

Transformations

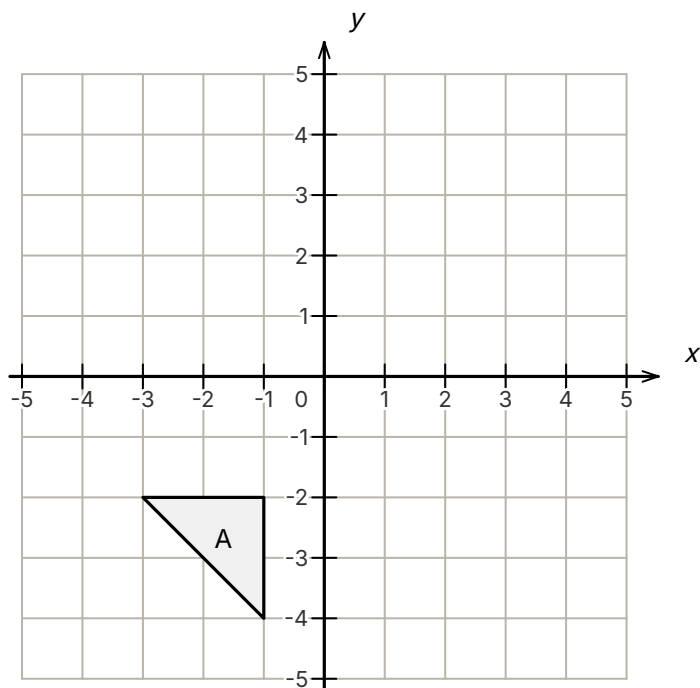
discia.org · 10 questions · 19 marks

NAME _____

DATE _____

1 Shape A is drawn on the grid.

 EITHER PAPER 2 MARKS

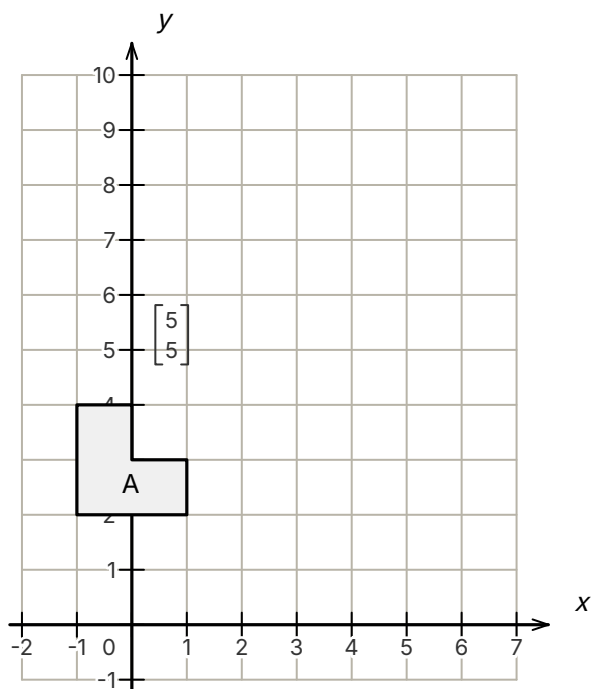


Reflect shape A in the y-axis.

Draw the image on the grid.

2 Shape A is drawn on the grid.

EITHER PAPER 2 MARKS



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

Draw the image on the grid.

3 A shape is translated by the vector $\begin{pmatrix} 5 \\ 0 \end{pmatrix}$.

EITHER PAPER 1 MARK

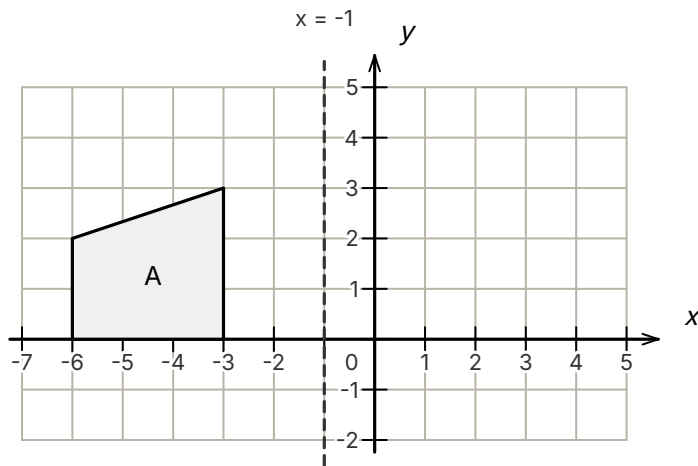
In which direction does the shape move?

