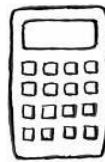


Name:

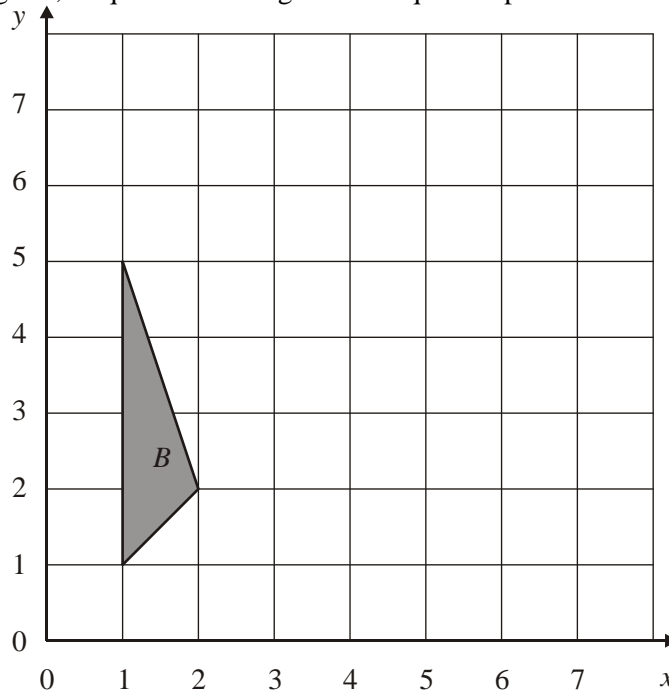
Teacher  
Assessment



**Section A** **Translations** **Grade D / C**

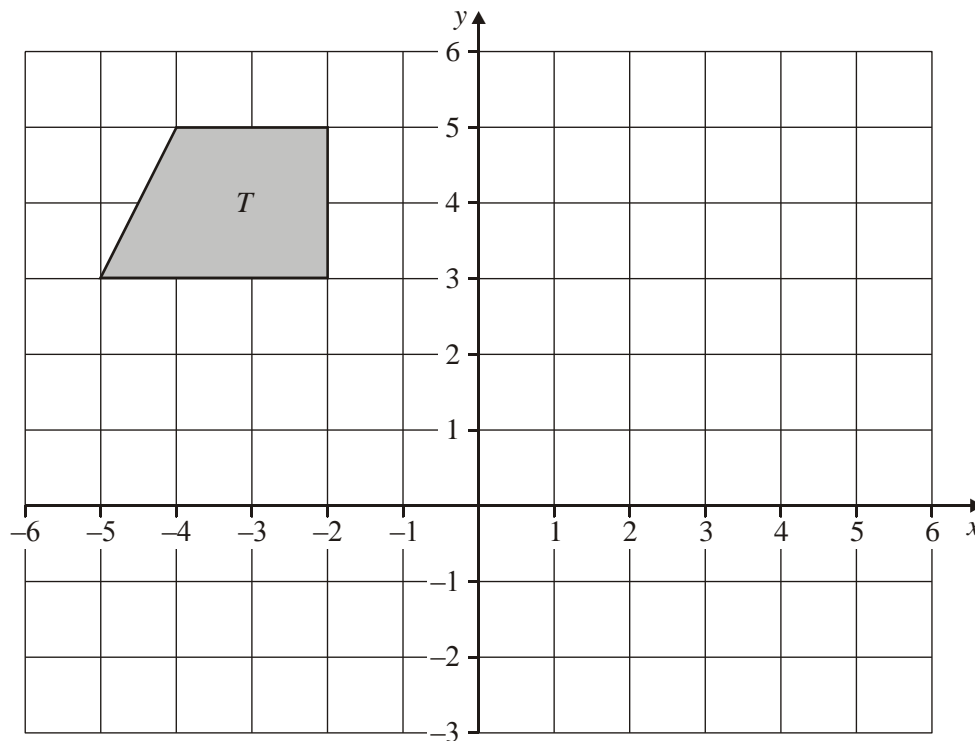
1. The grid shows a triangle  $B$ .

Translate triangle  $B$ , 3 squares to the right and 2 squares up.



(Total 1 mark)

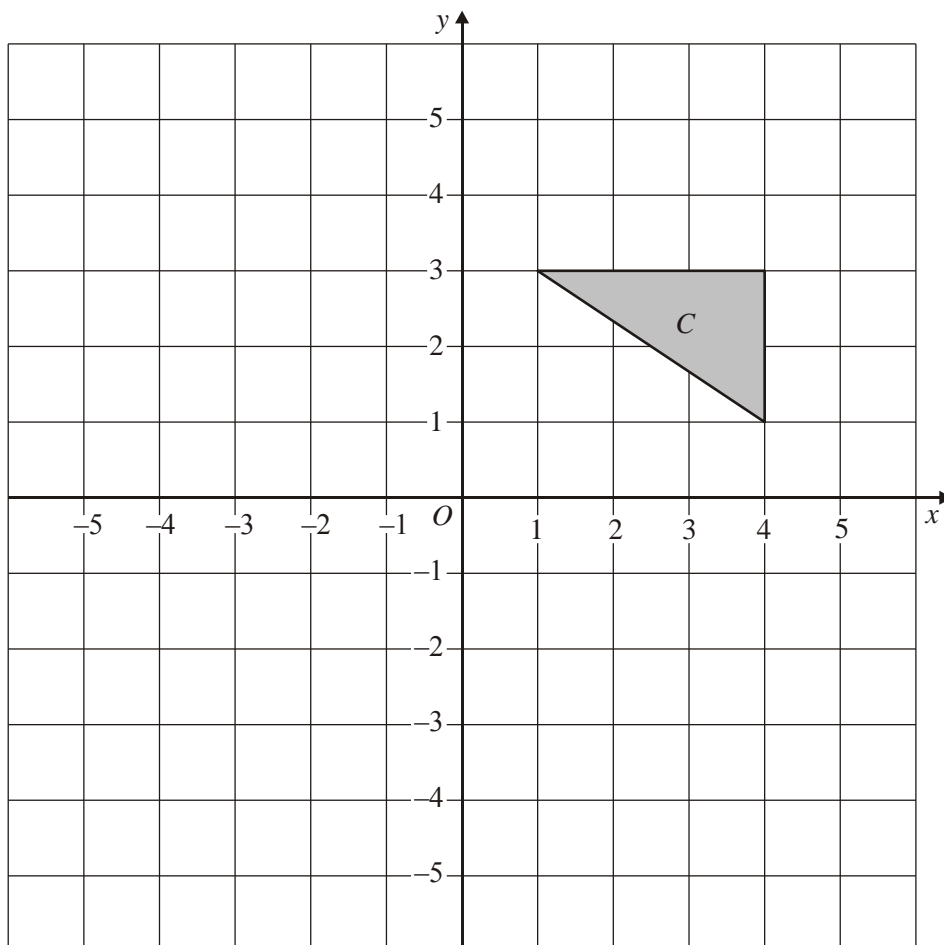
2. The trapezium  $T$  has vertices at  $(-4,5)$ ,  $(-2,5)$ ,  $(-2,3)$  and  $(-5,3)$ .



Translate trapezium  $T$  6 squares right, 2 squares down and label it  $B$ .

(Total 1 mark)

3.

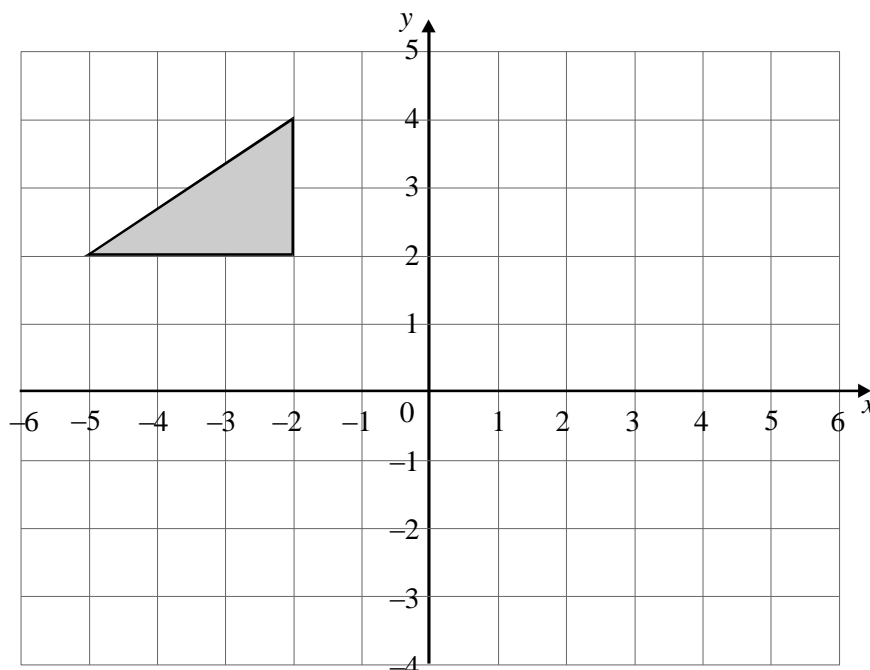


Triangle  $C$  is translated by the vector  $\begin{pmatrix} 1 \\ -4 \end{pmatrix}$

Draw the new position of triangle  $C$ .

(Total 2 marks)

4.



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

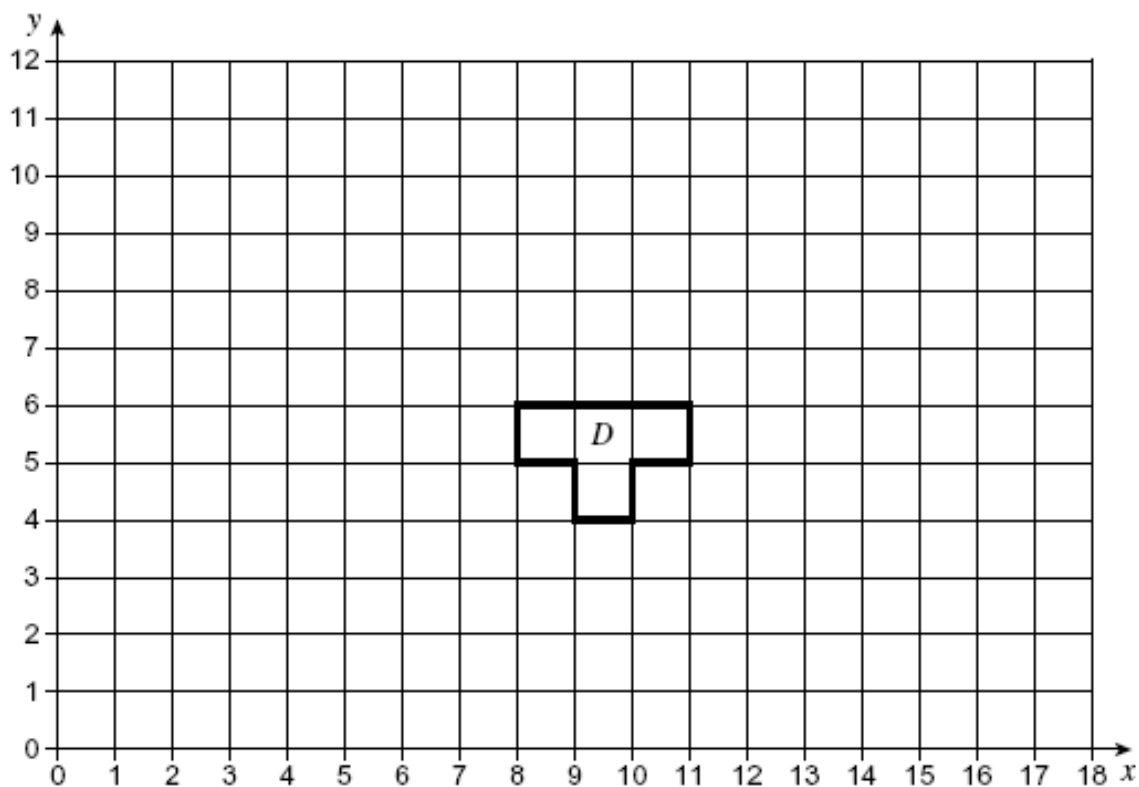
Label this triangle  $C$ .

