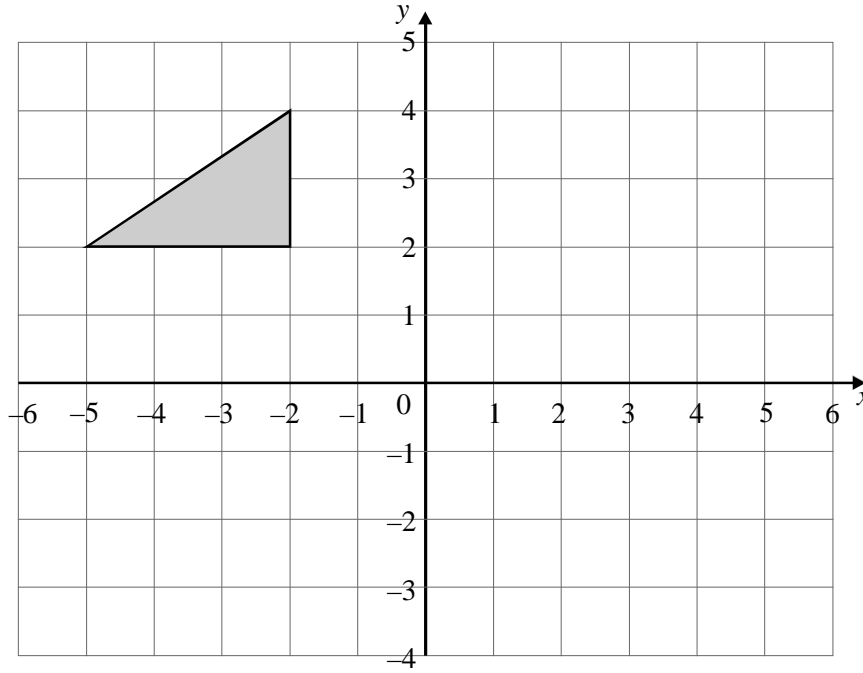


1.



- (a) Translate the shaded triangle by the vector $\begin{pmatrix} 5 \\ -4 \end{pmatrix}$

Label this triangle C.

(2)

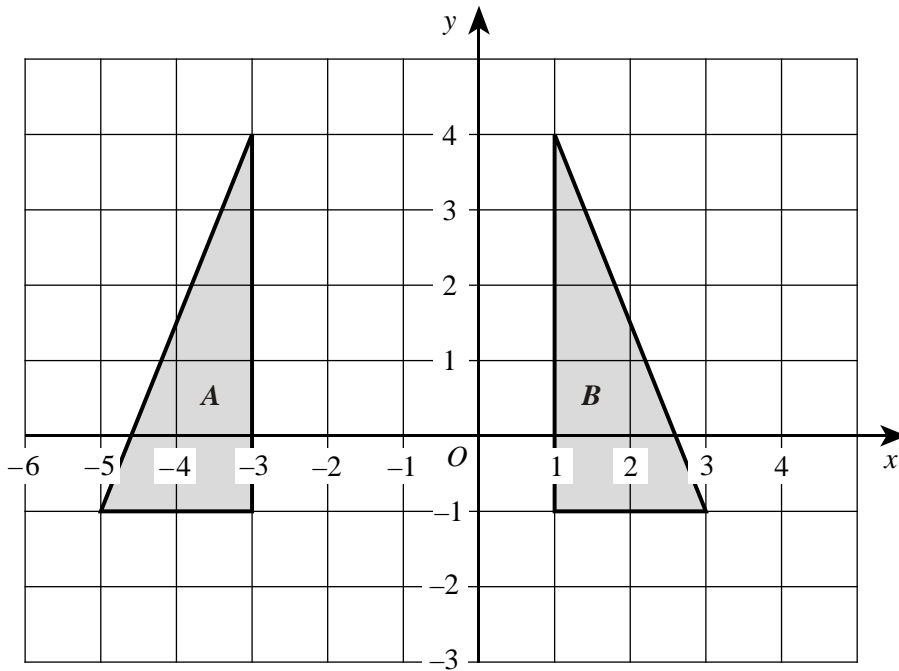
- (b) Rotate the shaded triangle through 90° clockwise about $(-1, 1)$

Label this triangle D.