Circle your answer.

up down left right

- 4 Shape A and the line $x = -1$ are drawn on the grid.

EITHER PAPER 2 MARKS

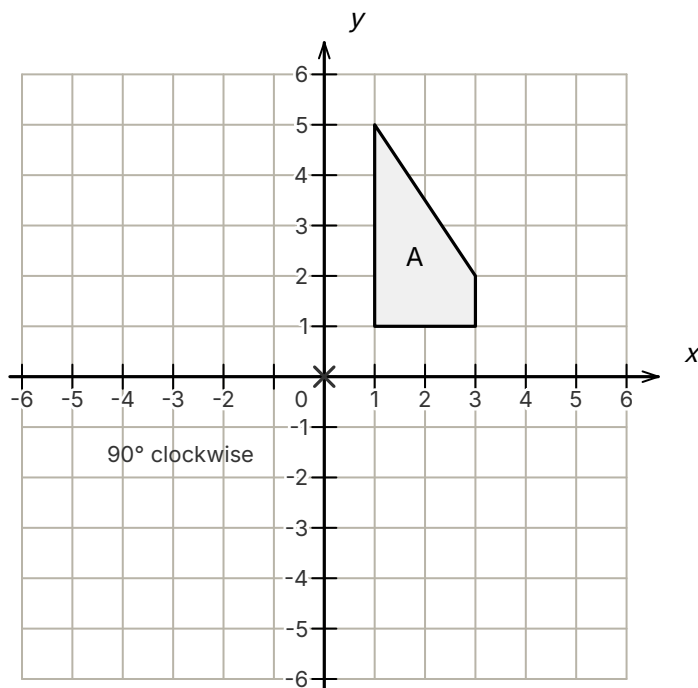


Reflect shape A in the line $x = -1$.

Draw the image on the grid.

- 5 Shape A is drawn on the grid.

EITHER PAPER 2 MARKS

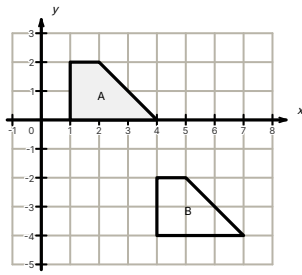


Rotate shape A through 90° clockwise about the origin.

Draw the image on the grid.