(Total 2 marks)

5. Shape *C* is **not** shown on the grid.  
Shape *D* is a translation of shape *C*.

The translation vector from shape *C* to shape *D* is  $\begin{pmatrix} 5 \\ -2 \end{pmatrix}$ .

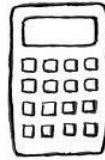
Draw shape *C* on the grid.



(Total 2 marks)

Success:

Target:

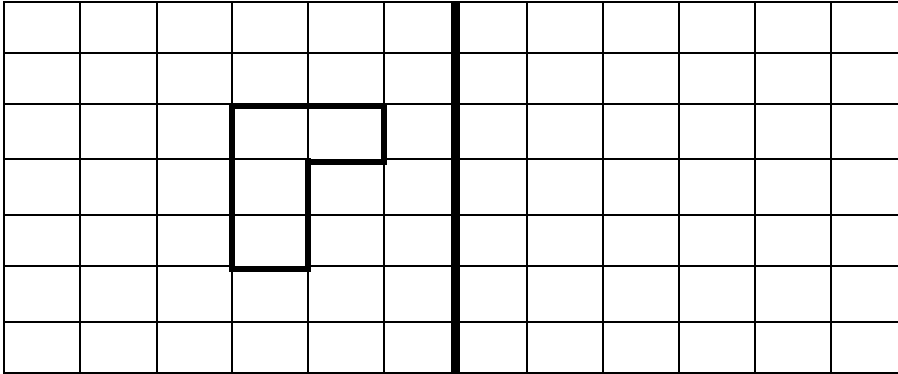


**Section B**

**Reflections**

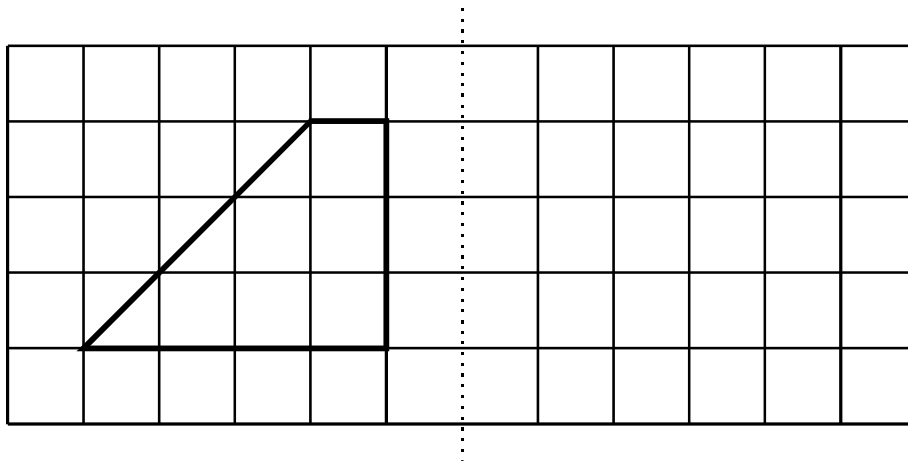
**Grade G → D**

1. Draw the reflection of the shape in the mirror line.



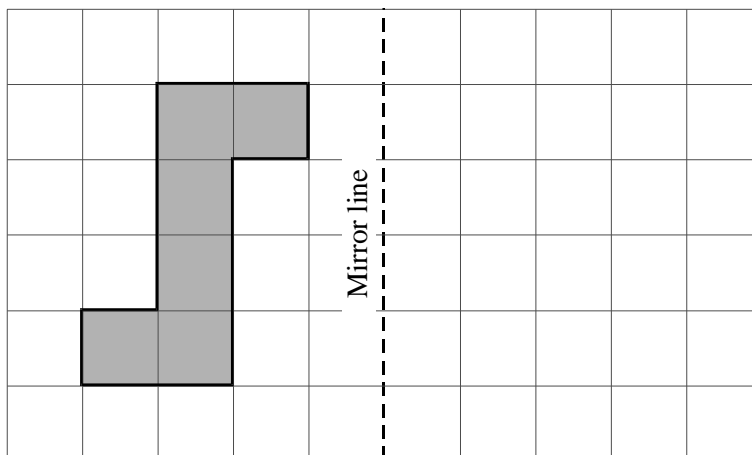
(Total 2 marks)

2. Reflect the shape using the dotted line as the mirror line.



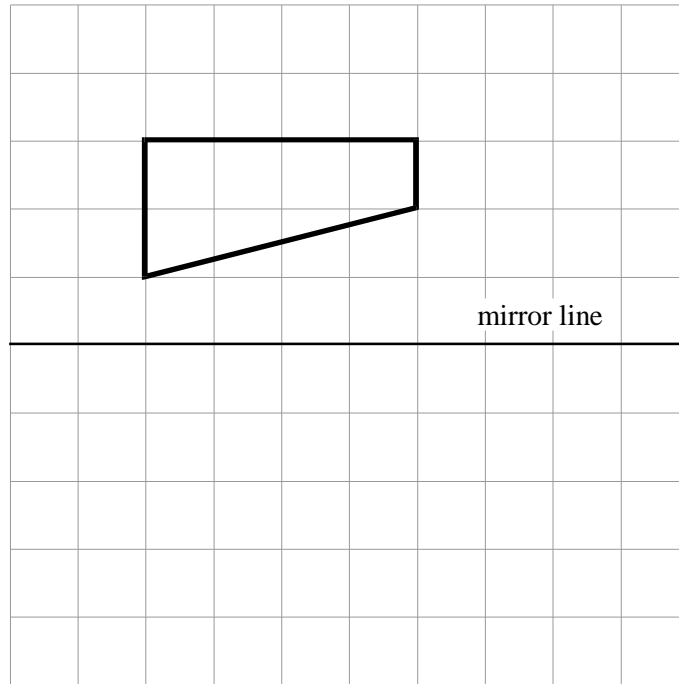
(Total 2 marks)

3. Draw the reflection of the shape in the mirror line.



(Total 2 marks)

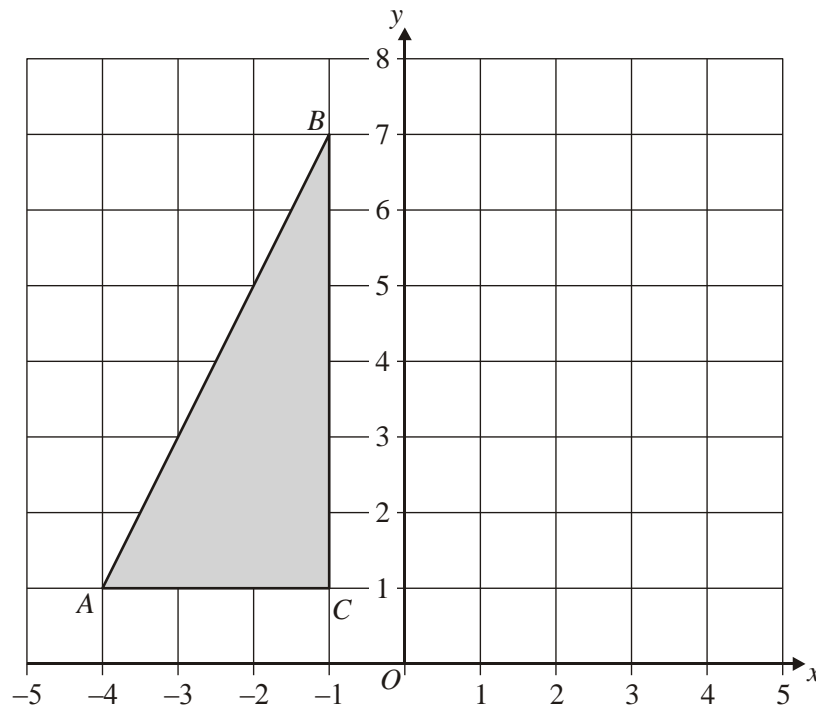
4.



Draw the reflection of the shape in the mirror line.

(Total 2 marks)

5. The diagram shows a triangle drawn on a centimetre square grid.



(a) Write down the coordinates of A.

Answer      A (....., .....

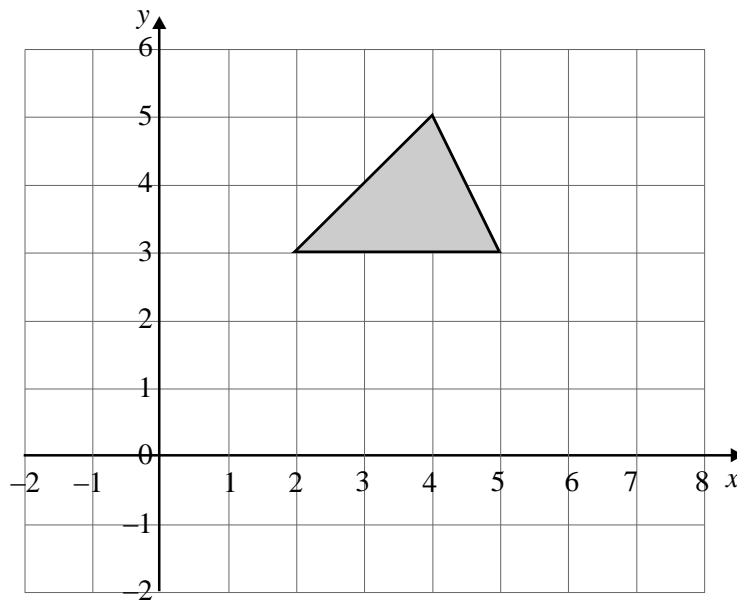
(1)

(b) Draw the reflection of the triangle in the y-axis.

(2)

(Total 3 marks)

6.



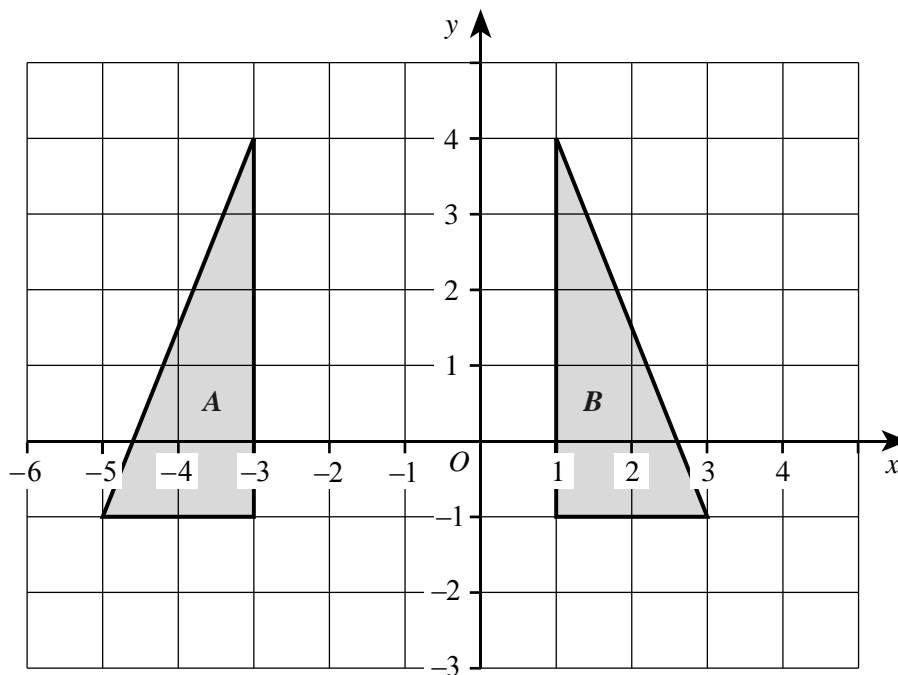
(a) Draw the line  $y = 2$  on the grid above.

(1)

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

(1)(Total 2 marks)

7. 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*.

