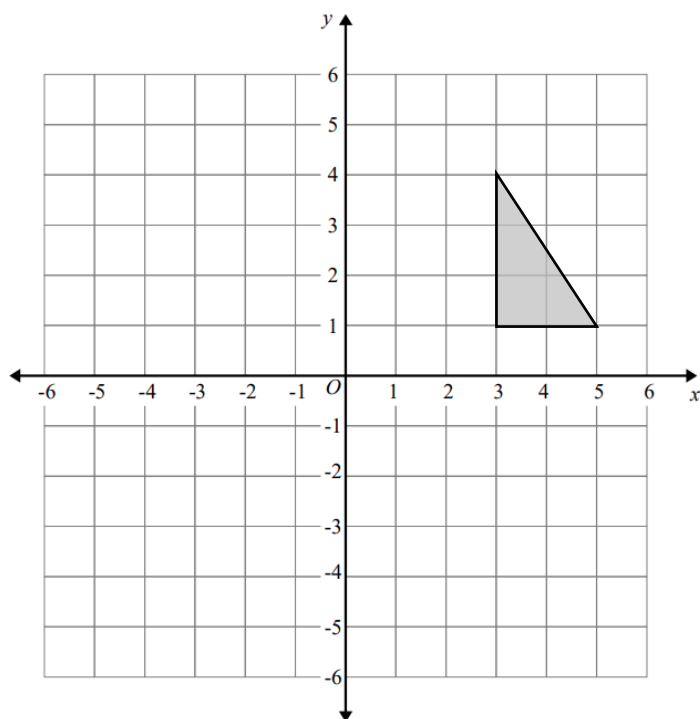
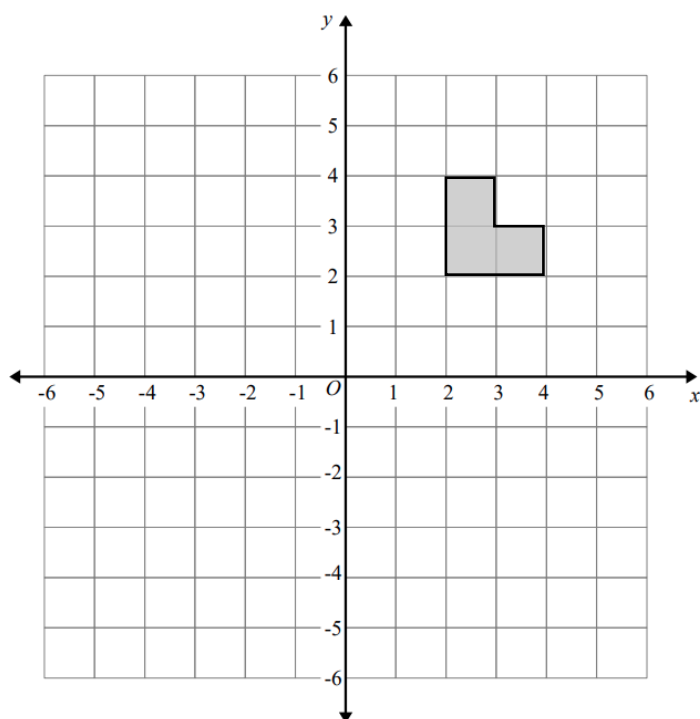


1. Translate the shape by the vector $\begin{pmatrix} -4 \\ 1 \end{pmatrix}$



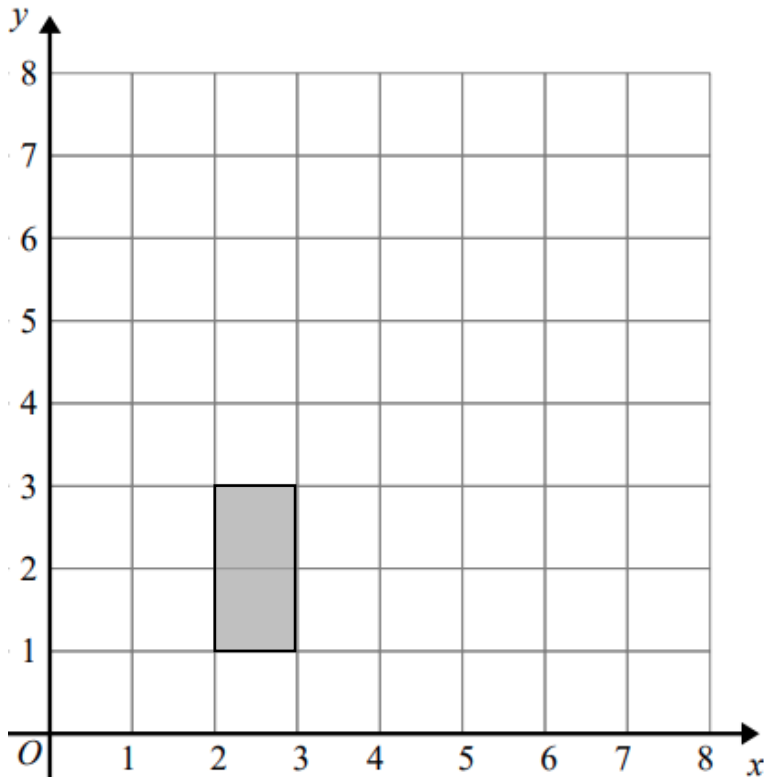
(1 mark)

2. Reflect the shape in the y axis.



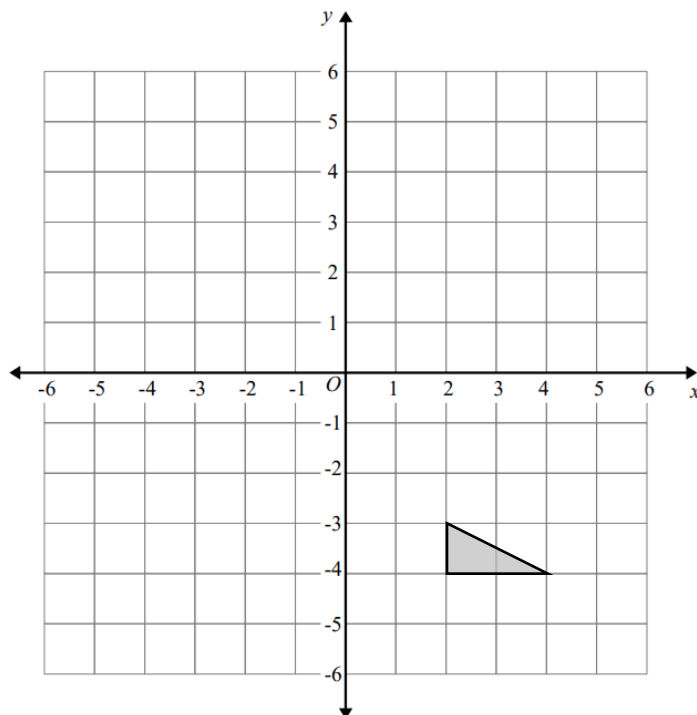
(2 marks)

