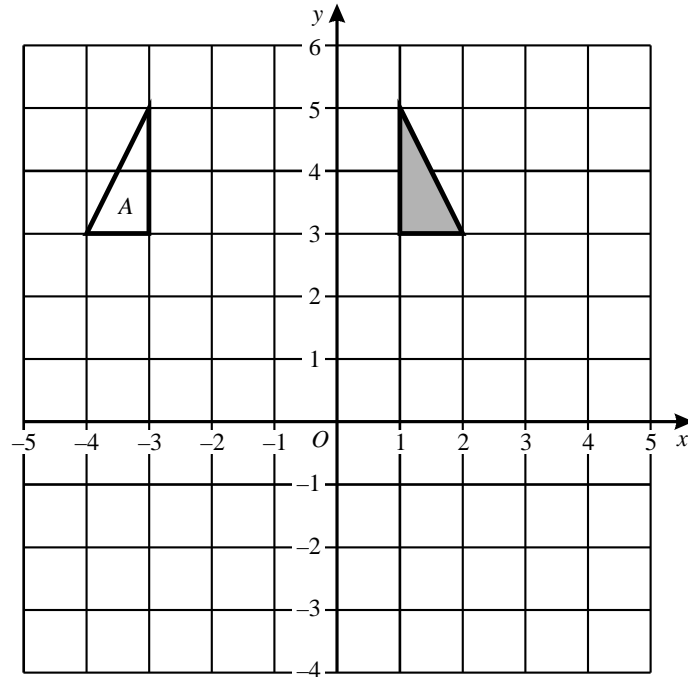


1. (a)



(i) Describe fully the **single** transformation that takes the shaded triangle to triangle A.

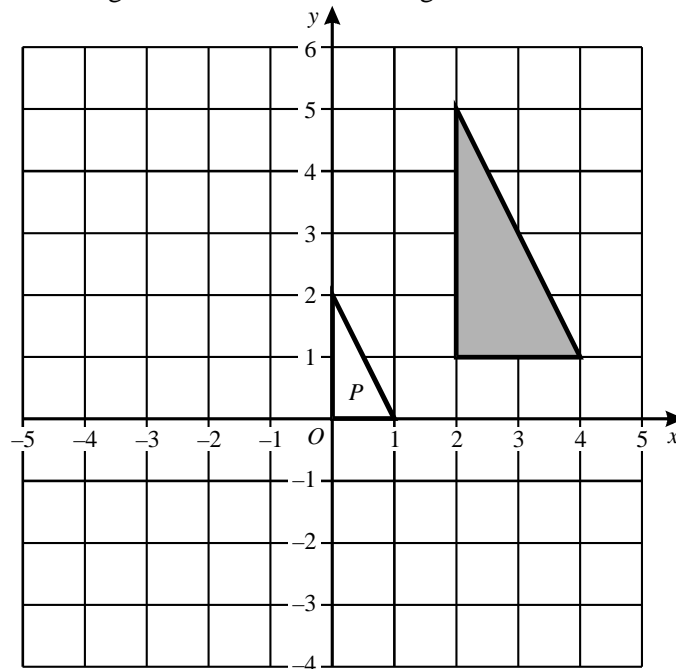
.....

(2)

(ii) On the grid above translate the **shaded** triangle by 2 squares to the right and 4 squares down.

(1)

(b) Triangle P is an enlargement of the shaded triangle.



(i) What is the scale factor of the enlargement?