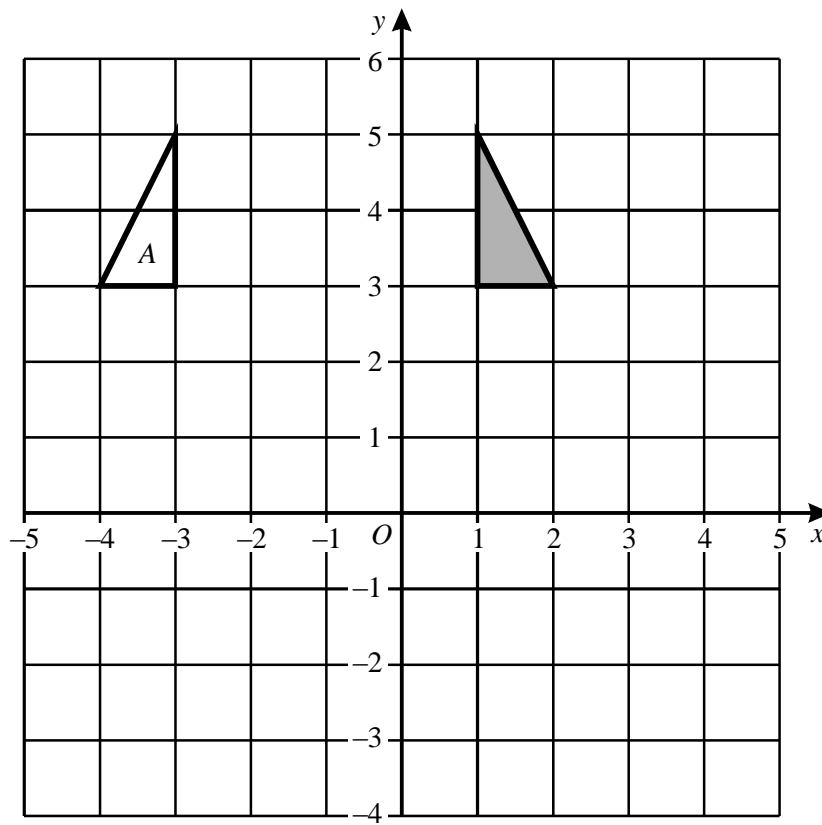
.....

.....

.....

(Total 2 marks)

8.

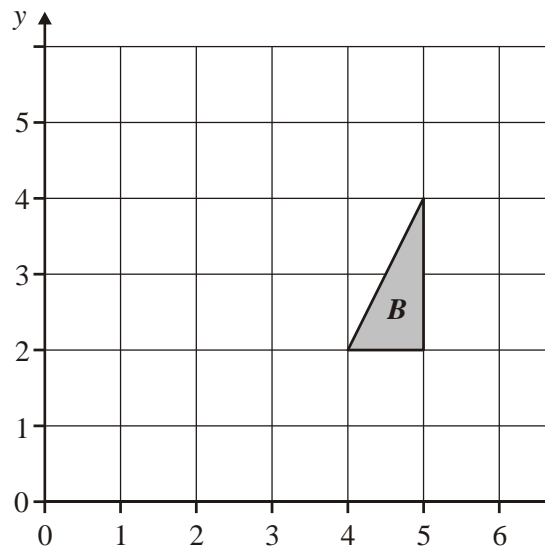


Describe fully the **single** transformation that takes the shaded triangle to triangle A.

.....  
 .....

(Total 2 marks)

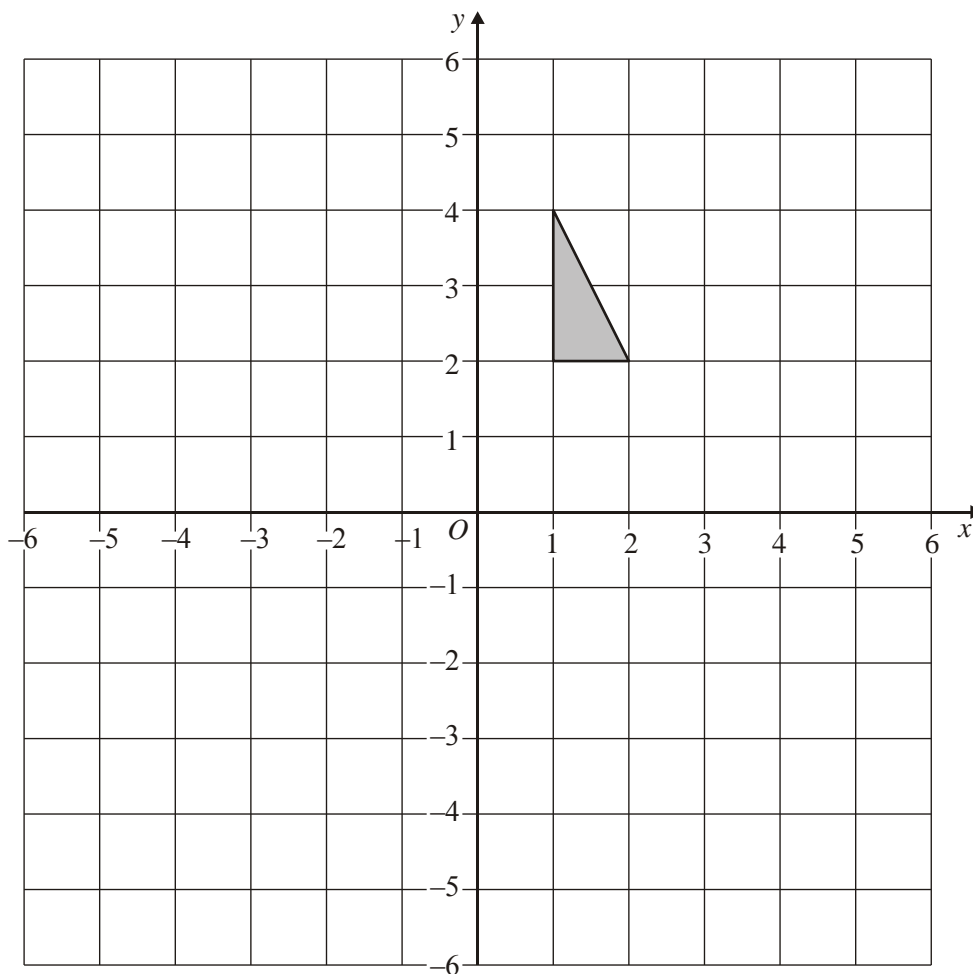
9.



On the diagram draw the image of triangle **B** after it is reflected in the line  $y = x$

(Total 2 marks)

10.



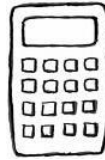
Reflect the shaded triangle in the line  $y = -x$ .  
Label this new triangle with the letter *A*.

**(Total 2 marks)**

Success:

Target:



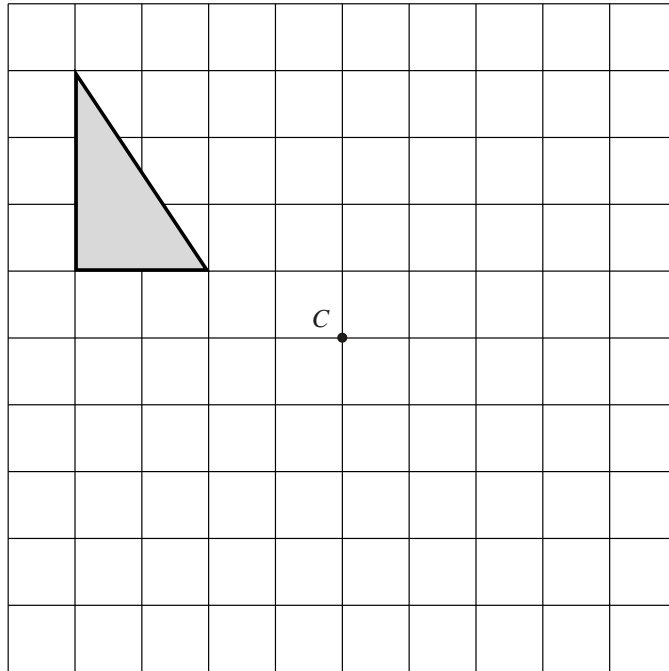


Section C

Rotations

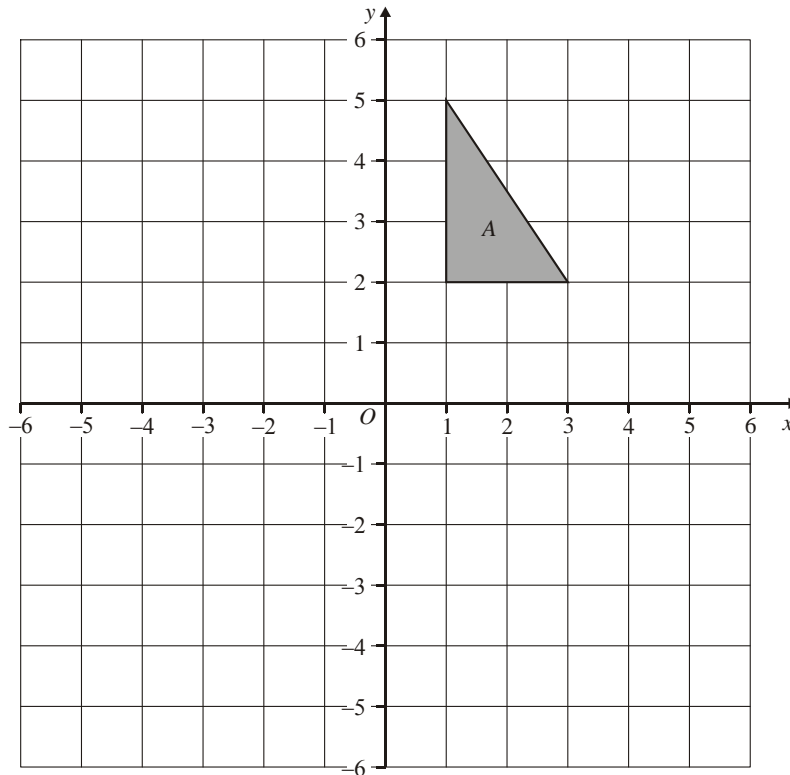
Grade D / C

1. Rotate the triangle  $90^\circ$  clockwise about the point  $C$ .



(Total 2 marks)

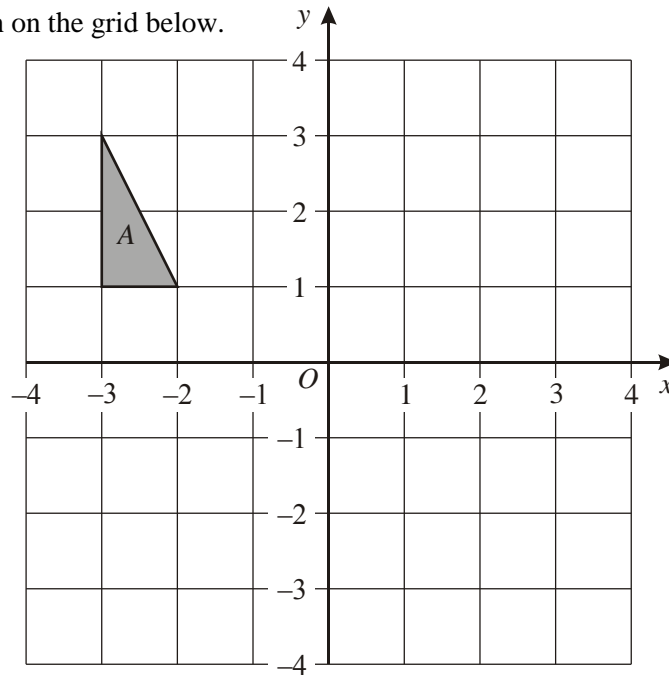
2. Triangle  $A$  has vertices  $(1,2)$ ,  $(1,5)$  and  $(3,2)$ .



Draw the new position of triangle  $A$  after a rotation of  $90^\circ$  clockwise about the origin.

