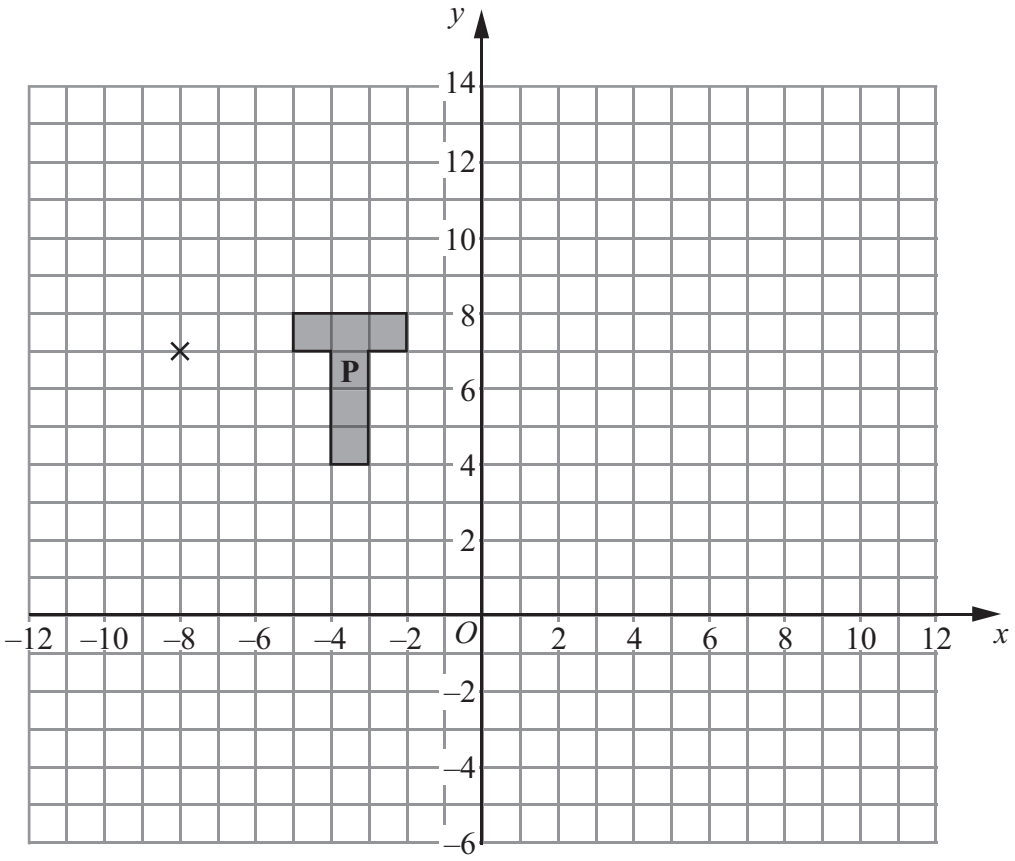
(b)



On the grid, enlarge triangle **P** with scale factor $\frac{1}{2}$ and centre (4, 2).

(2)

21. **[5 marks]**



(a) On the grid, enlarge shape **P** with scale factor 3 and centre (−8, 7).
Label the new shape **Q**.

(3)

(b) On the grid, rotate shape **P** through 90° clockwise about the point (−8, 7).
Label the new shape **R**.

(2)