Answer

(1)

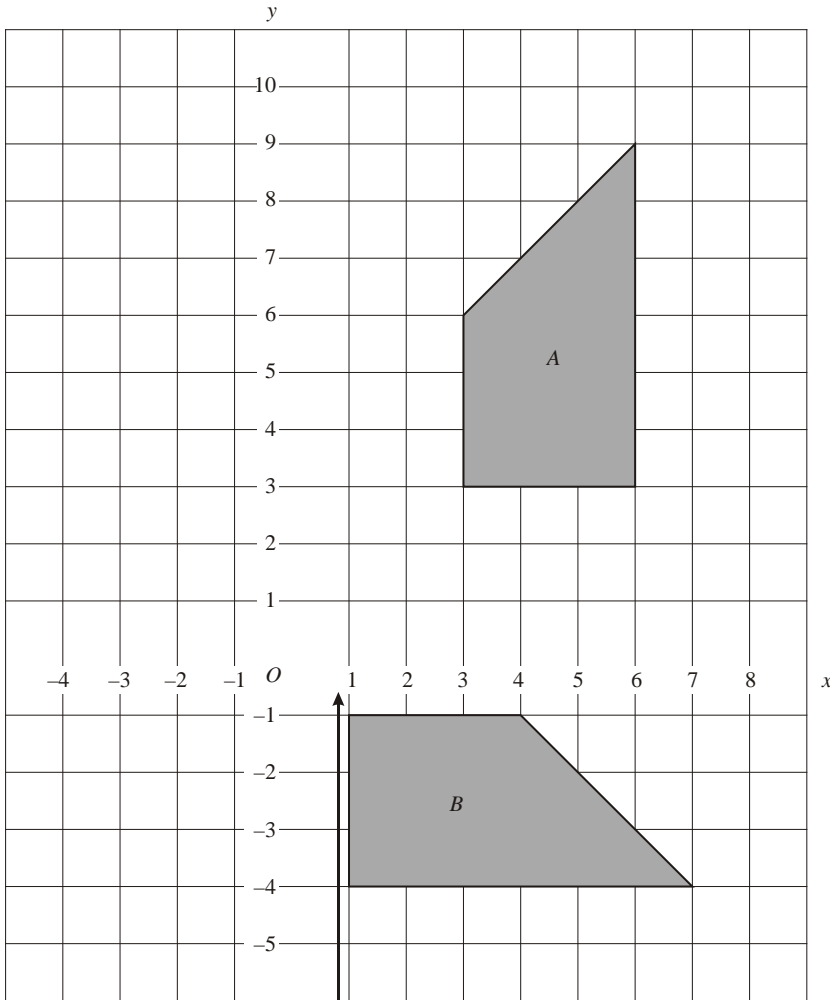
(ii) What is the centre of enlargement?

Answer (.....,

(1)

(Total 5 marks)

2. On the grid below there are two shapes, A and B.



(a)

Describe fully the **single** transformation that takes shape A to shape B

.....

.....

.....

.....

.....

(3)

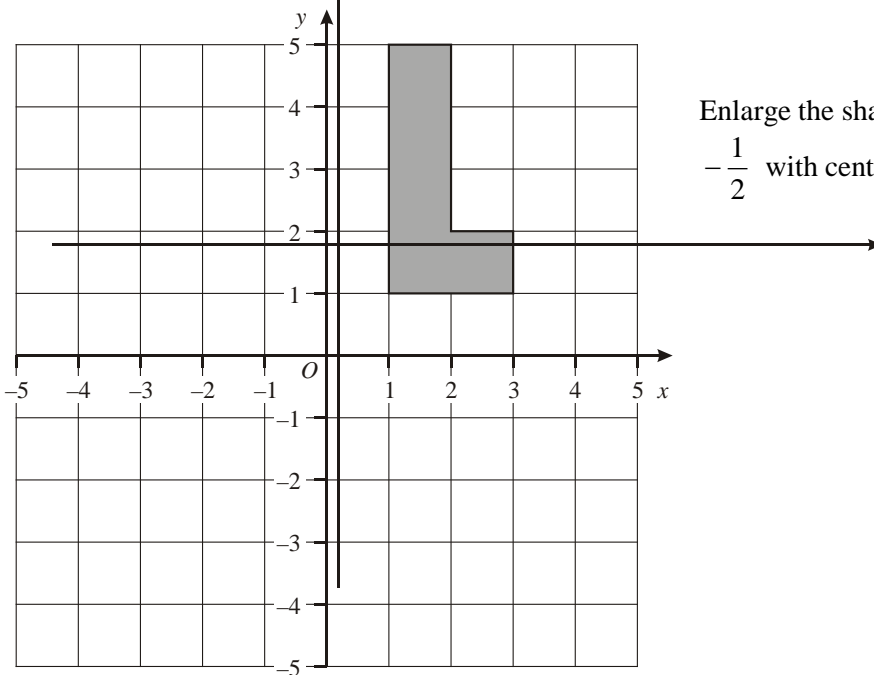
(b)