(Total 3 marks)

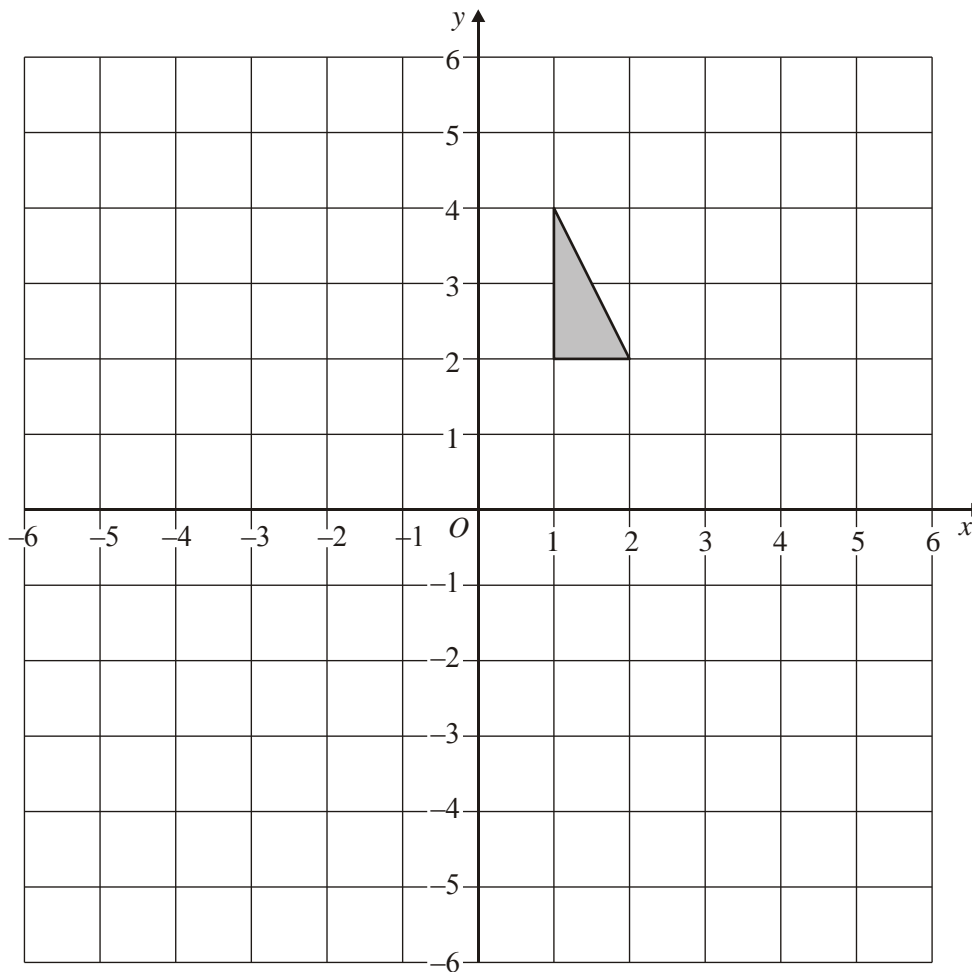
3. Triangle A is drawn on the grid below.



Rotate triangle A  $90^\circ$  clockwise about the origin  $O$ . Label the triangle  $C$ .

(Total 2 marks)

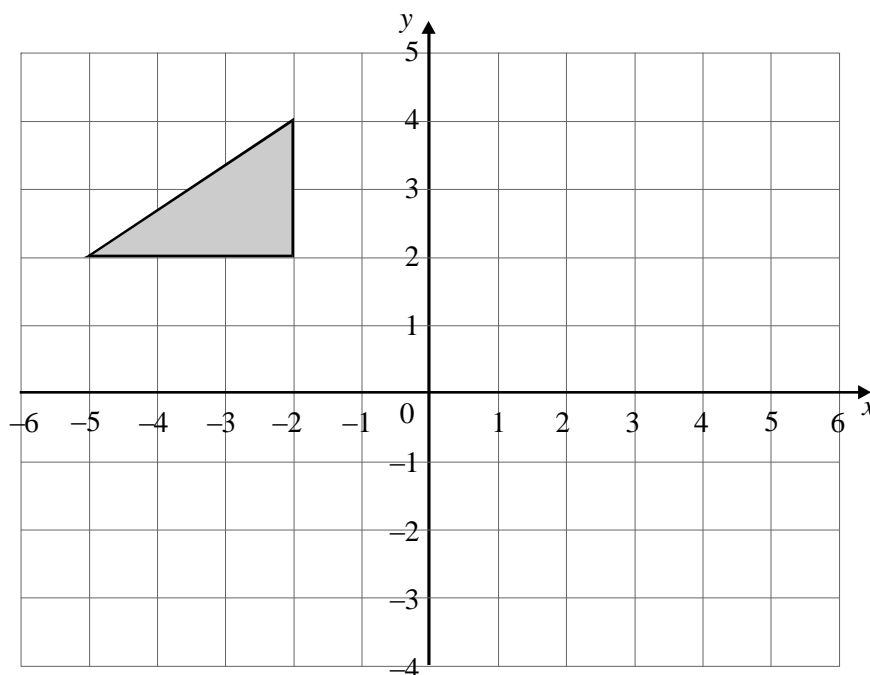
- 4.



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

(Total 2 marks)

5.



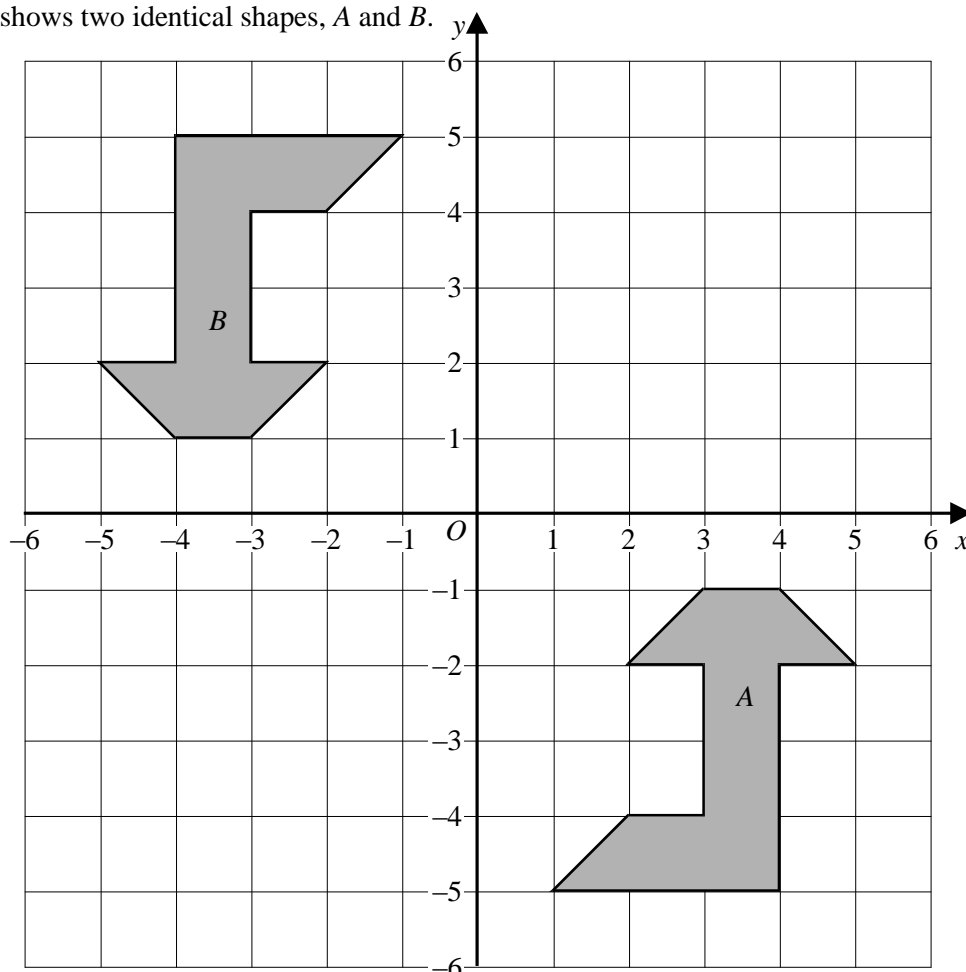
Rotate the shaded triangle through  $90^\circ$  clockwise about  $(-1, 1)$ . Label this triangle D.

(Total 2 marks)

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

Success:

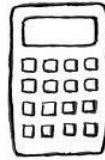
Target:



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

.....  
 .....  
 .....

(Total 3 marks)