3. Enlarge the shape by scale factor 2 from the origin



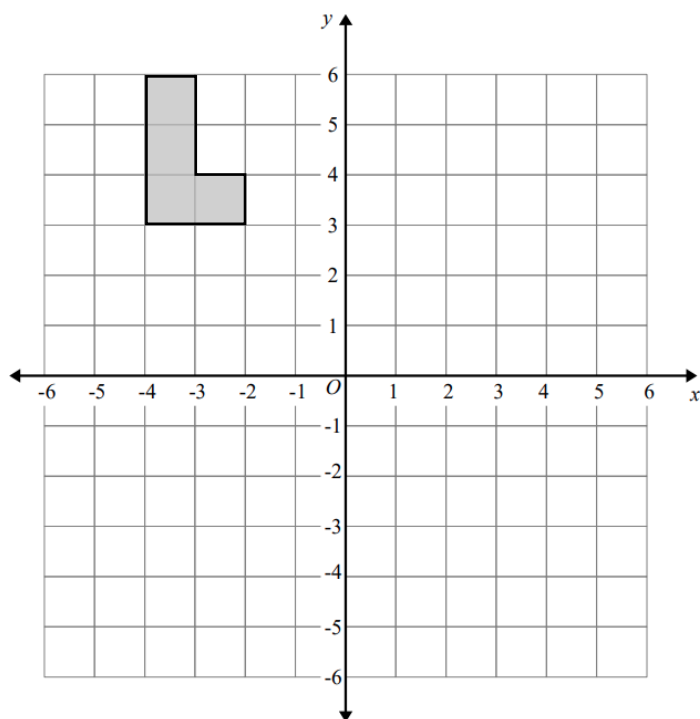
(2 marks)

4. Rotate the shape 90° clockwise around the origin.



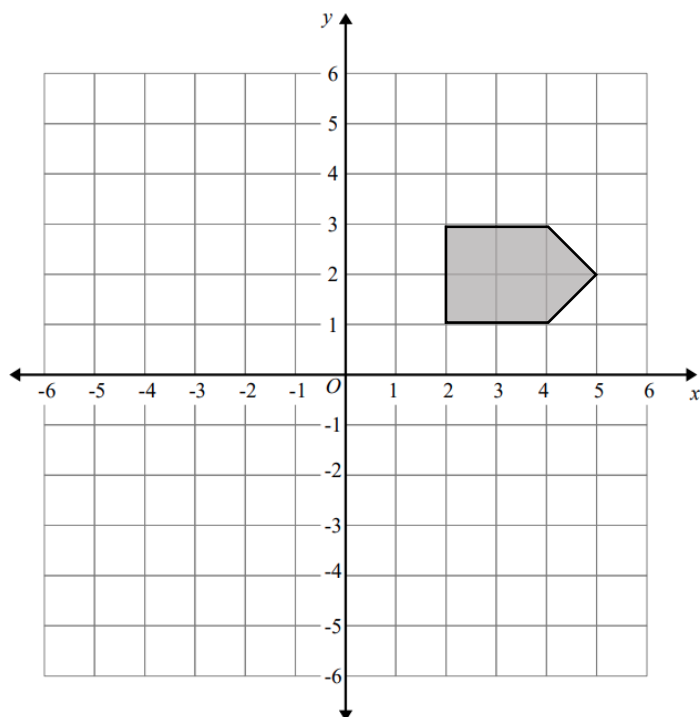
(2 marks)

5. Translate the shape by the vector $\begin{pmatrix} 5 \\ -4 \end{pmatrix}$



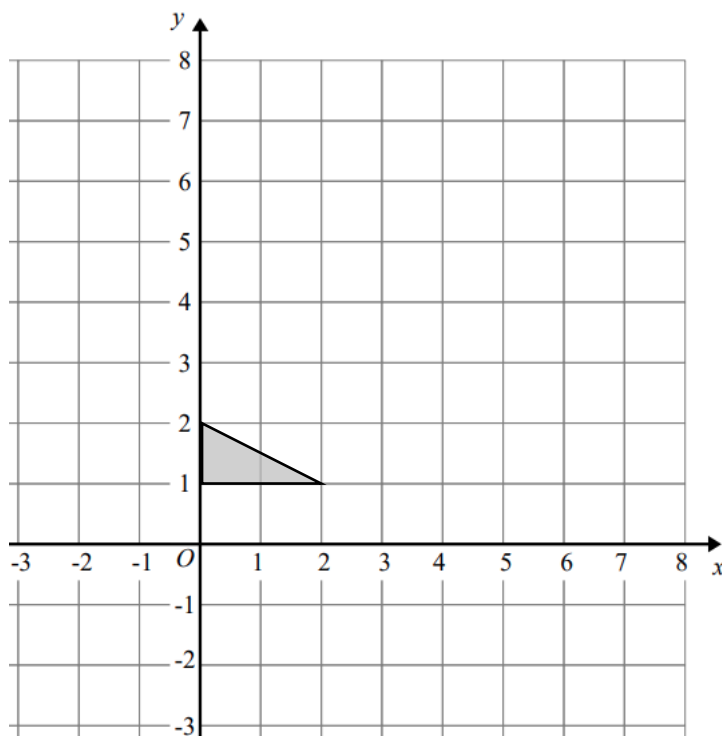
(1 mark)