6 Shapes A and B are drawn on the grid.

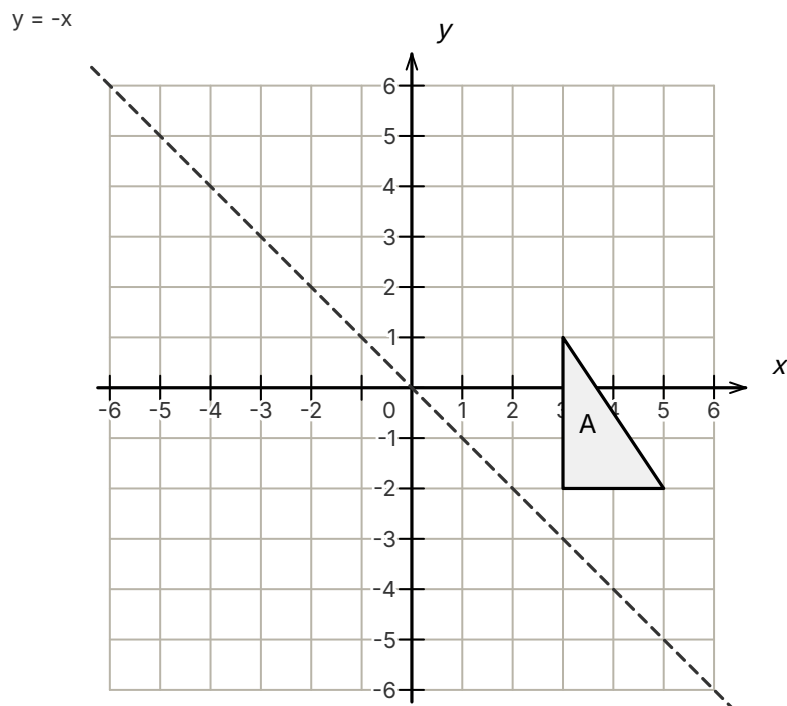
EITHER PAPER 2 MARKS



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

7 Shape A and the line $y = -x$ are drawn on the grid.

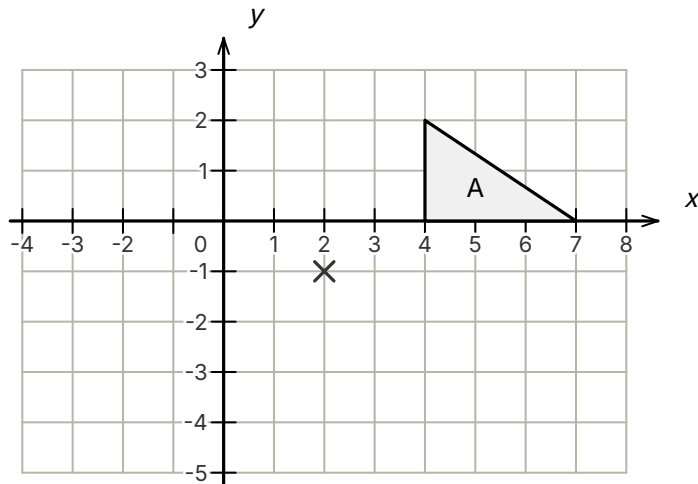
EITHER PAPER 2 MARKS



Reflect shape A in the line $y = -x$.

Draw the image on the grid.

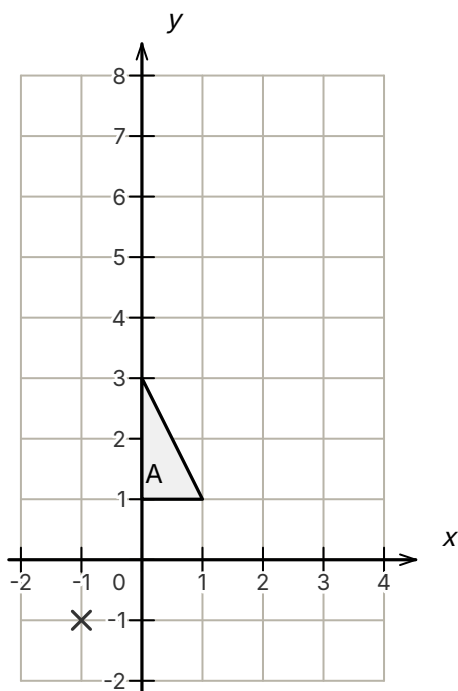
- 8 Shape A is drawn on the grid. The centre of rotation $(2, -1)$ is marked with a cross. EITHER PAPER 2 MARKS



Rotate shape A through 180° about $(2, -1)$.

Draw the image on the grid.

- 9 Shape A is drawn on the grid. The centre of enlargement $(-1, -1)$ is marked with a cross. EITHER PAPER 2 MARKS



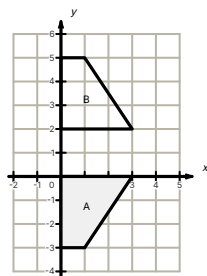
scale factor 2

Enlarge shape A by scale factor 2, centre $(-1, -1)$.

Draw the image on the grid.