(2)

(Total 4 marks)

2. The diagram shows two triangles *A* and *B* drawn on a centimetre square grid.



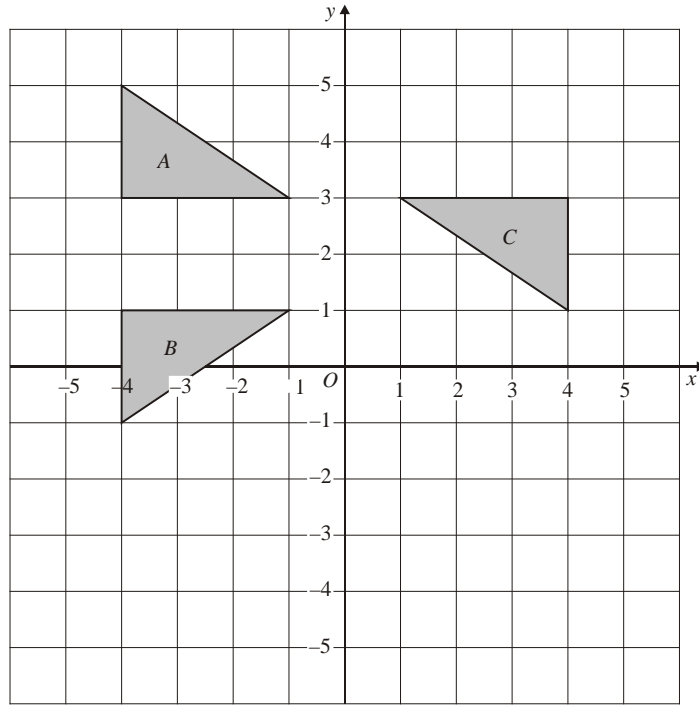
Describe fully the transformation that maps triangle *A* onto triangle *B*.

.....

(Total 2 marks)



3.



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

.....

(2)

(b) Triangle A is rotated onto triangle C.

(i) Write down the angle of rotation. Answer degrees

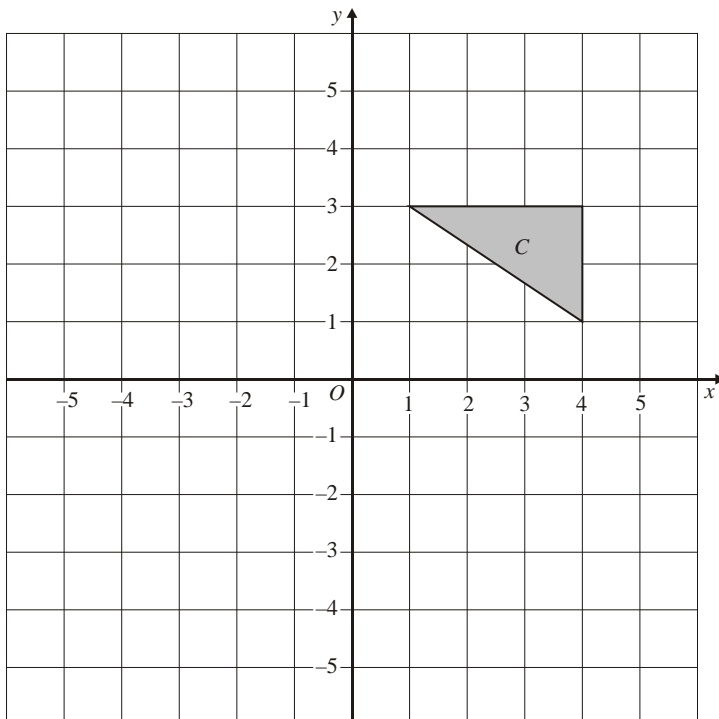
(1)

(ii) Write down the coordinates of the centre of rotation.

Answer (..... ,)

(1)

(c)



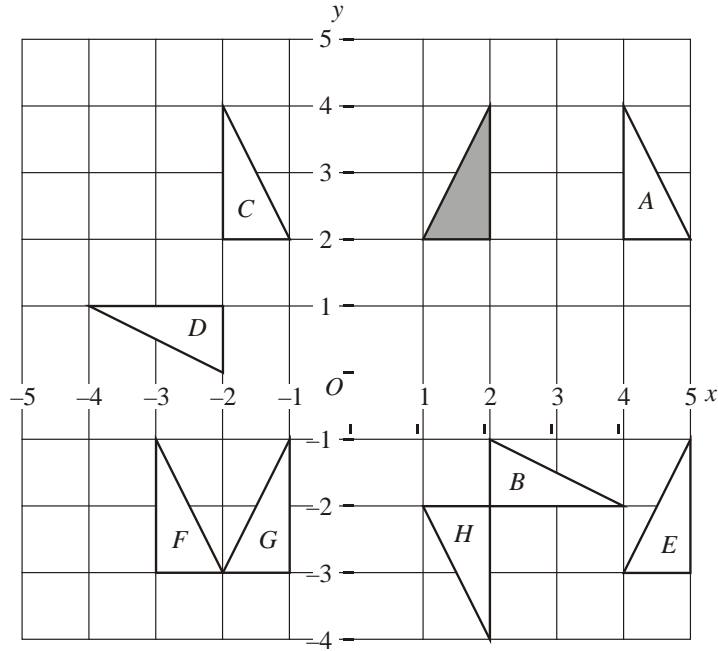
Triangle C is translated by the vector $\begin{pmatrix} 1 \\ -4 \end{pmatrix}$

Draw the new position of triangle C.