6. Reflect the shape in the line $y = -1$



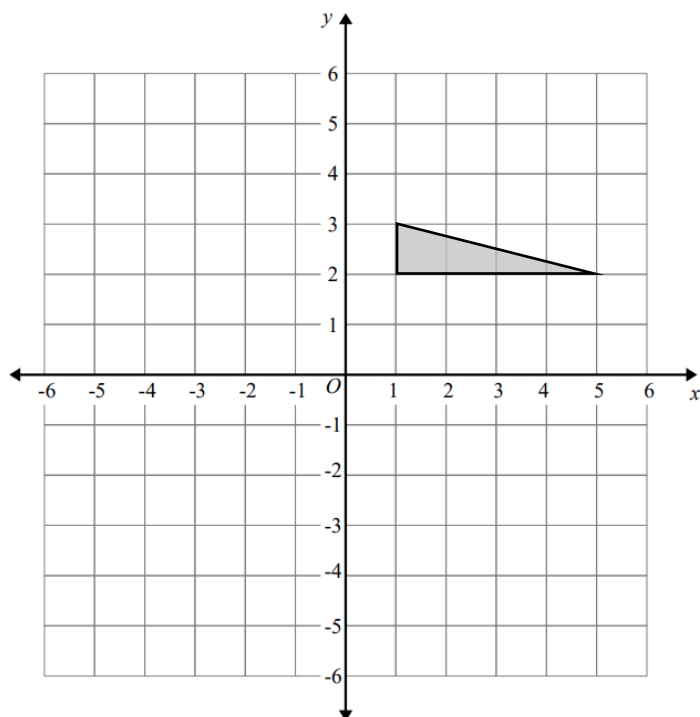
(2 marks)

7. Enlarge the shape by scale factor 2 from the centre $(-1,0)$

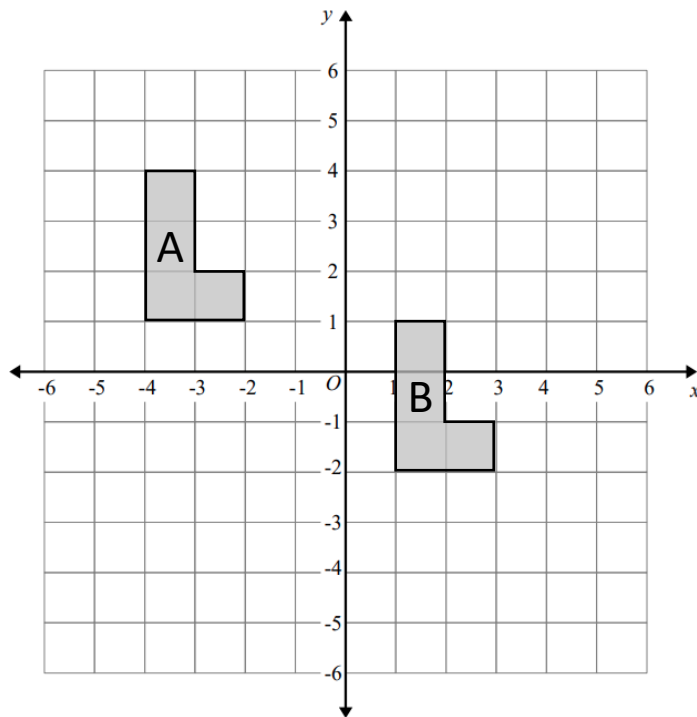


(2 marks)

8. Rotate the shape 180° around the centre $(1,1)$

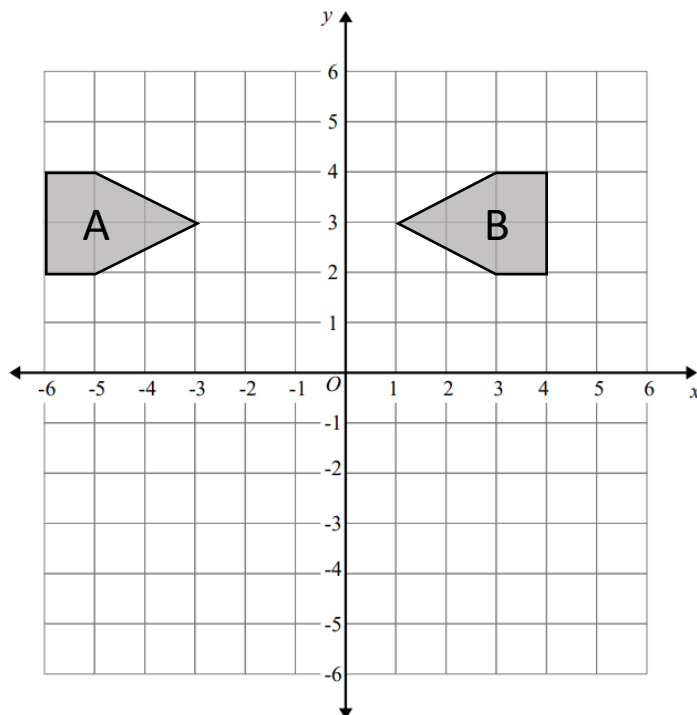


9. Describe the single transformation that lands shape A onto shape B.



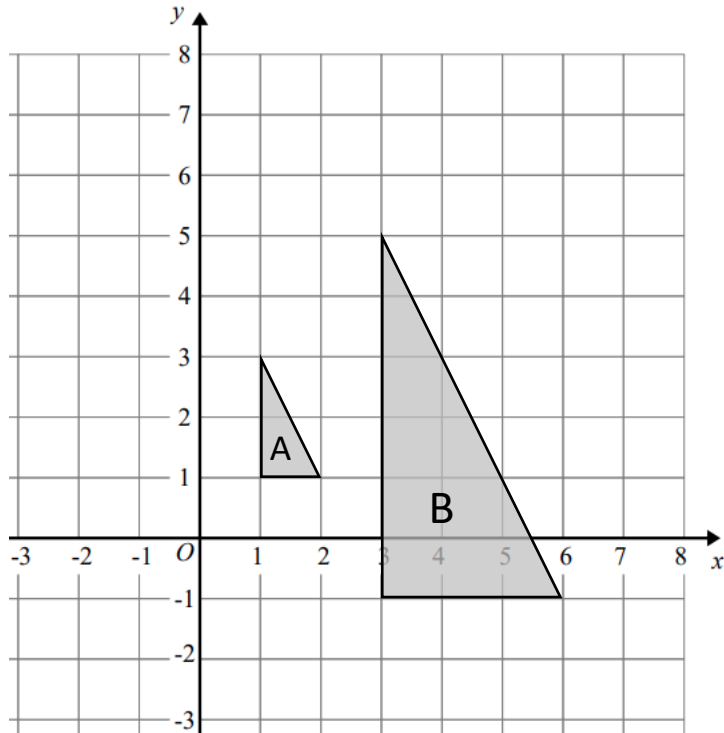
..... (1 mark)

