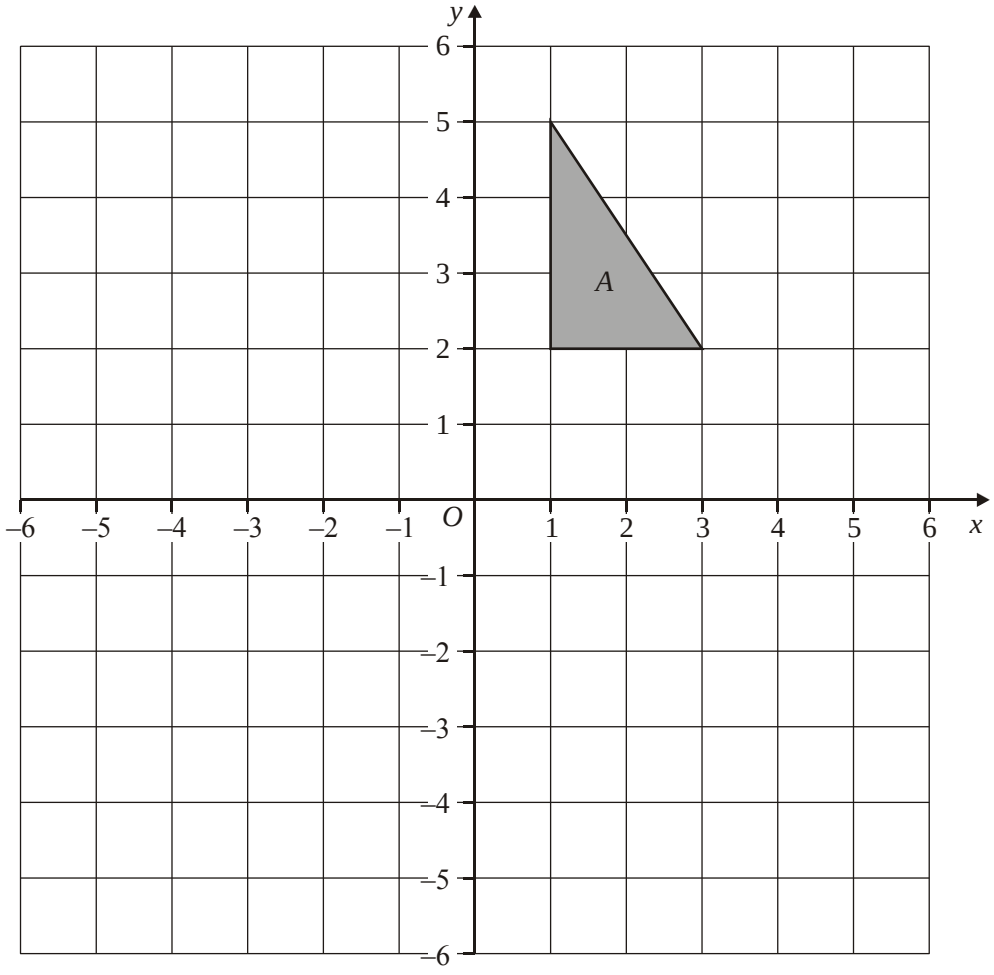
GCSE Foundation Mathematics Name _____

Translation, Enlargement, Rotation and Reflection (TERRy)