(2)

(Total 6 marks)

4. The grid shows several transformations of the shaded triangle.



(a) Write down the letter of the triangle

(i) after the shaded triangle is reflected in the line $x = 3$,

Answer

(1)

(ii) after the shaded triangle is translated by 3 squares to the right and 5 squares down,

Answer

(1)

(iii) after the shaded triangle is rotated 90° clockwise about O .

Answer

(1)

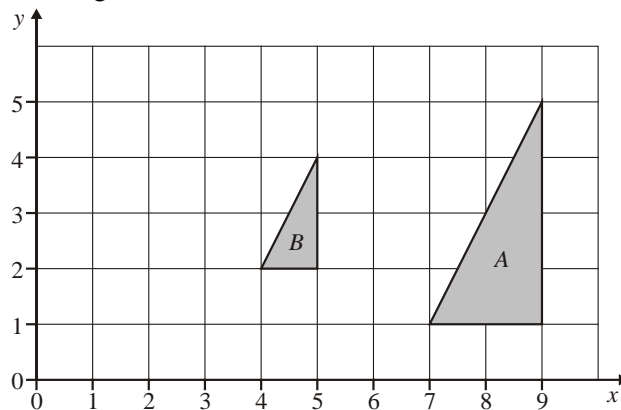
(b) Describe fully the **single** transformation which takes triangle F onto triangle G .

.....

(2)

(Total 5 marks)

5. The diagram shows two triangles A and B .

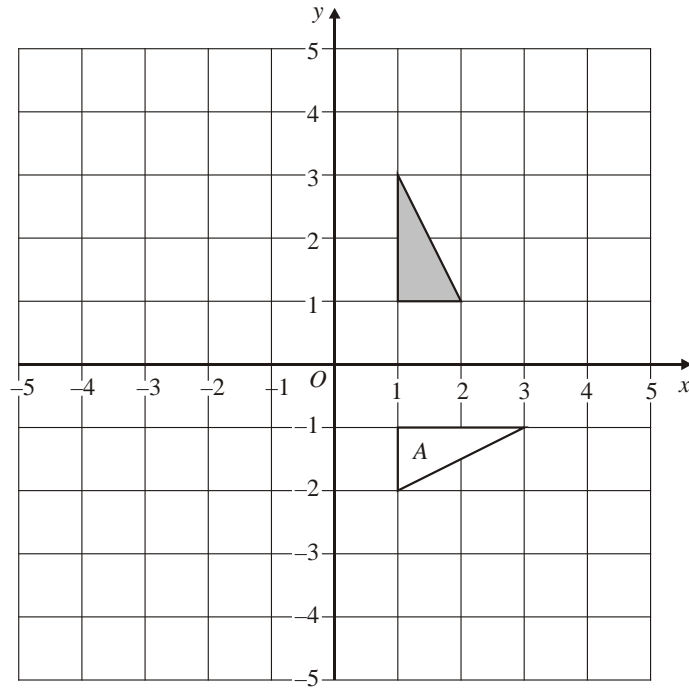


Describe fully the single transformation that maps triangle A onto triangle B .

.....

(Total 3 marks)

6. The grid shows two triangles.



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

.....