10. Describe the single transformation that lands shape A onto shape B.



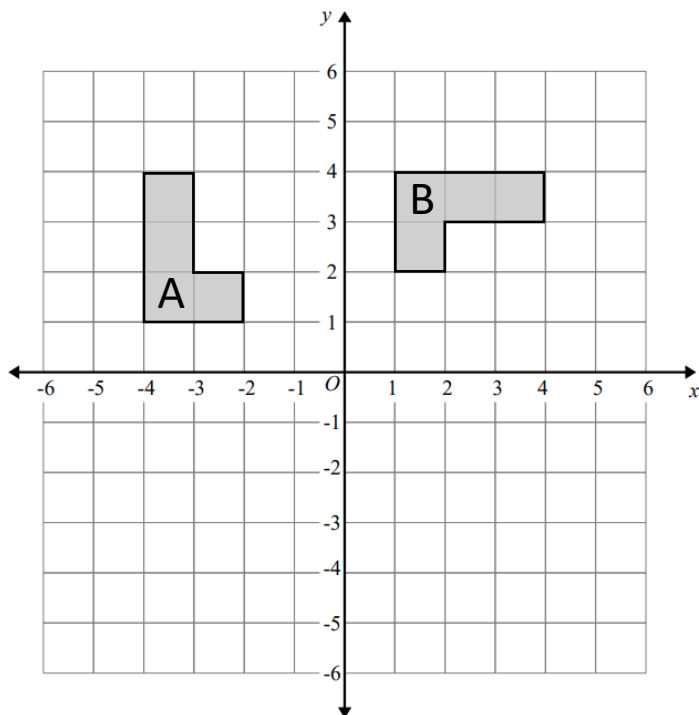
..... (2 marks)

11. Describe the single transformation that lands shape A onto shape B.



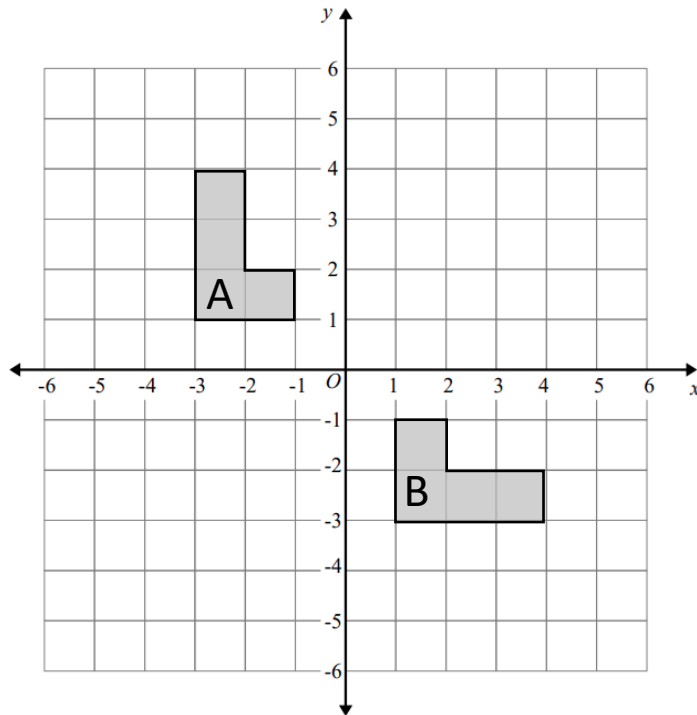
..... (2 marks)

12. Describe the single transformation that lands shape A onto shape B.



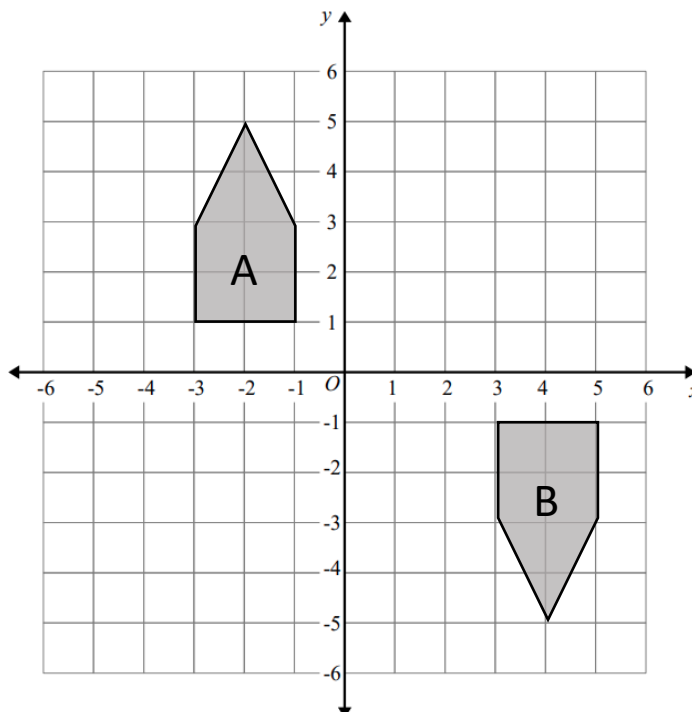
..... (2 marks)

13. Describe the single transformation that lands shape A onto shape B.



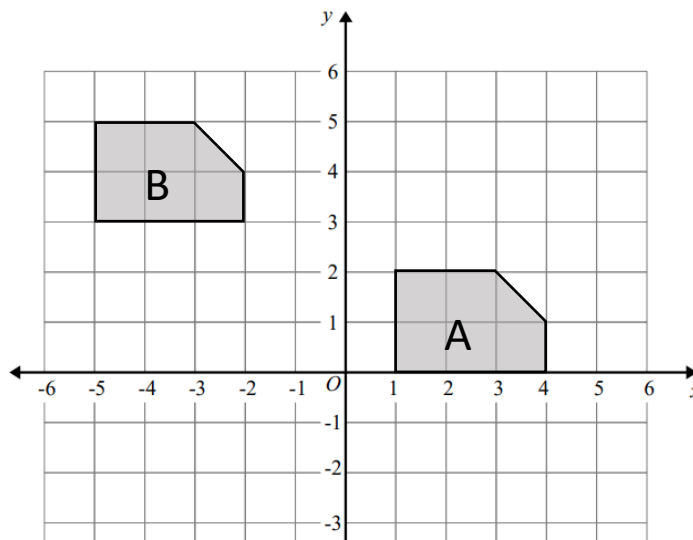
..... (2 marks)