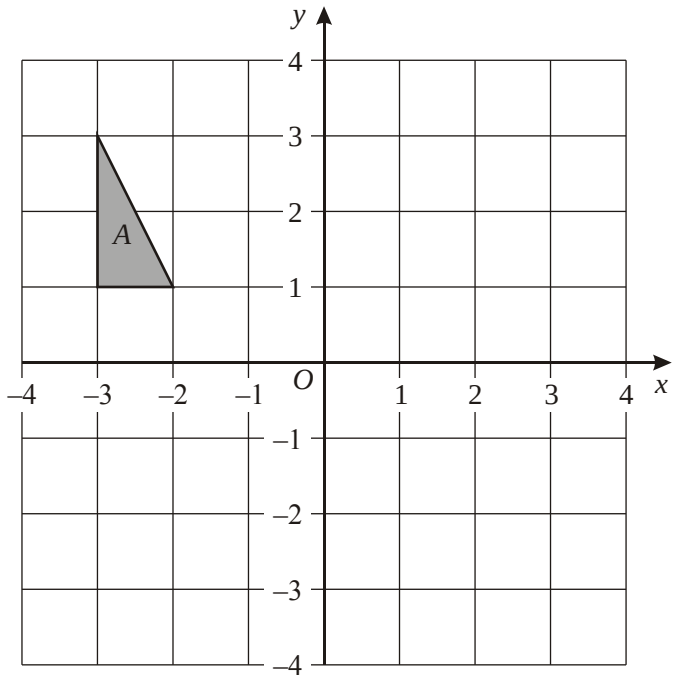
1. Triangle *A* has vertices (1,2), (1,5) and (3,2).



Draw the new position of triangle *A* after a rotation of 90° clockwise about the origin.

(Total 3 marks)

2. Triangle *A* is drawn on the grid below.



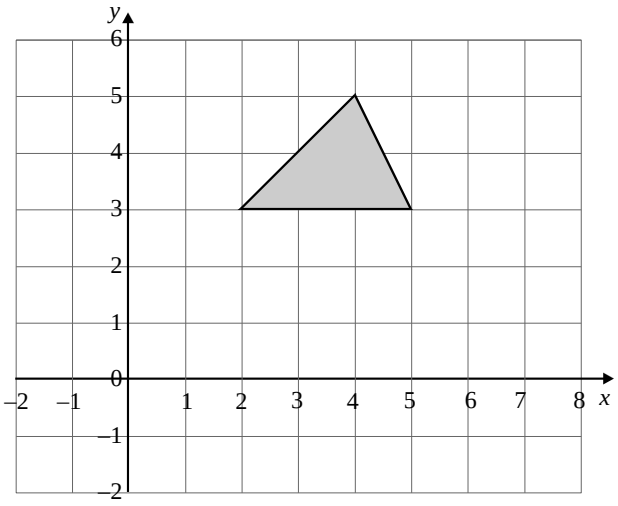
(a) Reflect triangle *A* in the *x*-axis.
Label the triangle *B*.

(1)

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

(2)
(Total 3 marks)

3. (a)



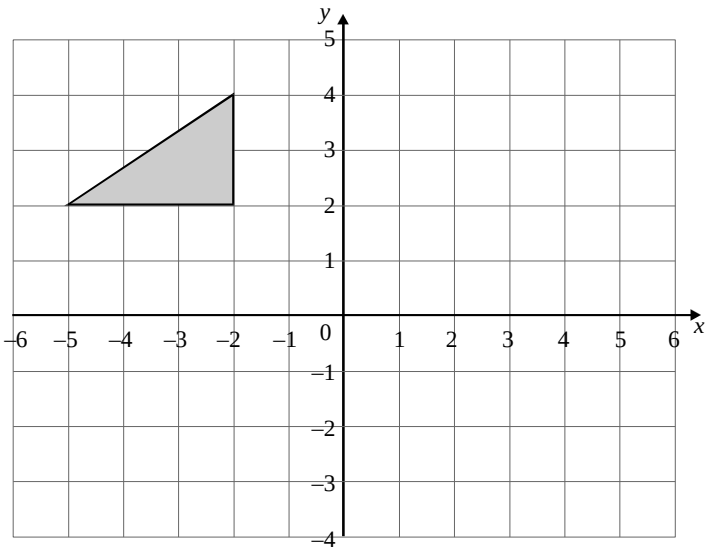
(i) Draw the line $y = 2$ on the grid above.

(1)

(ii) Reflect the shaded triangle in the line $y = 2$.

(1)

(b)



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

Label this triangle C.