10 Shapes A and B are drawn on the grid.

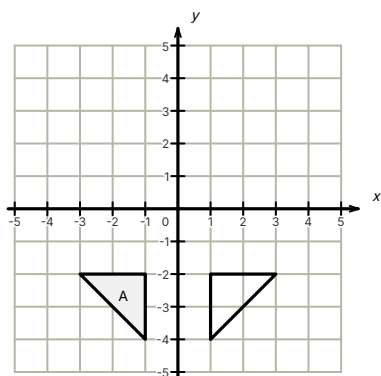
EITHER PAPER 2 MARKS



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

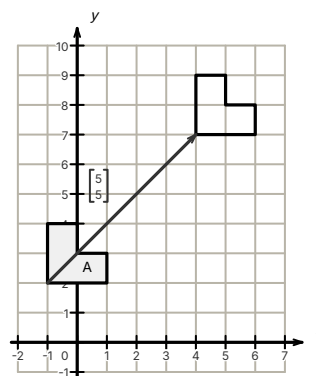
1

The image is the triangle with vertices $(1, -2)$, $(3, -2)$ and $(1, -4)$



2

Every corner moves 5 right and 5 up; the corner $(-1, 2)$ lands on $(4, 7)$

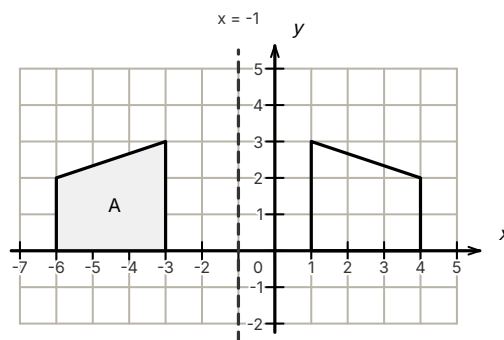


3

right

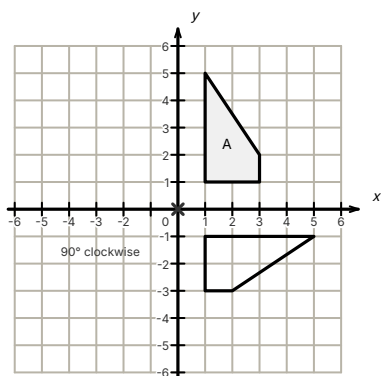
4

The image has vertices $(1, 0)$, $(4, 0)$, $(4, 2)$ and $(1, 3)$



5

The image has vertices $(1, -1)$, $(1, -3)$, $(2, -3)$ and $(5, -1)$

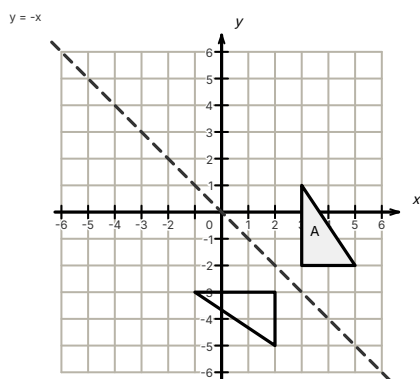


6

Translation by the vector $\begin{pmatrix} 3 \\ -4 \end{pmatrix}$

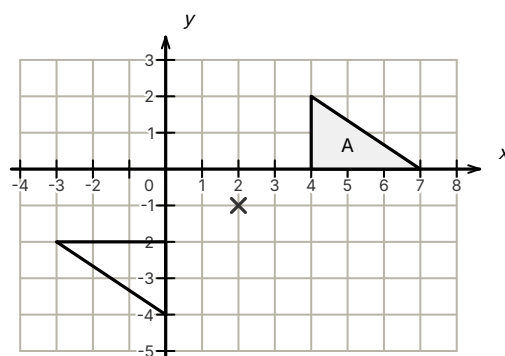
7

The image is the triangle with vertices $(2, -3)$, $(2, -5)$ and $(-1, -3)$



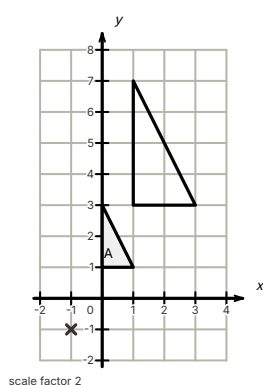
8

The image is the triangle with vertices $(0, -2)$, $(-3, -2)$ and $(0, -4)$



9

The image is the triangle with vertices $(1, 3)$, $(3, 3)$ and $(1, 7)$



10

Reflection in the line $y = 1$