14. Describe the single transformation that lands shape A onto shape B.



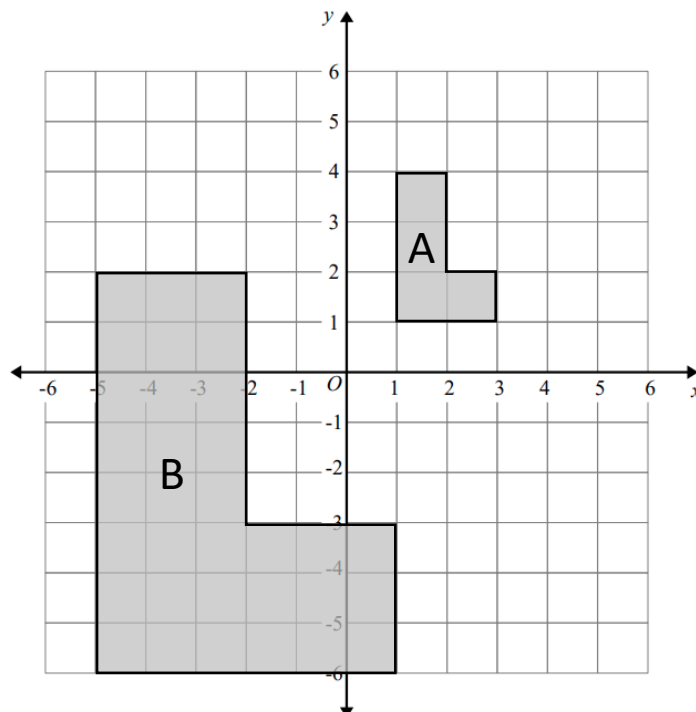
..... (2 marks)

15. Describe the single transformation that lands shape A onto shape B.



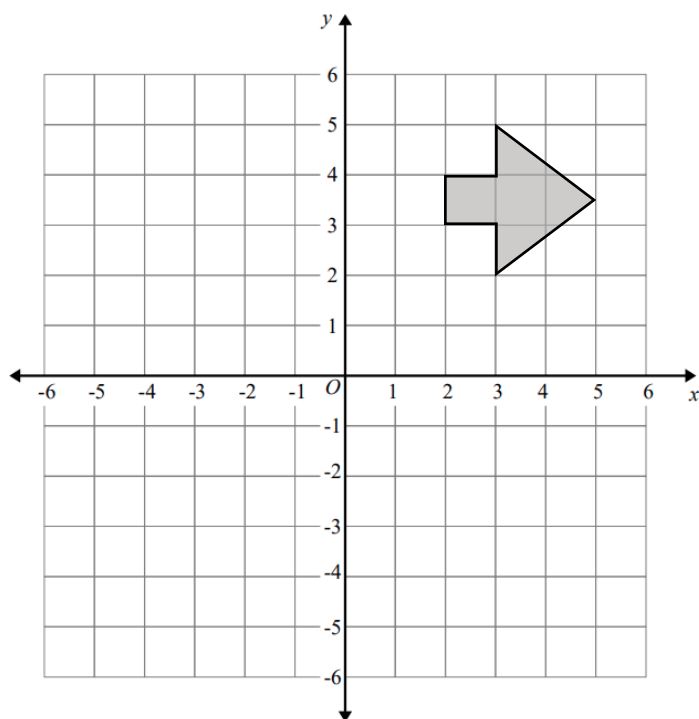
..... (2 marks)

16. Describe the single transformation that lands shape A onto shape B.



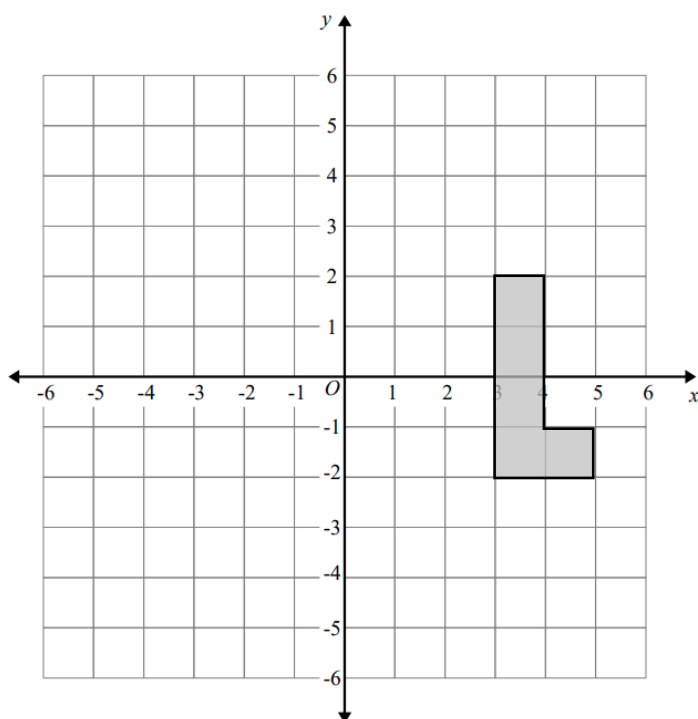
..... (2 marks)

17. Translate the shape by the vector $\begin{pmatrix} -3 \\ -5 \end{pmatrix}$



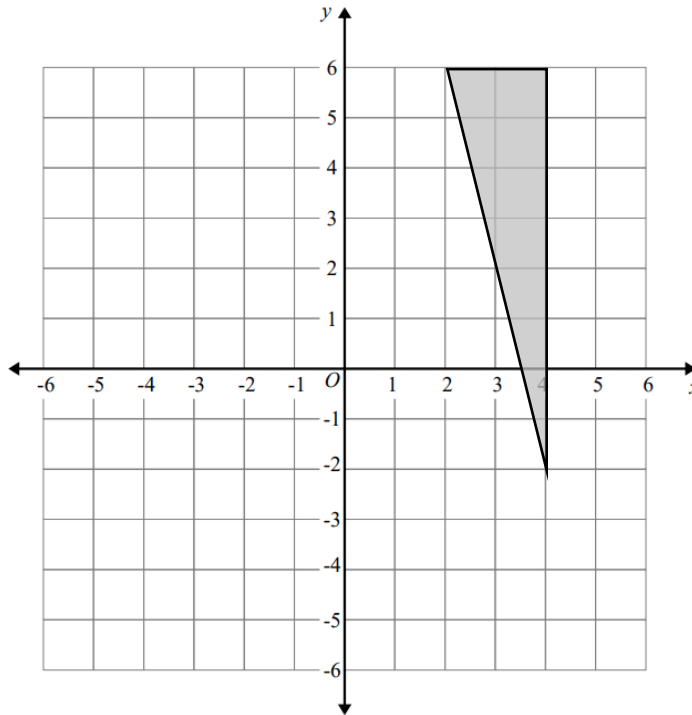
(1 mark)