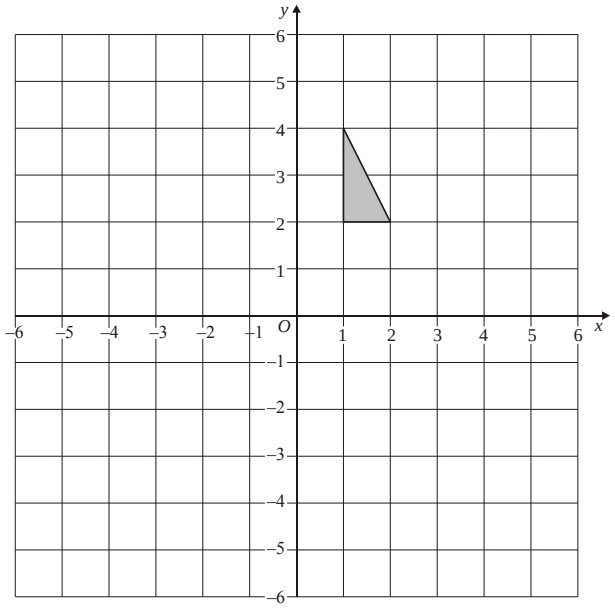
(2)

(ii) Rotate the shaded triangle through 90° clockwise about (−1, 1)

Label this triangle D.

(2)
(Total 6 marks)

4.



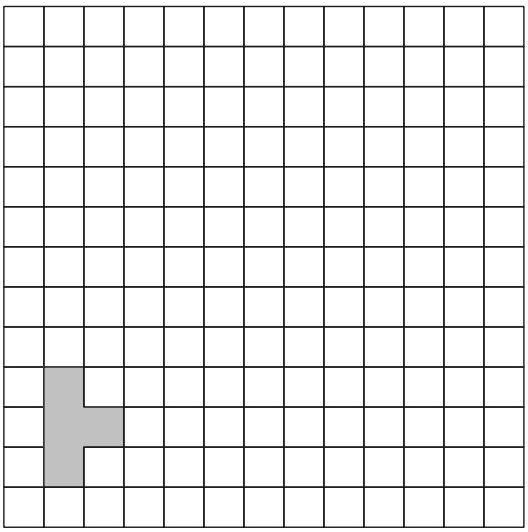
(a) Reflect the shaded triangle in the line $y = -x$.
Label this new triangle with the letter *A*.

(2)

(b) Rotate the original shaded triangle by a quarter-turn anticlockwise about (0,2).
Label this new triangle with the letter *B*.

(2)
(Total 4 marks)

5. (a) Enlarge the shaded shape by a scale factor of 3.



(2)

(b) How many times bigger is the area of the enlarged shape than the area of the small shape?

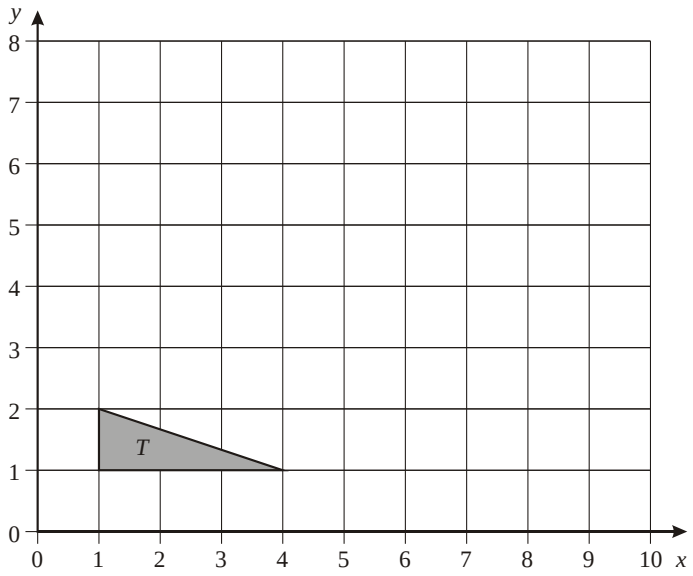
.....

.....

Answer .....