Draw the enlargement of shape A with scale factor $\frac{1}{3}$ and centre of enlargement (0,0).

(2)

(Total 5 marks)

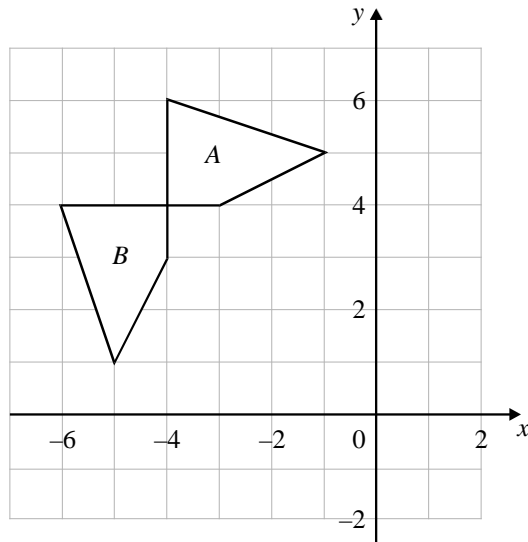
3.



Enlarge the shaded shape by scale factor $-\frac{1}{2}$ with centre of enlargement $(-1, 0)$.

(Total 2 marks)

4. (a)



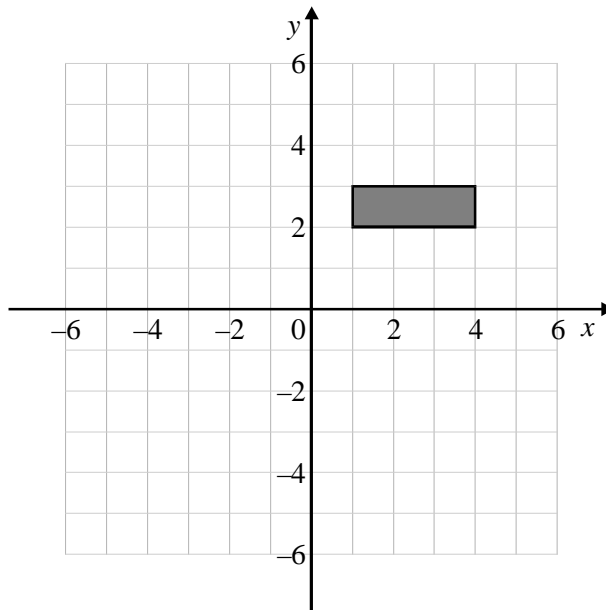
Describe fully the transformation which maps shape A onto shape B.

.....

.....

(2)

(b)