18. Reflect the shape in the line $y = x$



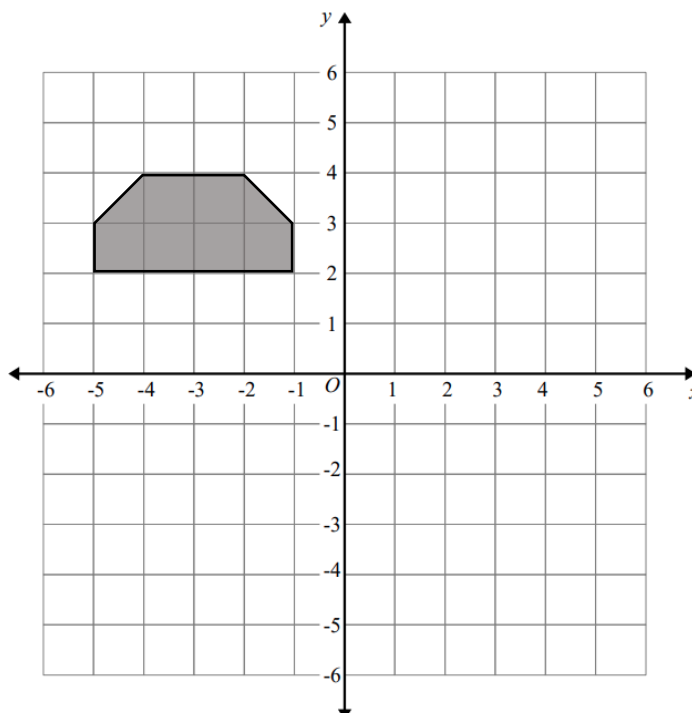
(2 marks)

19. Enlarge the shape by scale factor $\frac{1}{2}$ from the origin.



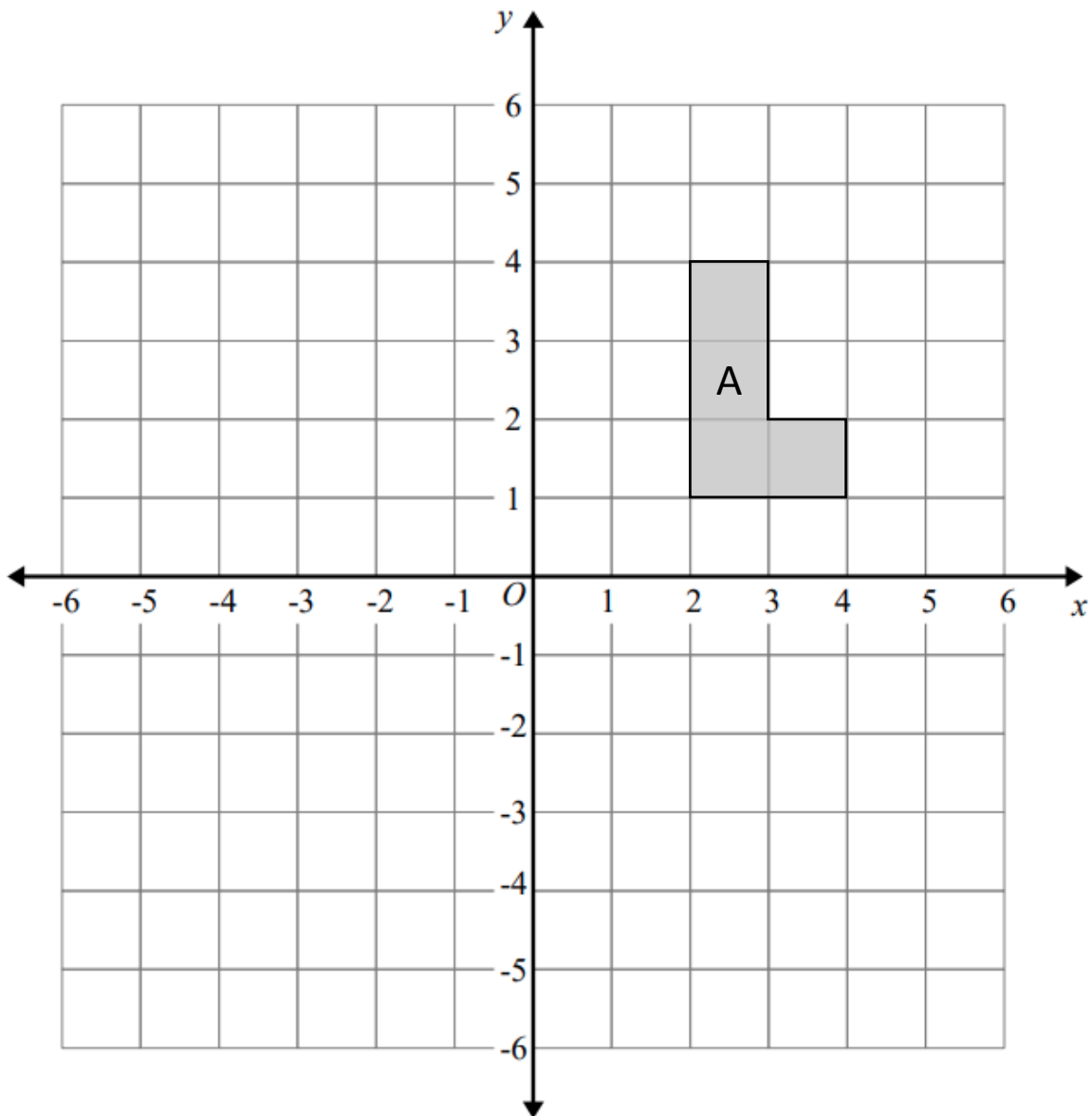
(2 marks)

20. Rotate the shape 90° anti-clockwise around the centre $(-1, 1)$.



(2 marks)

21. a) Reflect shape A in the line y axis and label B.
Then reflect the shape B in the line x axis, and label C.