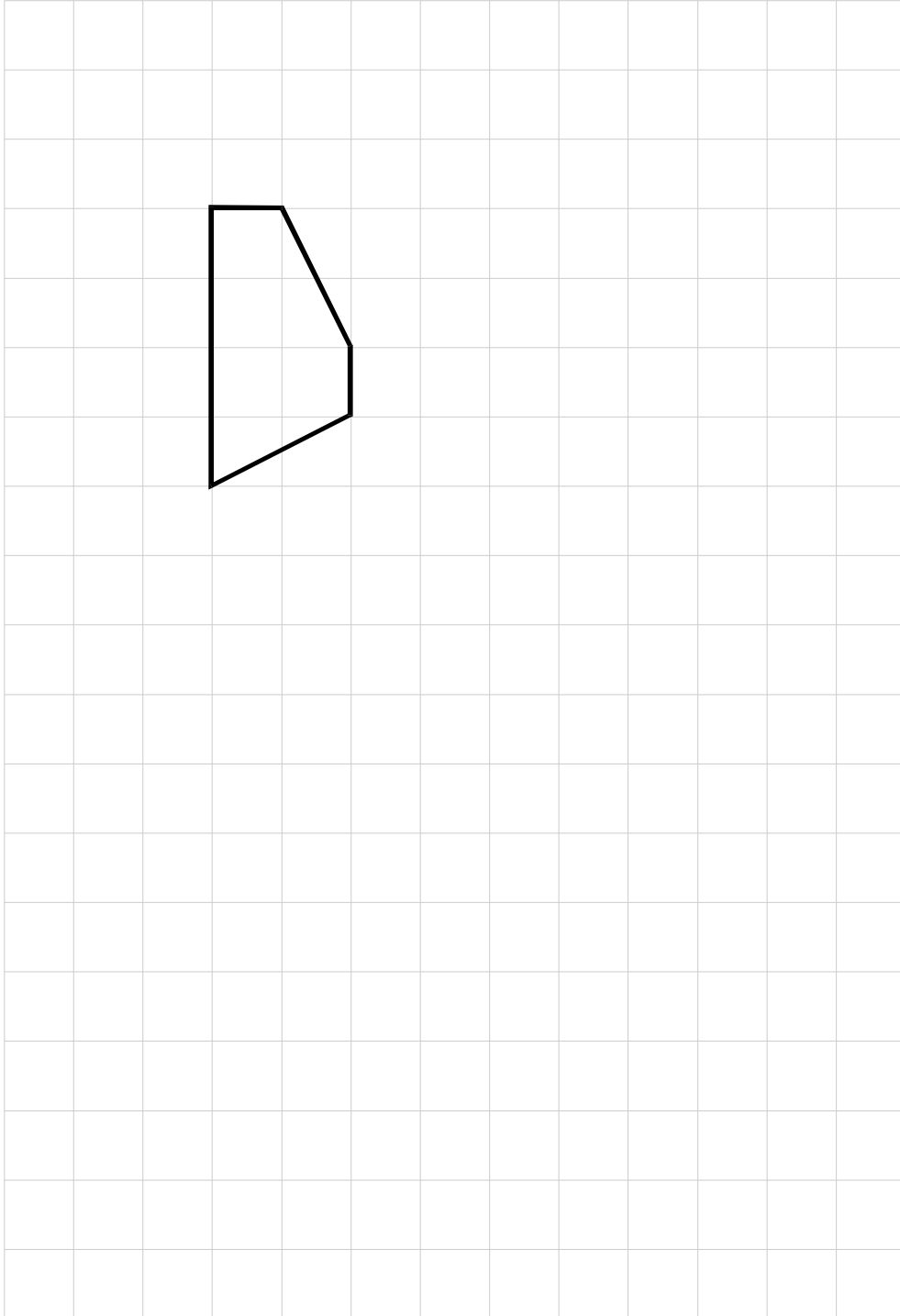


**Section D**

**Enlargements**

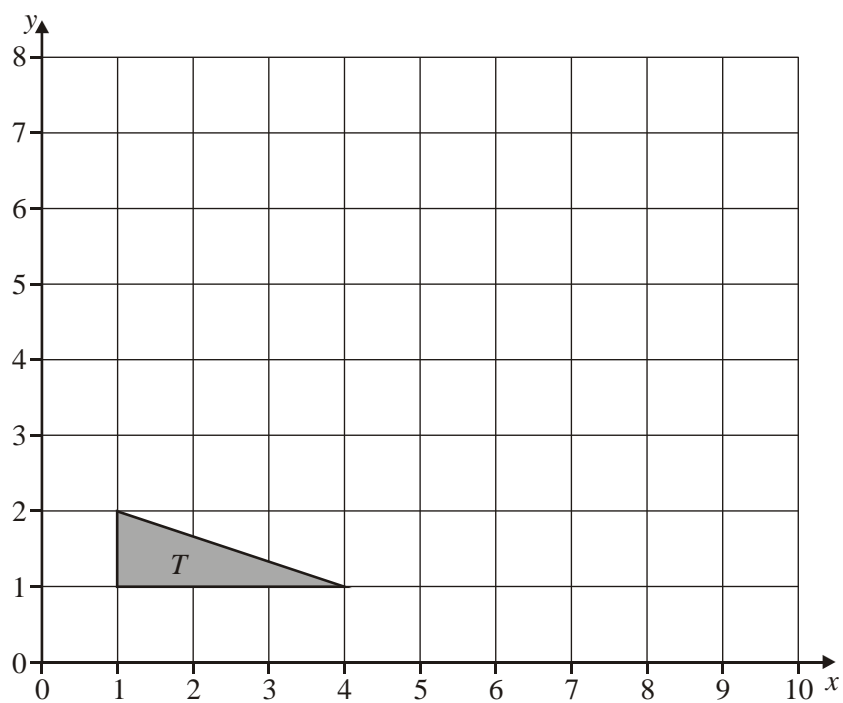
**Grade C → A**

1. Enlarge the shape by a scale factor of 3.



**(Total 2 marks)**

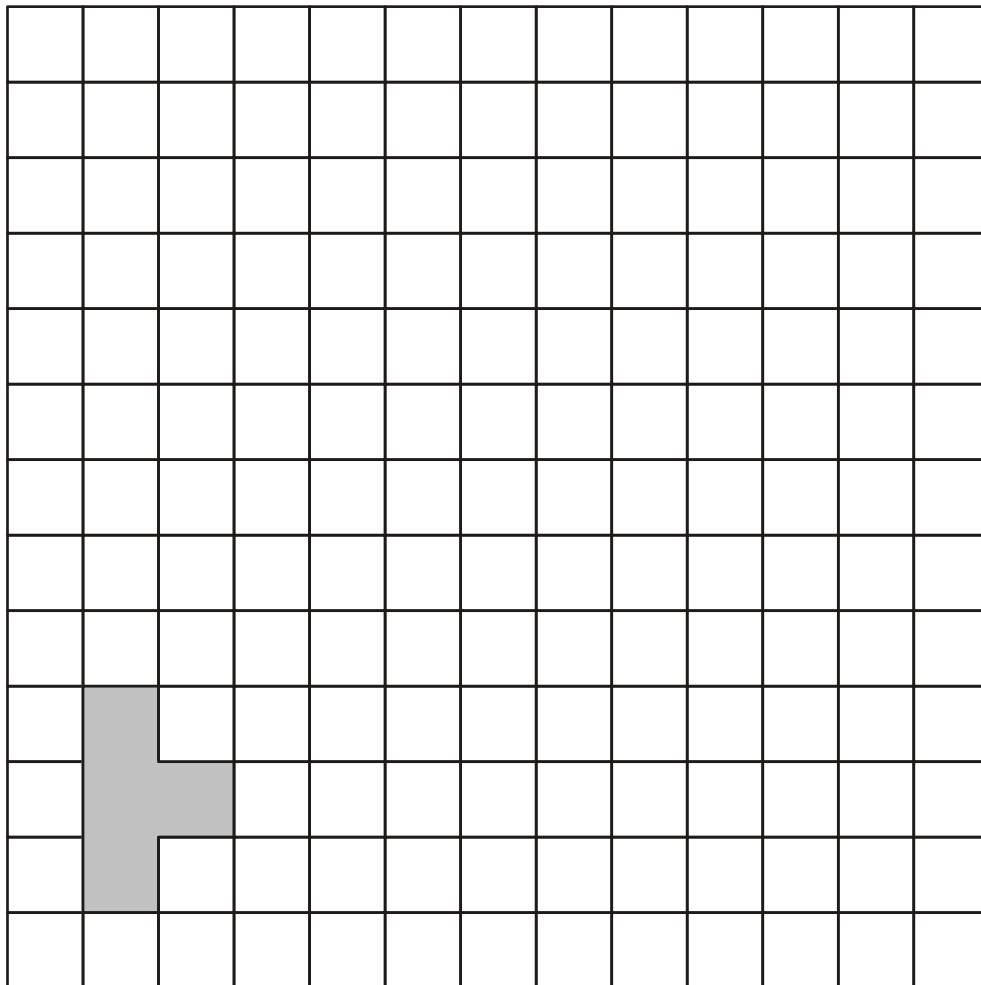
2. The vertices of triangle  $T$  are  $(1,1)$ ,  $(1,2)$  and  $(4,1)$ .



Enlarge triangle  $T$  by scale factor 2, using the origin as the centre of enlargement.

**(Total 3 marks)**

3. (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?

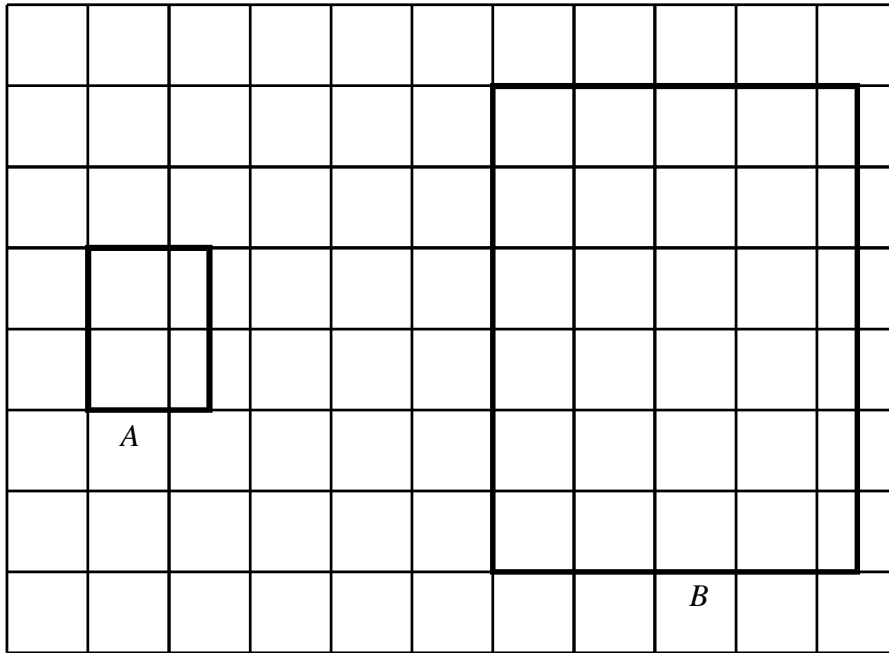
.....  
.....  
.....

Answer .....

(2)

(Total 4 marks)

4. Rectangle *A* is enlarged to give rectangle *B* on the centimetre grid.



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

.....

Answer .....

(1)

- (b) **Rectangle *B*** is enlarged by scale factor 5 to give rectangle *C*.  
Write down the length and width of rectangle *C*.

.....

.....

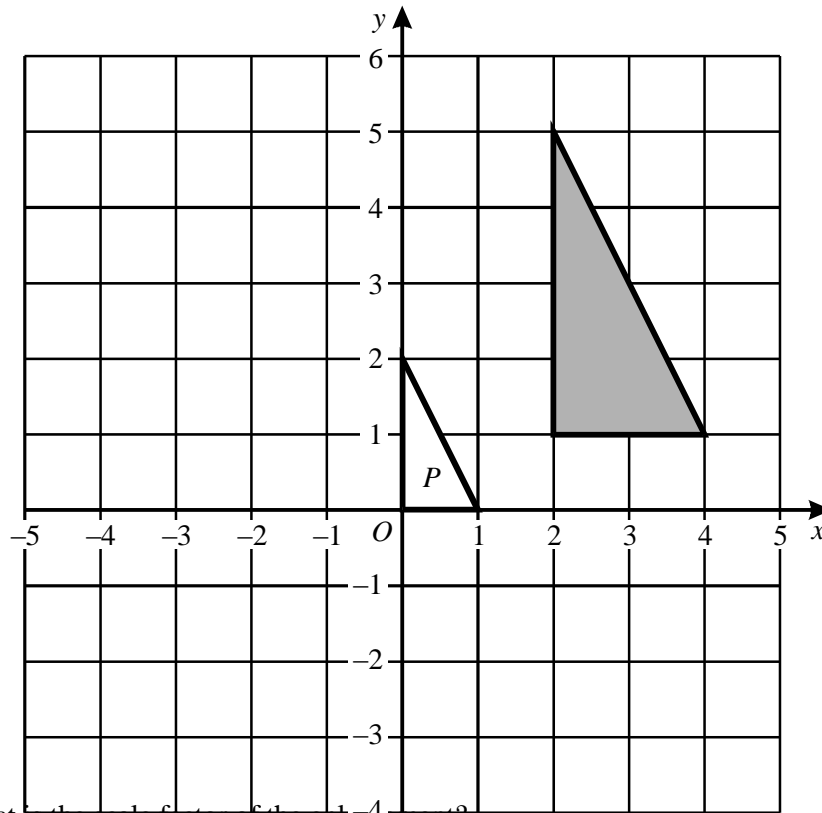
Answer Length ..... cm

Width ..... cm

(2)

(Total 3 marks)

5. Triangle  $P$  is an enlargement of the shaded triangle.



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

Answer .....

(1)

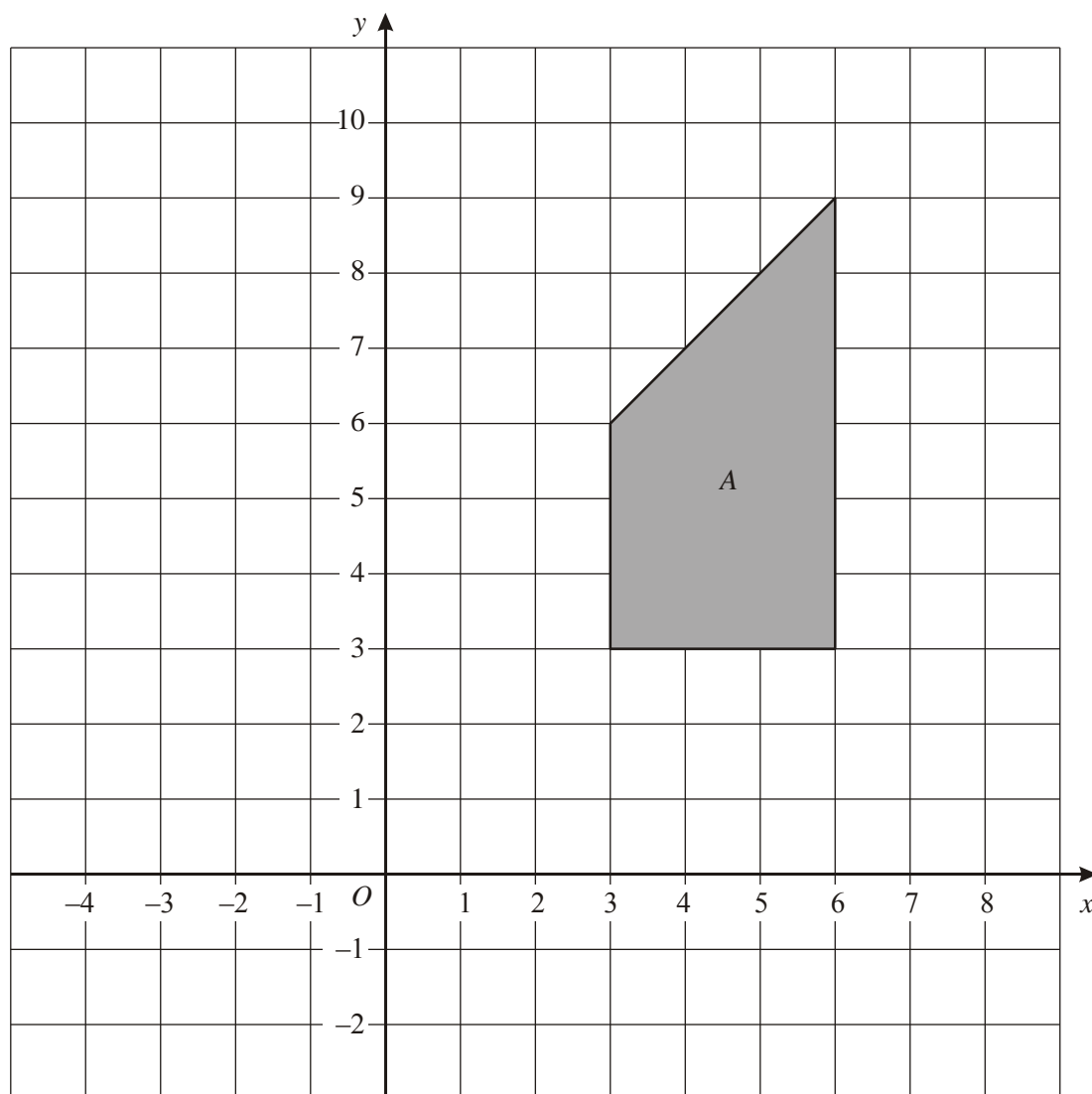
- (b) What is the centre of enlargement?