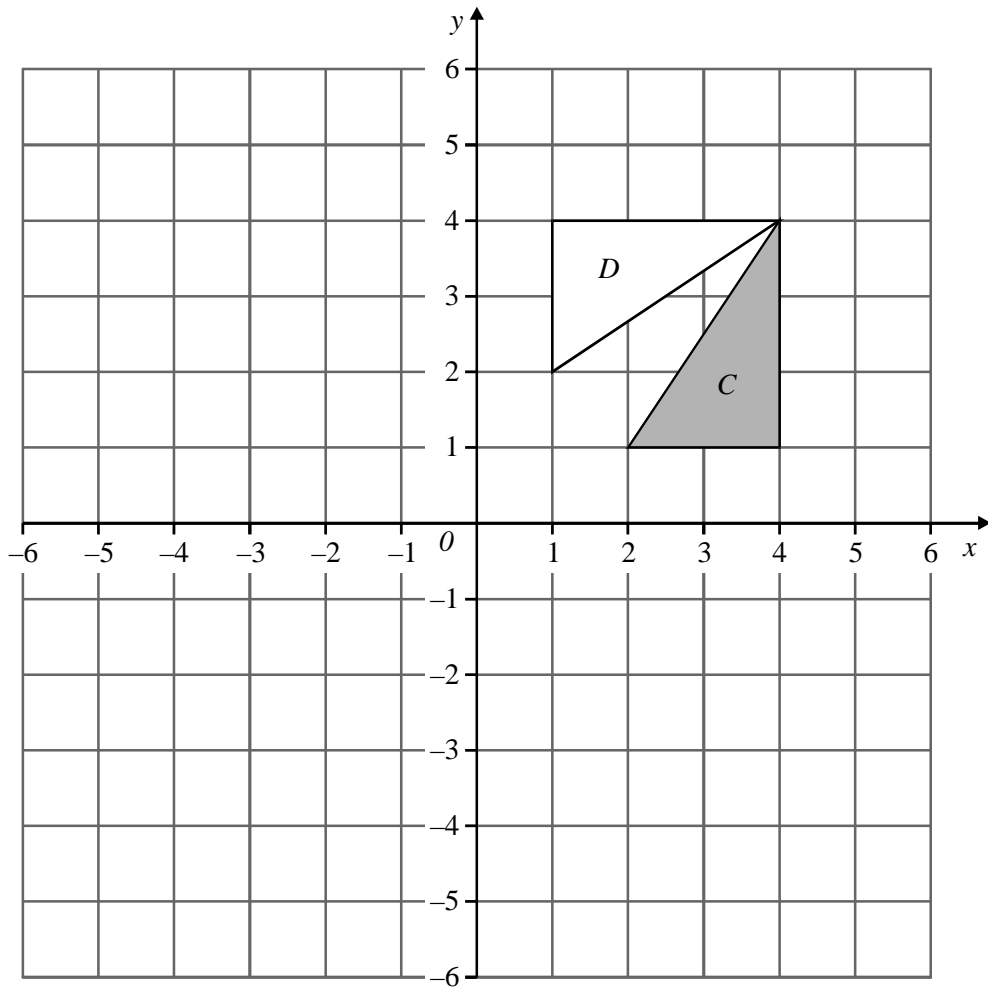
The rectangle is rotated 90° clockwise about the point $(-1, 0)$ and then translated by vector $\begin{pmatrix} -4 \\ 5 \end{pmatrix}$

Draw the Final position of the rectangle after these transformations.

(4)

(Total 6 marks)

5. The diagram shows two triangles, *C* and *D*.



(a) Describe fully the **single** transformation which maps triangle *C* to triangle *D*.

.....

Answer

(2)