(2)
(Total 4 marks)

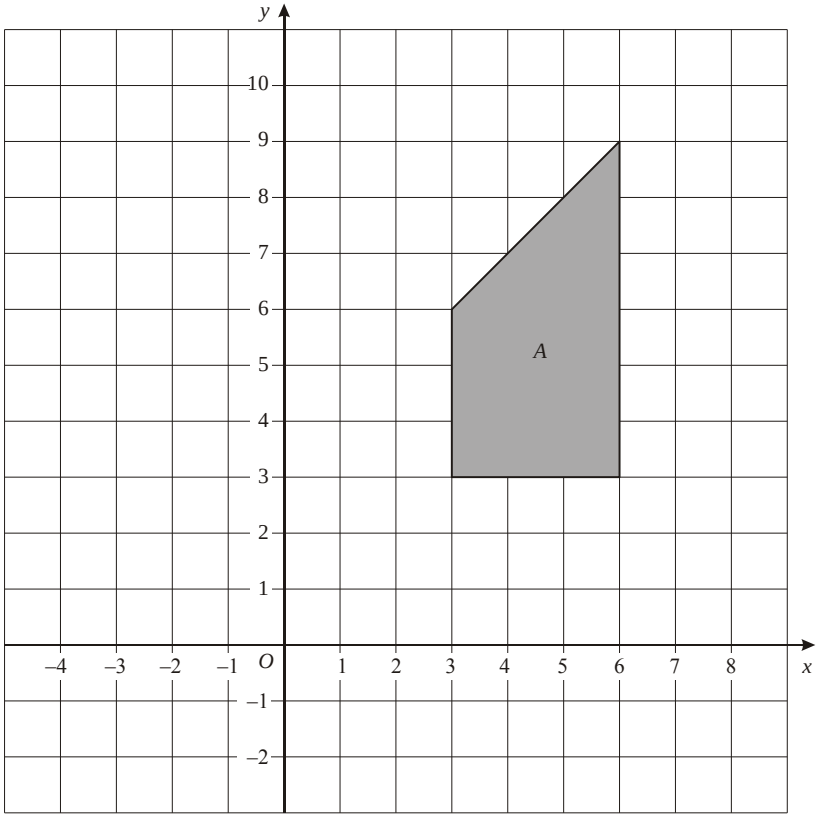
6. The vertices of triangle *T* are (1, 1), (1, 2) and (4, 1).



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

(Total 3 marks)

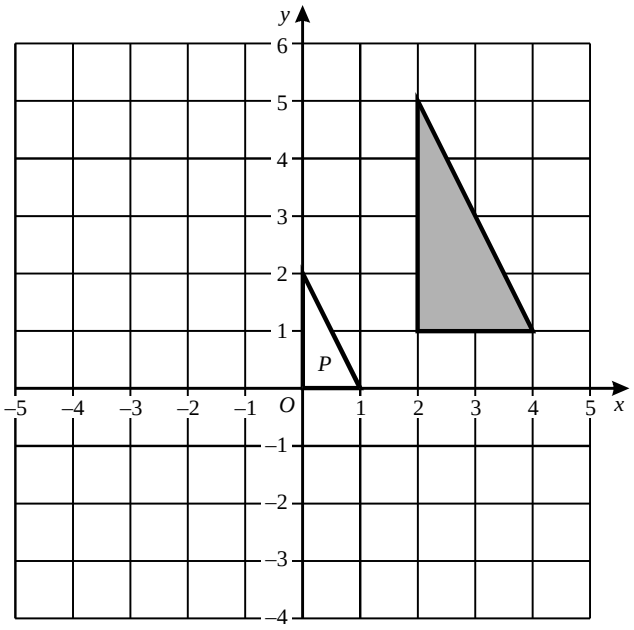
7. The diagram shows shape *A*.



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

(Total 2 marks)

8. Triangle *P* is an enlargement of the shaded triangle.



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

Answer .....

(1)

(b) What is the centre of enlargement?

Answer (....., ...)

(1)

(Total 2 marks)