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

(1)(Total 2 marks)



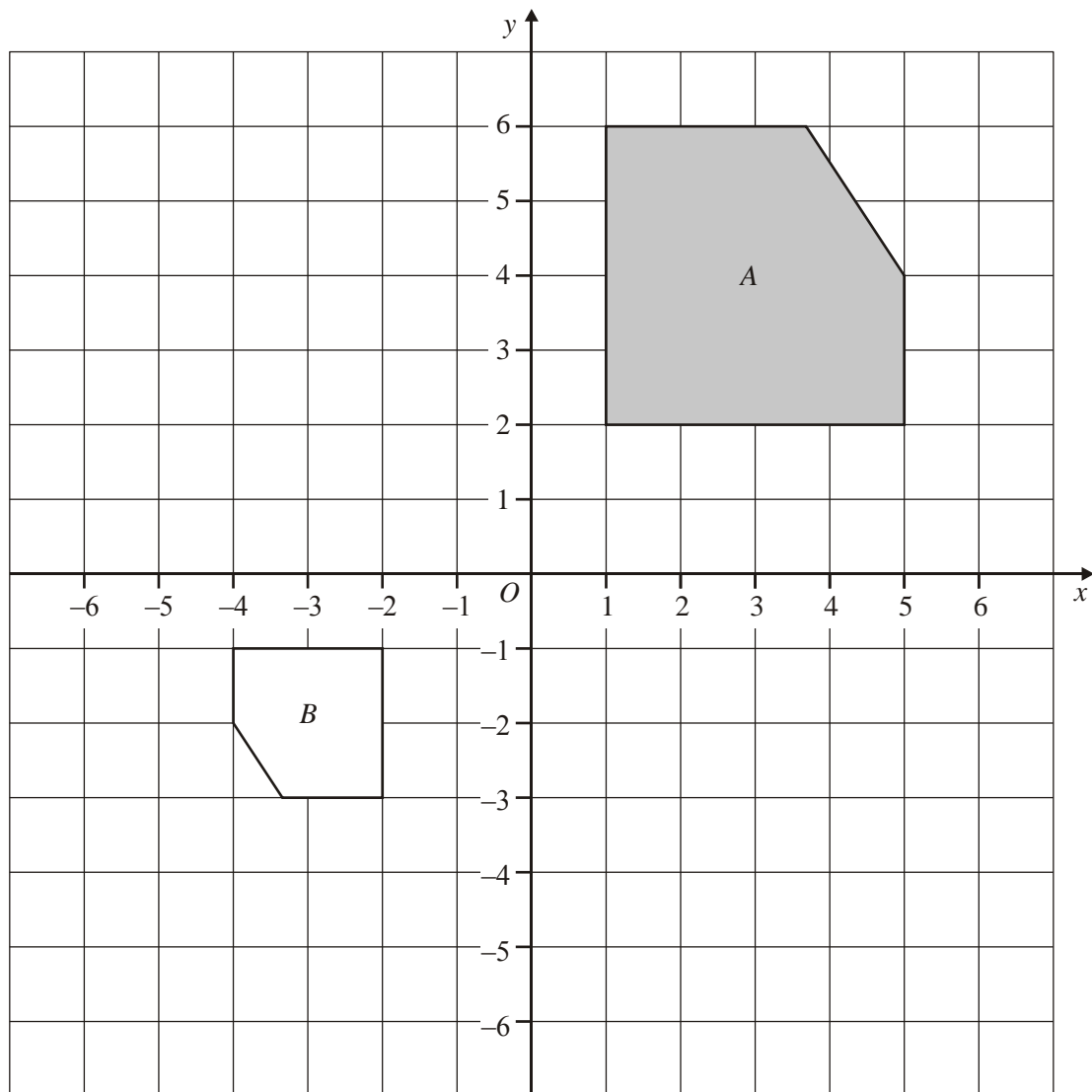
6. The diagram shows shape A.



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

**(Total 2 marks)**

7. In the diagram, shape *B* is an enlargement of the shaded shape *A*.



- (a) Write down the coordinates of the centre of enlargement.

Answer .....

(1)

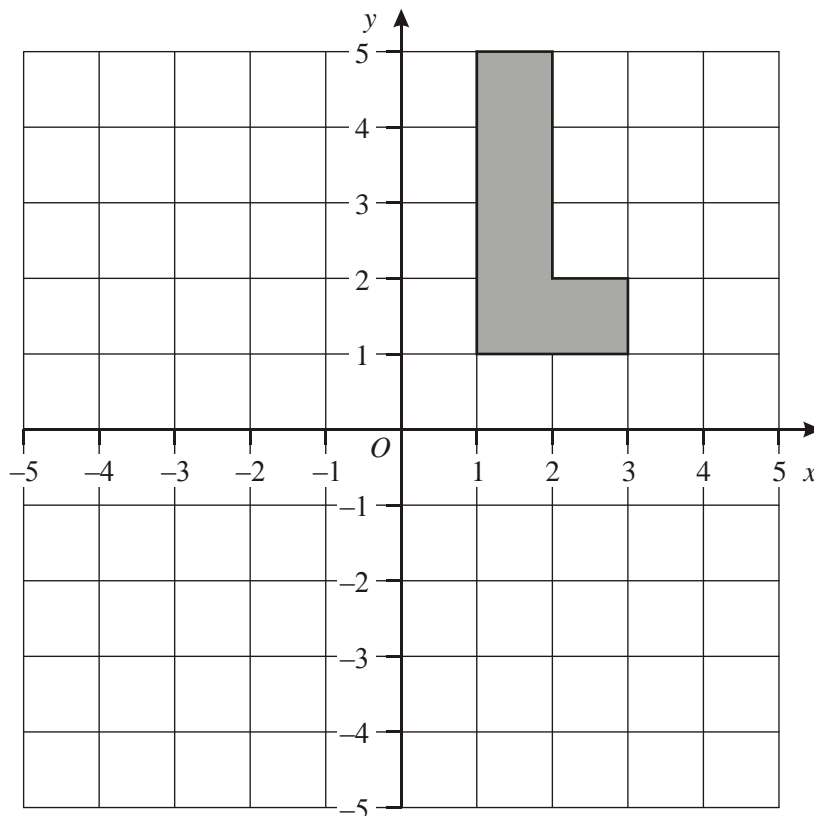
- (b) Write down the scale factor of the enlargement.

Answer .....

(1)

(Total 2 marks)

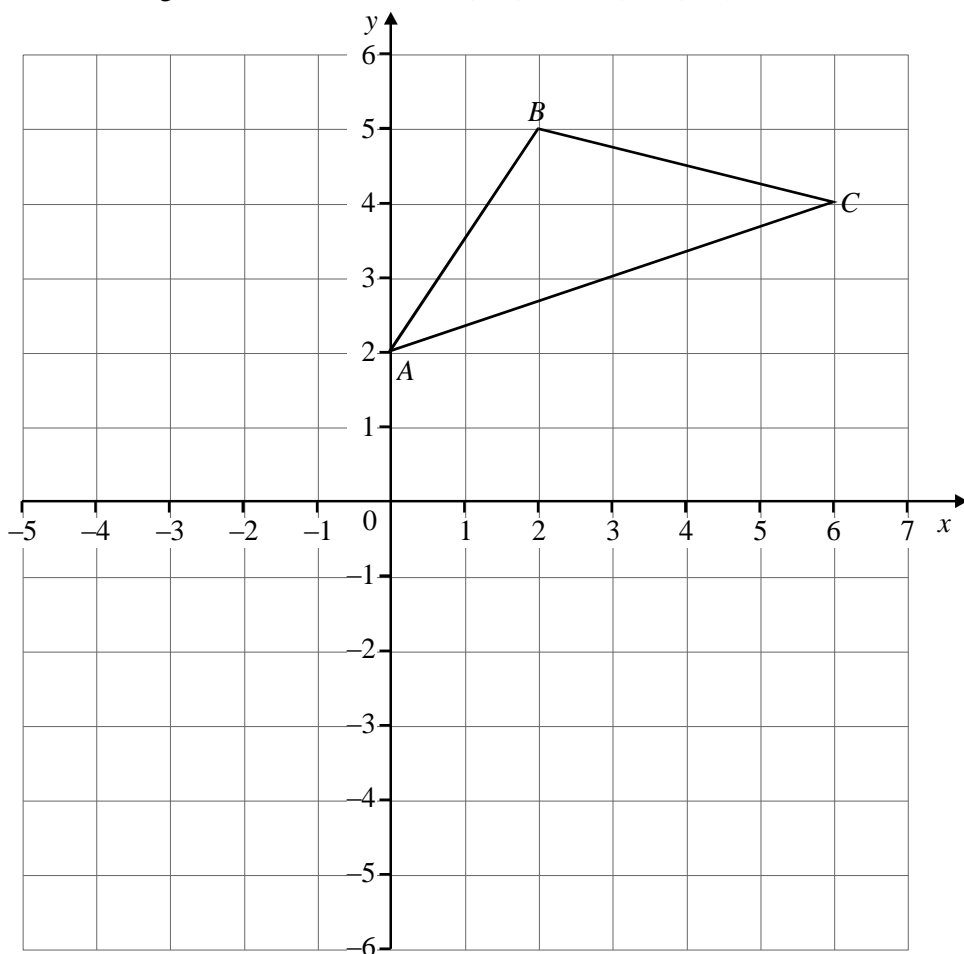
8.



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

(Total 2 marks)

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

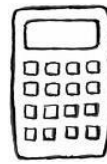


Success:

Target:

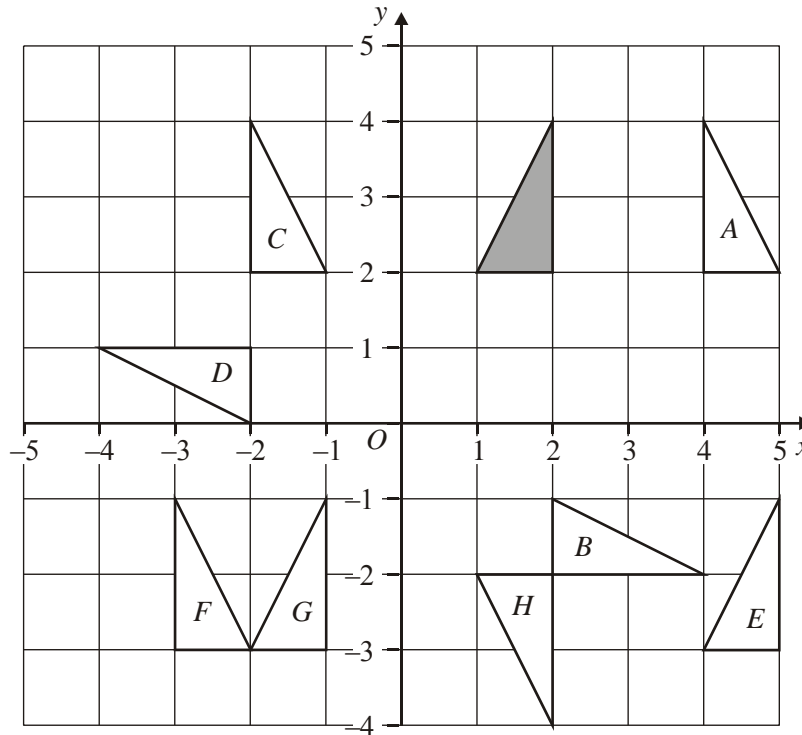
Draw the enlargement of triangle  $ABC$  with scale factor  $-\frac{1}{2}$  and centre  $(2, -2)$ .

(Total 2 marks)



**Section E** **Transformations** **Grade D → A**

1. 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  $90^\circ$  clockwise about  $O$ .