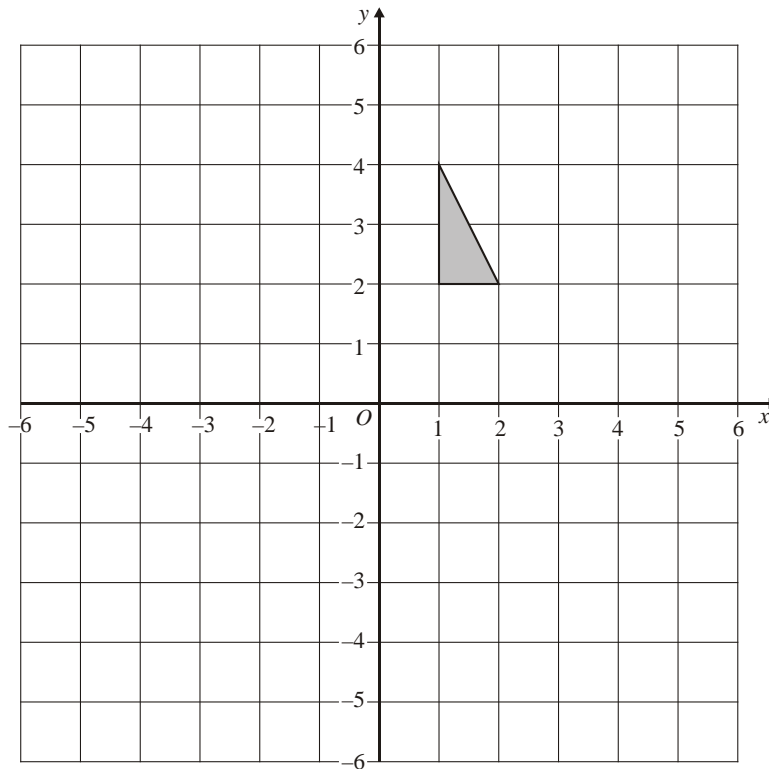
(b) Triangle *C* is translated by the vector $\begin{pmatrix} -4 \\ -3 \end{pmatrix}$ and then rotated 90° anti-clockwise about the point $(0, -2)$.

Draw the final position of triangle *C* after these transformations.

(4)

(Total 6 marks)

6.



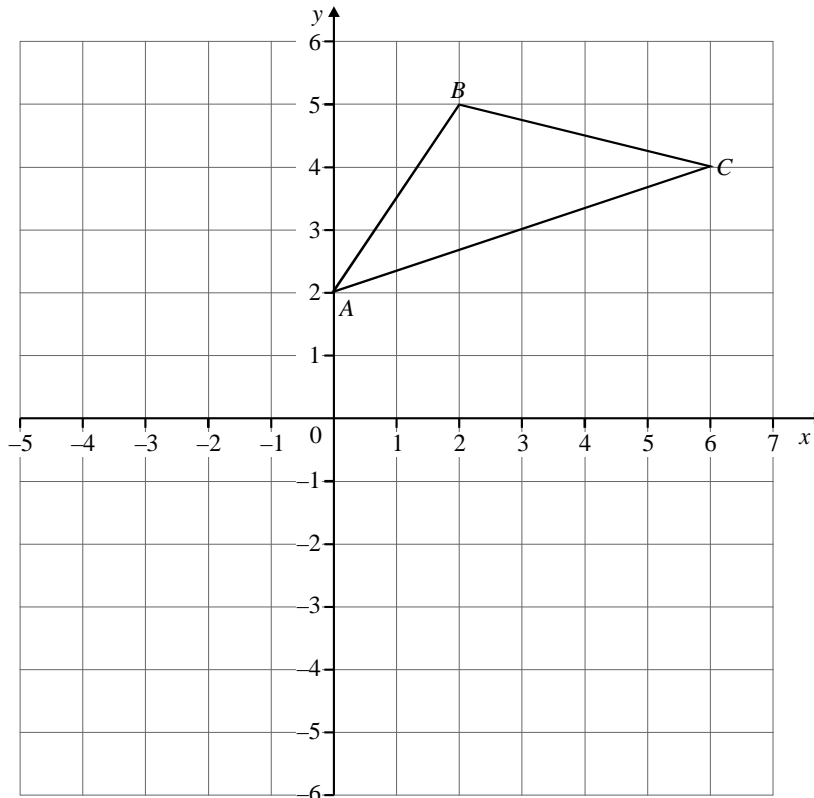
- (a) Reflect the shaded triangle in the line $y = -x$.
Label this new triangle with the letter *A*.
- (b) Rotate the original shaded triangle by a quarter-turn anticlockwise about (0,2).
Label this new triangle with the letter *B*.