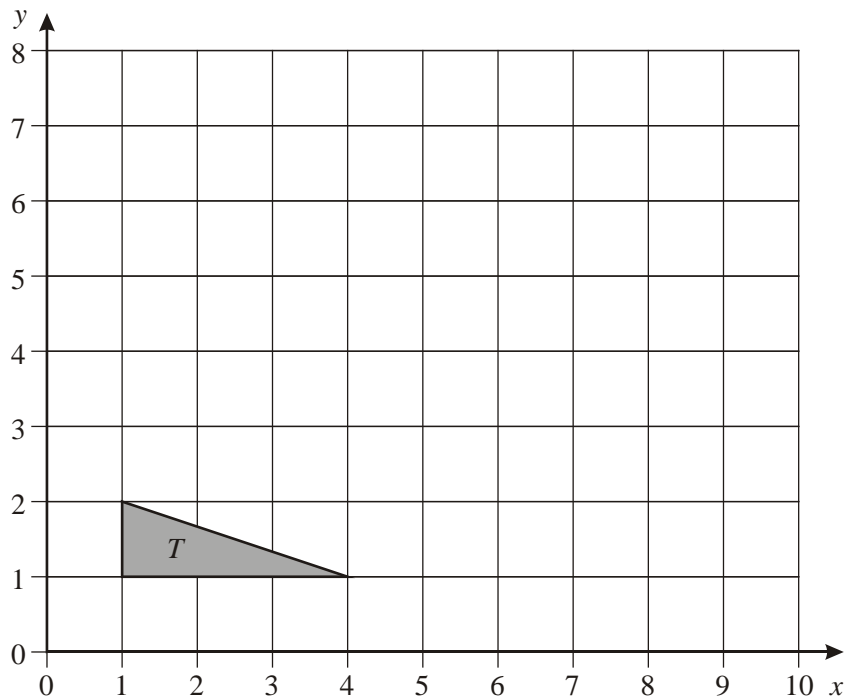
(3)

(b) Reflect the shaded triangle in the line $x = -1$

(2)

(Total 5 marks)

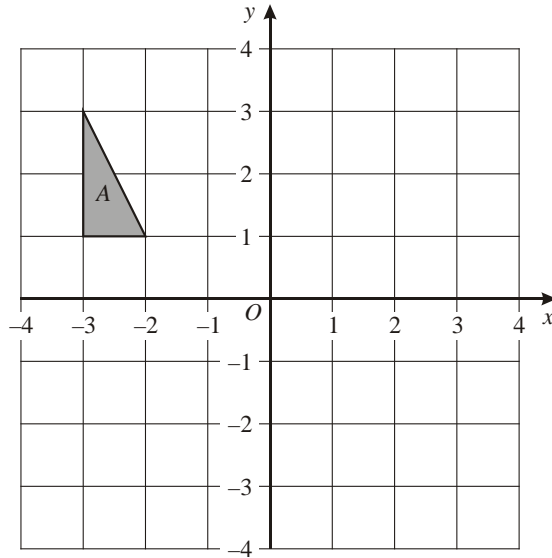
7. The vertices of triangle T are (1, 1), (1, 2) and (4, 1).



Enlarge triangle T by scale factor 2, with (0, 0) as the centre of enlargement.

(Total 3 marks)

8. Triangle A is drawn on the grid below.



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

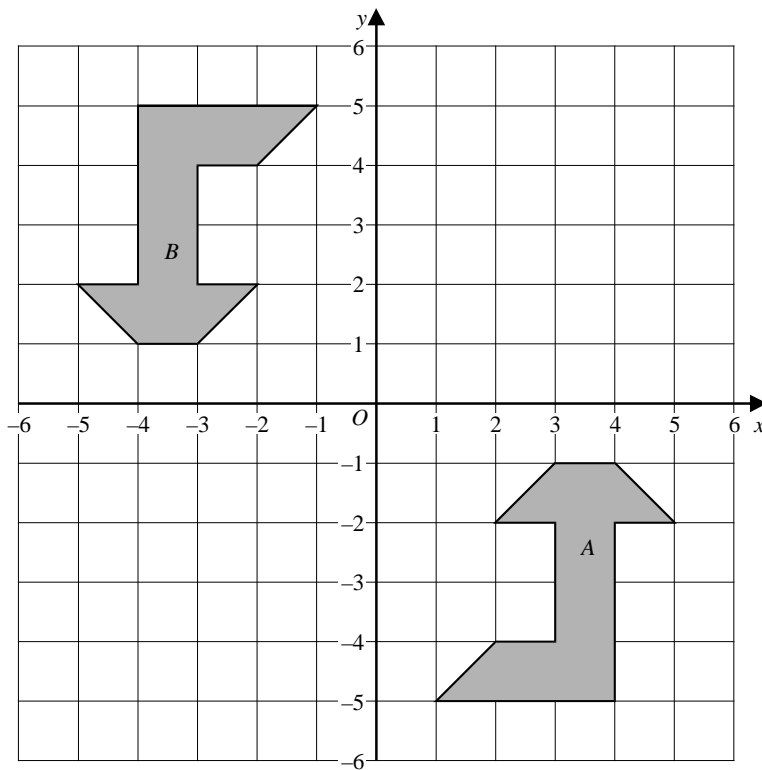
(1)

(b) Rotate triangle A 90° clockwise about the origin O.
Label the triangle C.

(2)

(Total 3 marks)

9. The diagram shows two identical shapes, A and B.



Describe fully the **single** transformation which takes shape A to shape B.

.....

.....

(Total 3 marks)