Answer .....

(1)

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

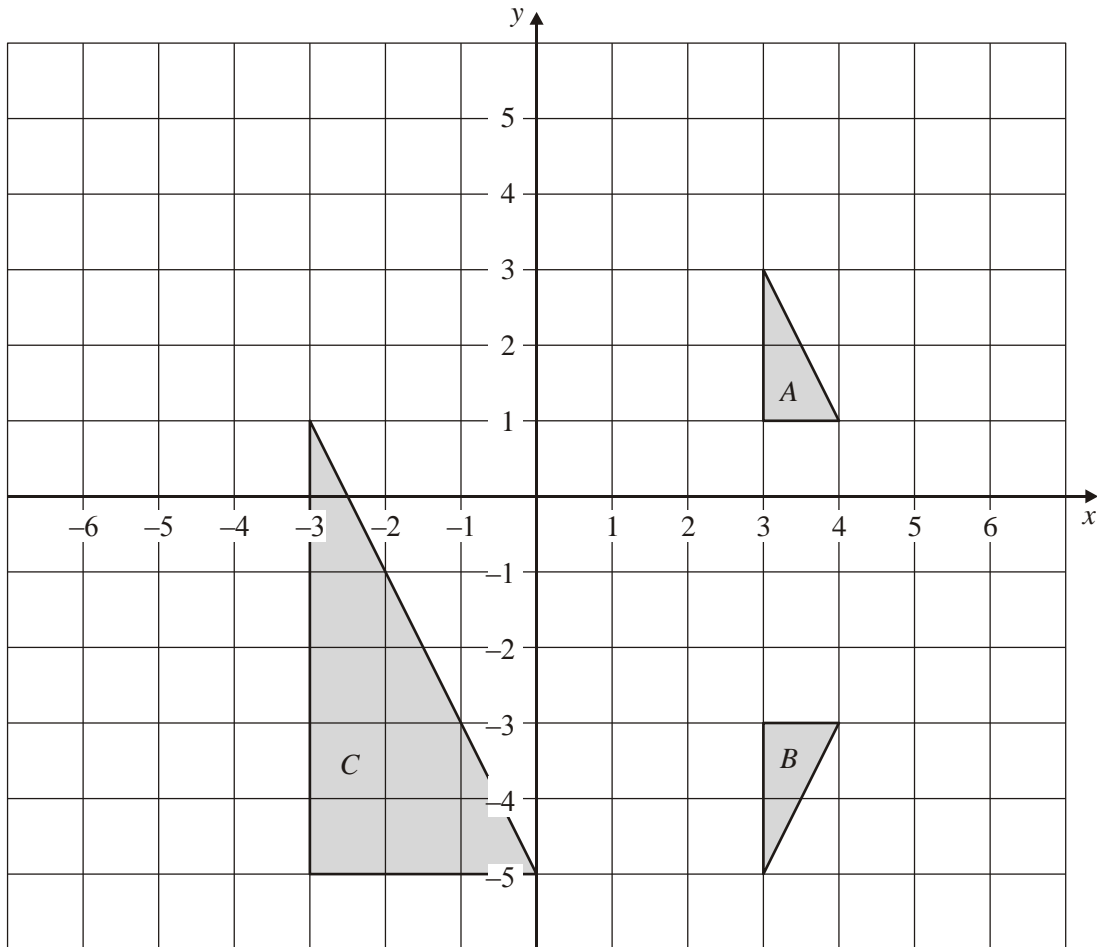
.....

.....

(2)

(Total 5 marks)

2.



(a) Describe the transformation that maps triangle *A* to triangle *B*.

.....  
 .....  
 .....

(2)

(b) Triangle *A* is rotated  $90^\circ$  anti-clockwise about  $(0, -1)$ .

Draw the image of *A* after this transformation.

(2)

(c) Triangle *C* is an enlargement of triangle *A*.

(i) Write down the scale factor of the enlargement.

Answer .....

(1)

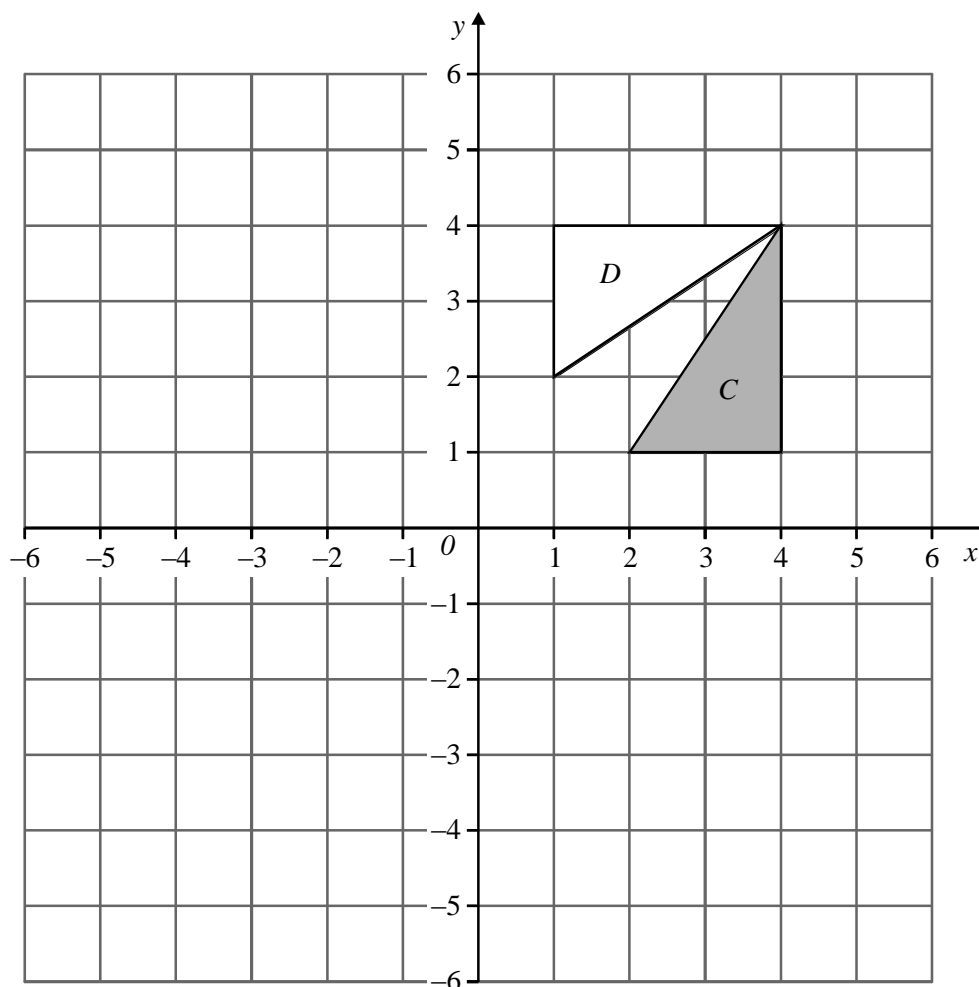
(ii) Write down the coordinates of the centre of the enlargement.

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

(1)

(Total 6 marks)

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



- (i) Translate the shaded triangle *C* by the vector  $\begin{pmatrix} -4 \\ -3 \end{pmatrix}$

Label the new triangle *E*.

(2)

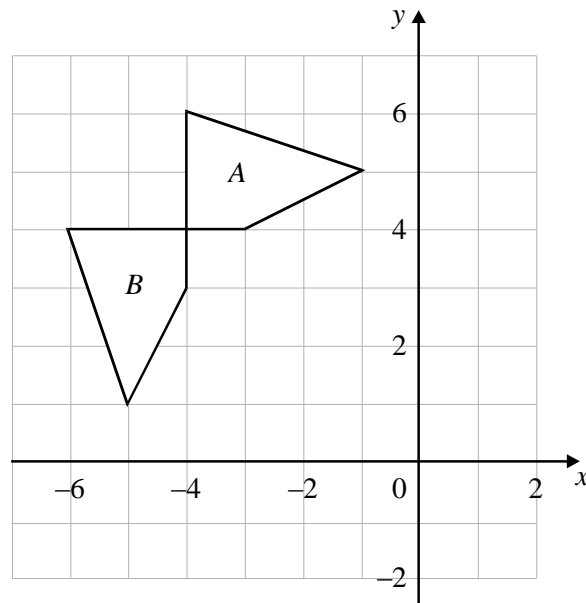
- (ii) Describe fully the **single** transformation which maps triangle *C* to triangle *D*.

.....  
.....

(2)

(Total 4 marks)

4. (a)

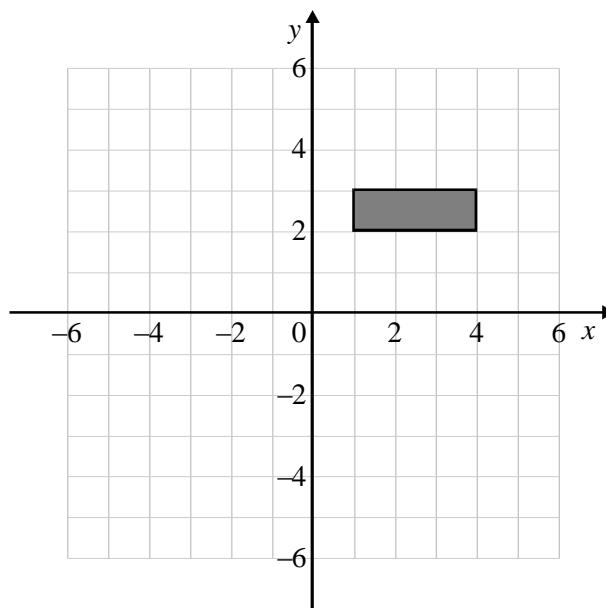


Describe fully the transformation which maps shape A onto shape B.

.....  
.....

(2)

(b)

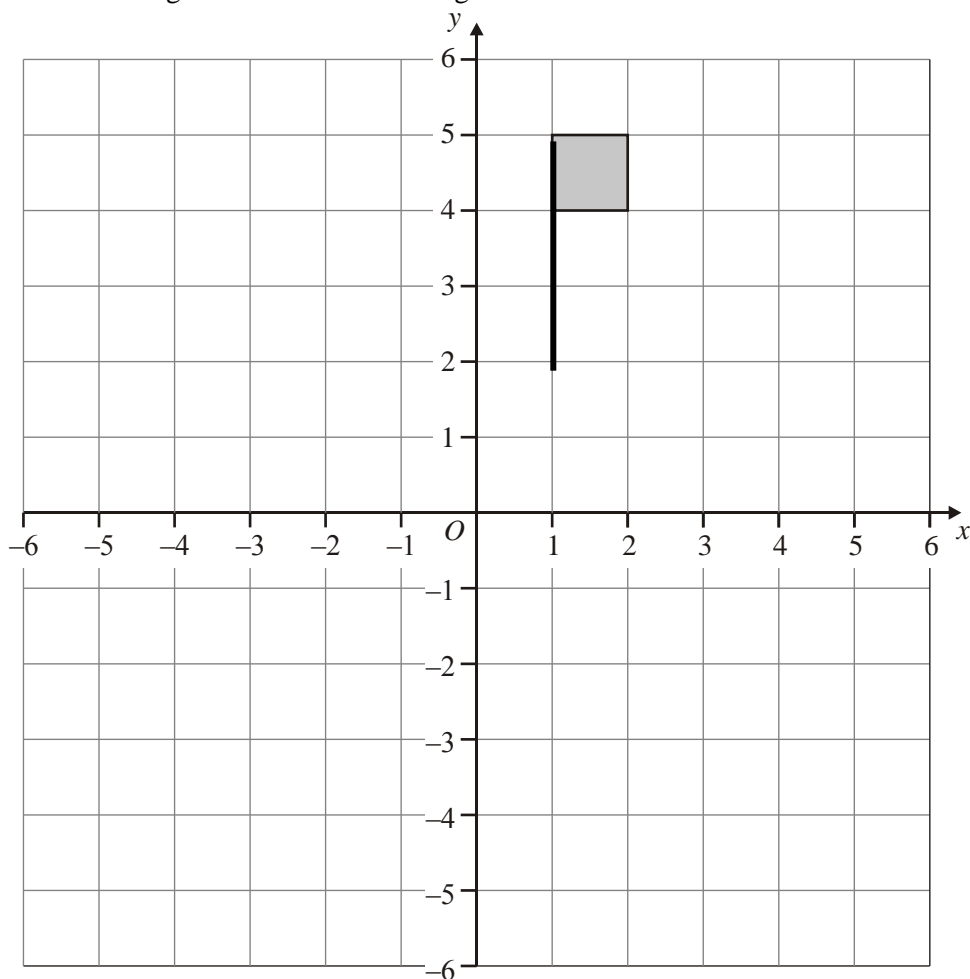


The rectangle is rotated  $90^\circ$  clockwise about the point  $(-1, 0)$  and then translated by vector  $\begin{pmatrix} -4 \\ 5 \end{pmatrix}$

Draw the Final position of the rectangle after these transformations.