(2)

(2)

(Total 4 marks)

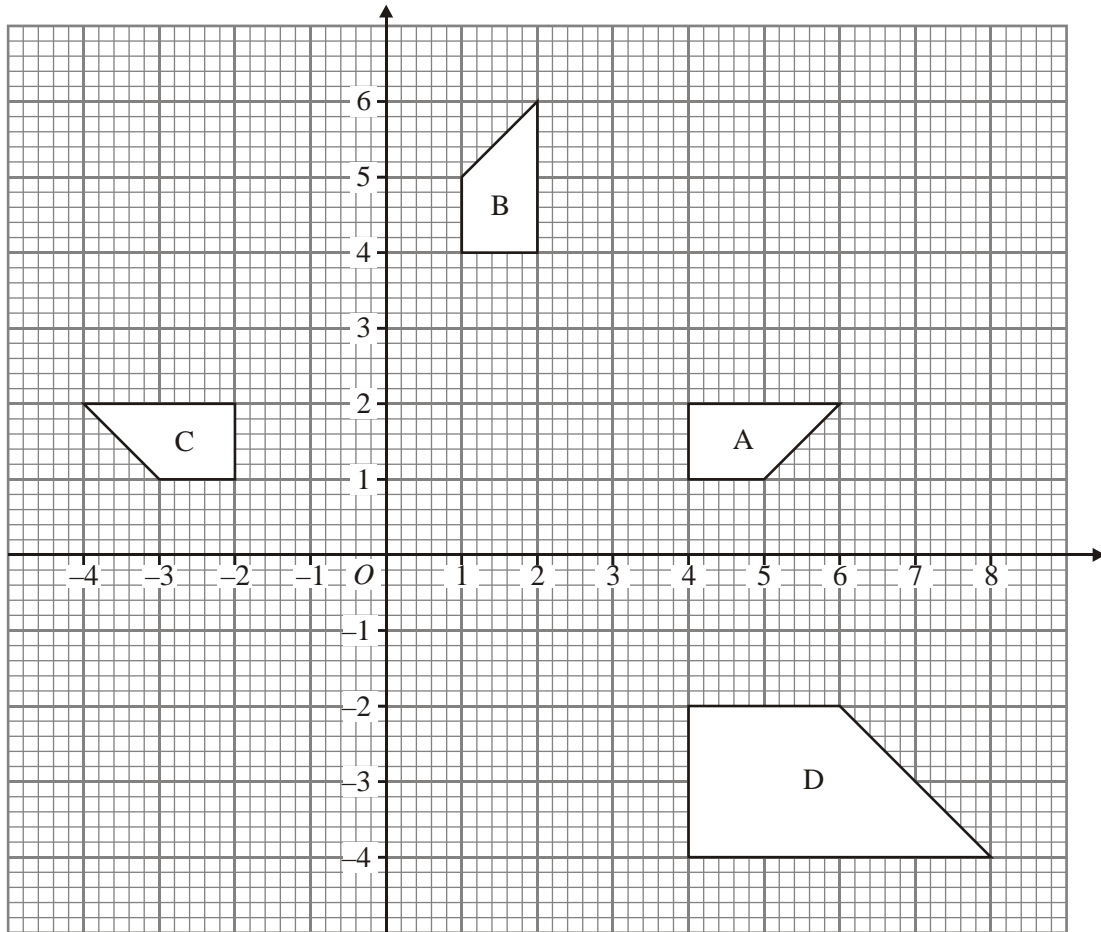
7. Triangle *ABC* has vertices at *A* (0, 2), *B* (2, 5), *C* (6, 4).



Draw the enlargement of triangle *ABC* with scale factor $-\frac{1}{2}$ and centre (2, -2).

(Total 2 marks)

8. The diagram shows four shapes, A, B, C and D.



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

.....

(2)

(b) Describe fully the single transformation that takes shape B onto shape C.

.....

(3)

(c) Describe fully the single transformation that takes shape C onto shape D.

.....

(3)

(Total 8 marks)