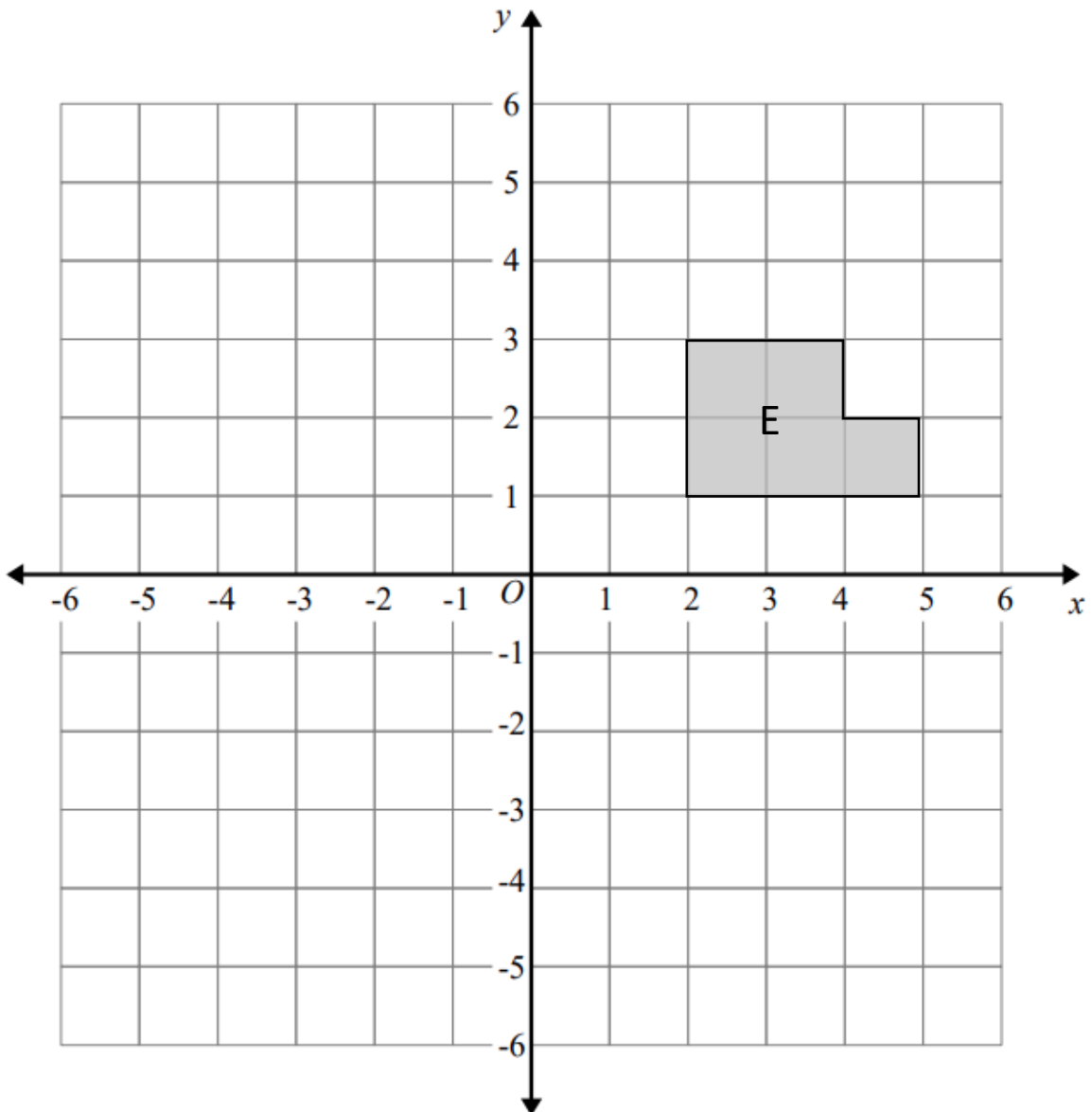


- b) Describe the single transformation that maps shape A onto shape C.

.....
.....

(4 marks)

22. a) Reflect shape E the line $x = 1$ and label F.
Then reflect the shape F in the line $y = -1$ and label G.

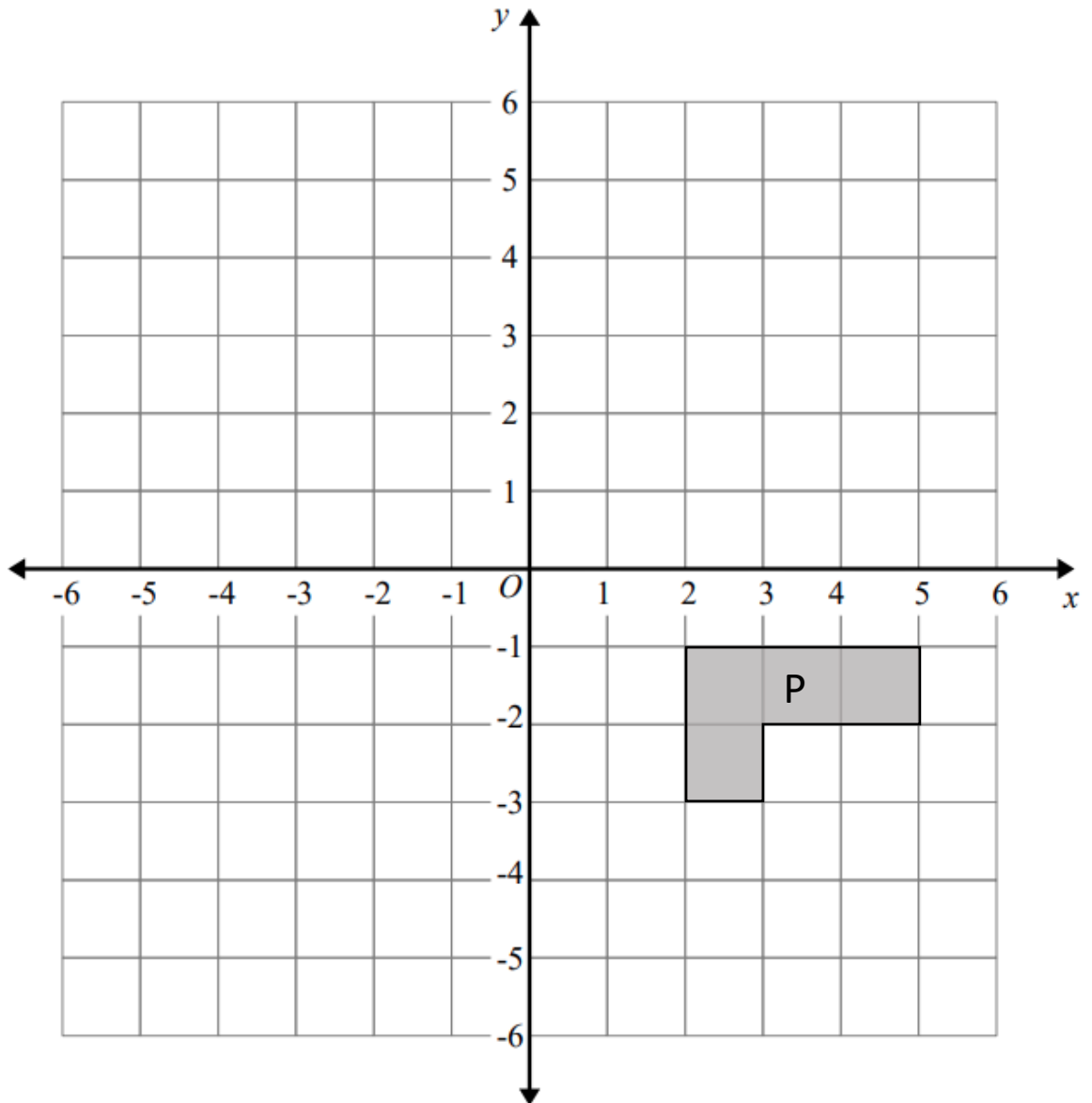


- b) Describe the single transformation that maps shape E onto shape G.

.....
.....

(4 marks)

23. a) Rotate shape P 180° around the point (1,1) and label Q.
Then translate the shape Q by the vector $\begin{pmatrix} -2 \\ -4 \end{pmatrix}$ and label R.



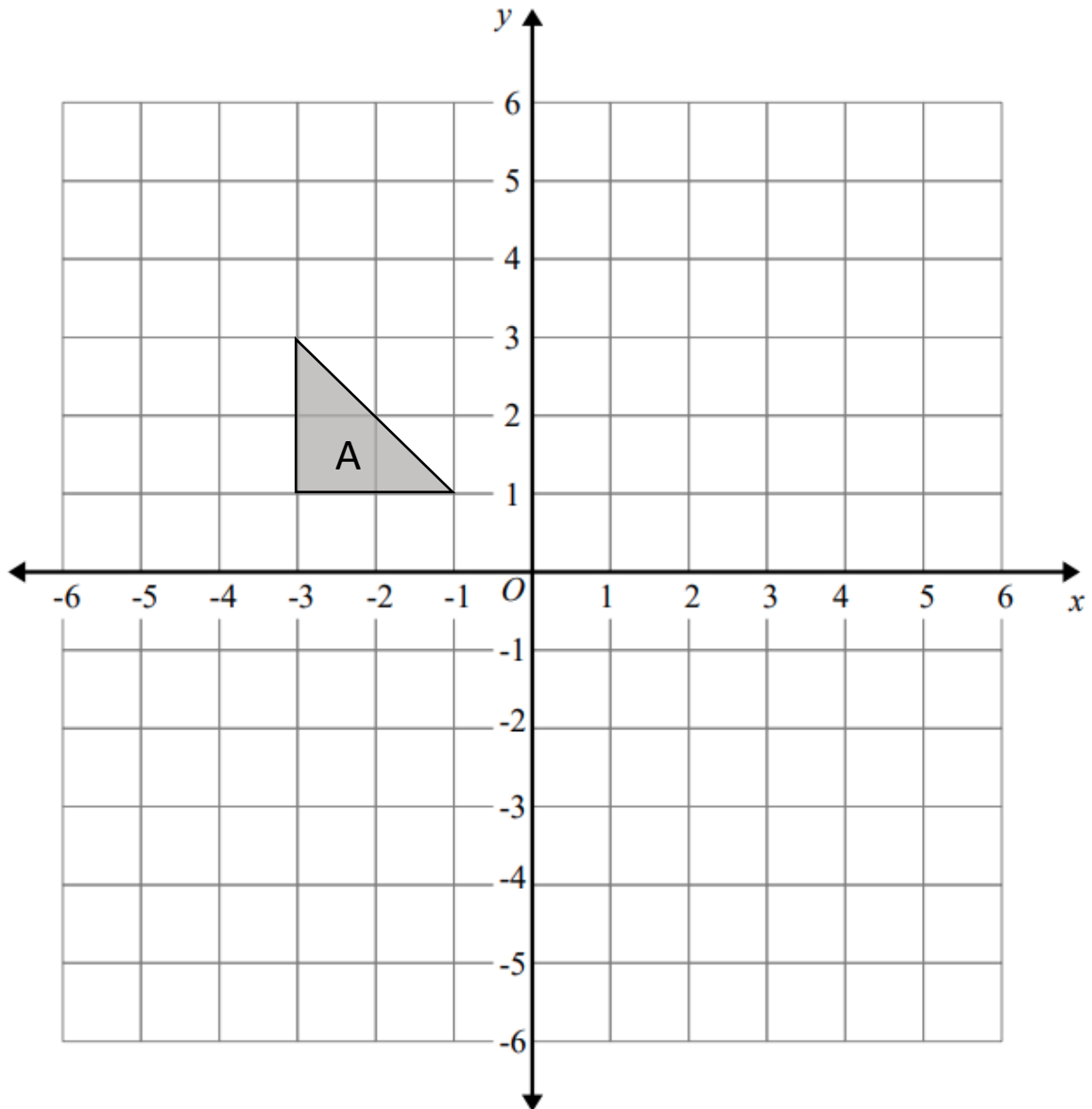
- b) Describe the single transformation that maps shape R onto shape P.

.....

.....

(4 marks)

24. a) Translate shape A by the vector $\begin{pmatrix} 6 \\ 2 \end{pmatrix}$ and label B.
then reflect the shape in the line x axis, and label C.



- b) Describe the single transformation that maps shape A onto shape C.

.....
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(4 marks)