(4)  
(Total 6 marks)

5. The diagram shows a shaded flag.



- (a) Rotate the shaded flag  $90^\circ$  anticlockwise about the origin.  
Label this new flag with the letter *A*.
- (b) Reflect the original shaded flag in the line  $y = 1$ .  
Label this new flag with the letter *B*.
- (c) Rotate the original shaded flag by a quarter-turn clockwise about  $(0, 2)$ .  
Label this new flag with the letter *C*.

(3)

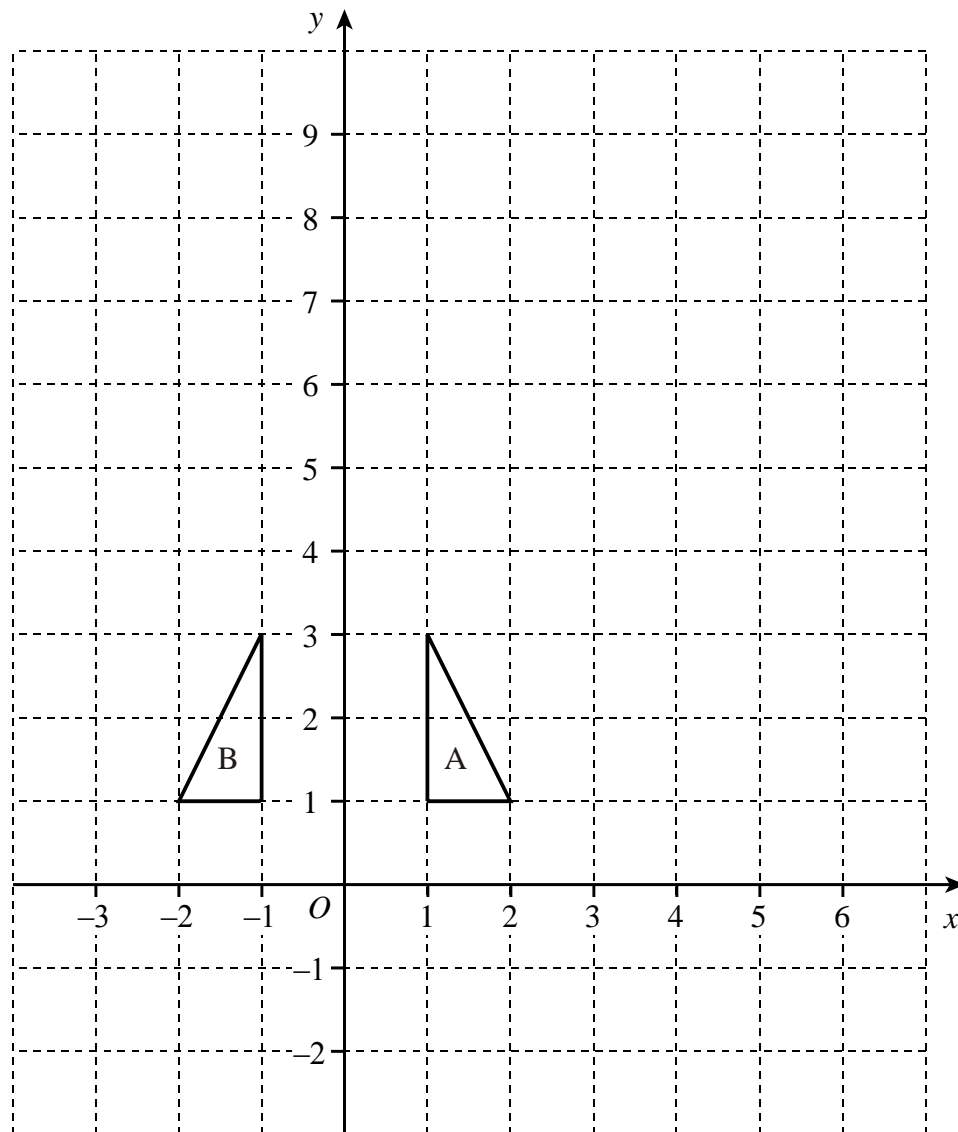
(2)

(2)

(Total 7 marks)



6. This question is about transformations of triangle A.



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

.....  
.....

(2)

- (b) Translate triangle A, 2 units to the left and 3 units down.  
Label the new triangle C.

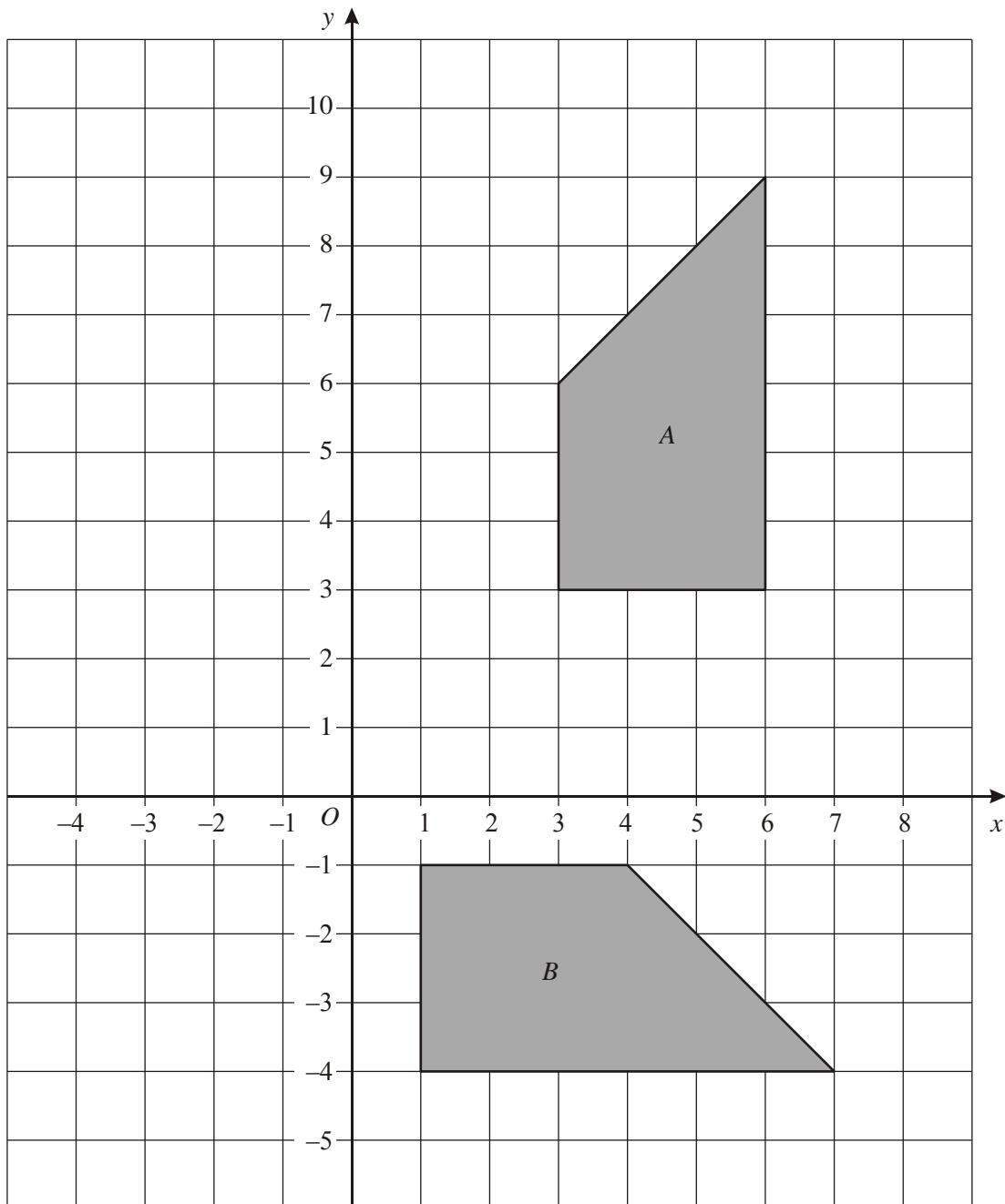
(1)

- (c) Enlarge triangle A by a scale factor of 3, centre (0, 1).  
Label the new triangle D.

(3)

**(Total 6 marks)**

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

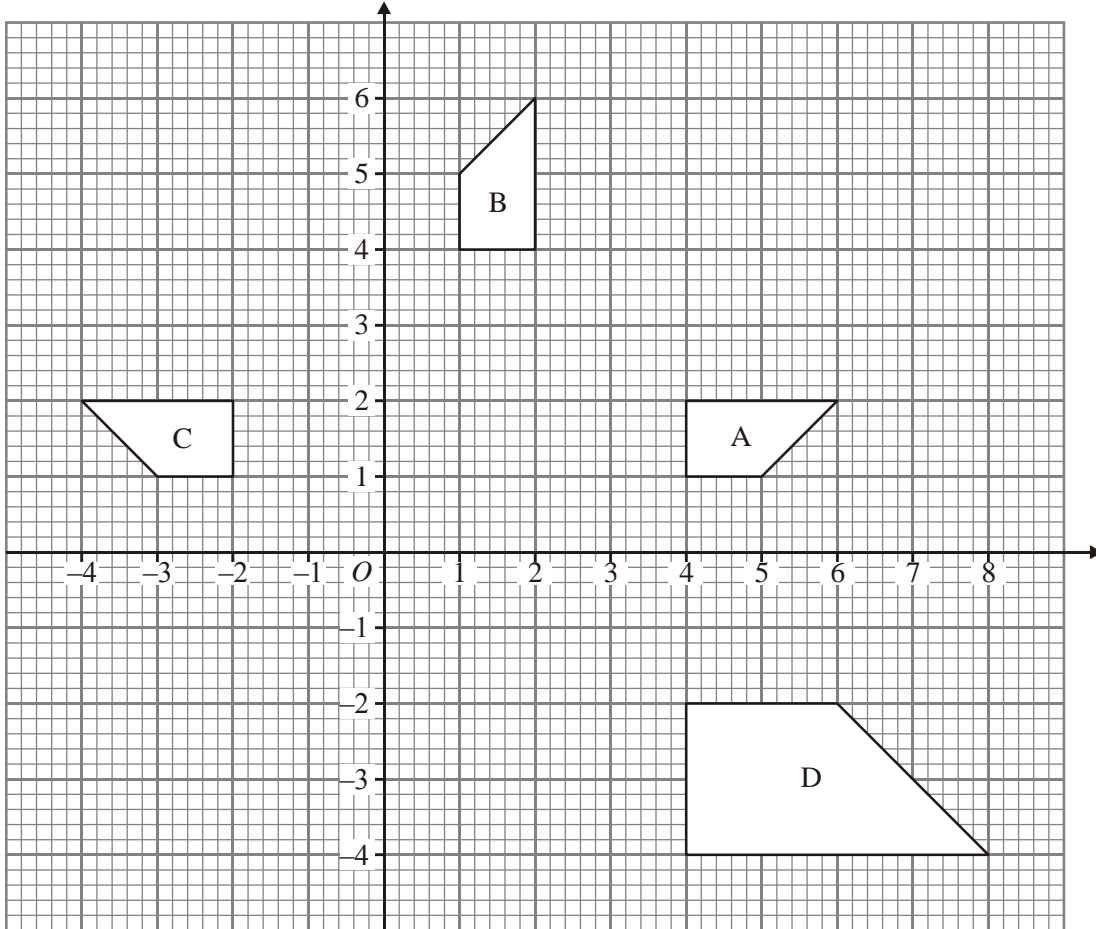


(a) Describe fully the **single** transformation that takes shape *A* to shape *B*

.....  
 .....

(Total 3 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)

Success:

Target: