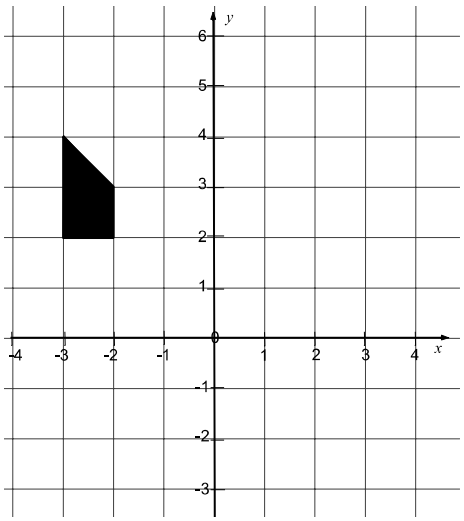
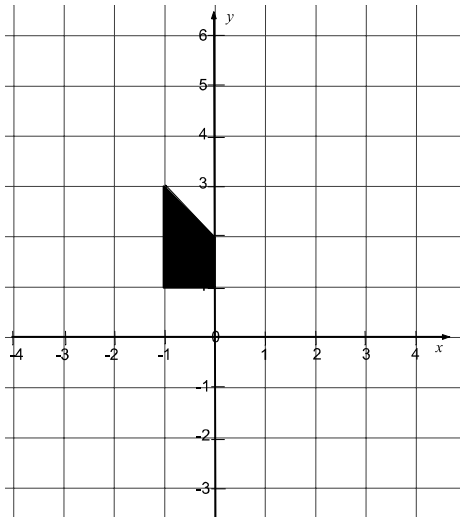
Figure to Figure

1. The figure below is transformed to give a new image:

Before:



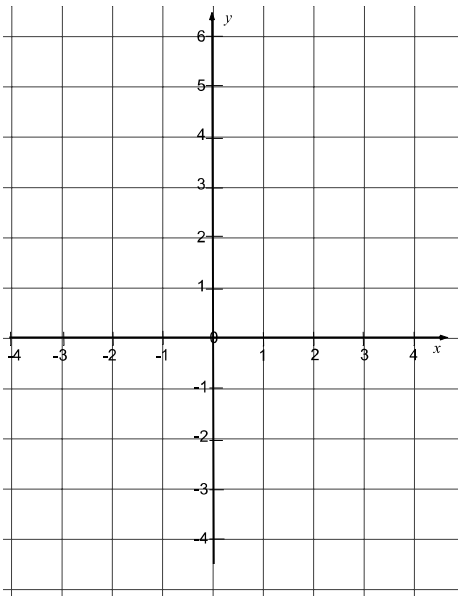
After:



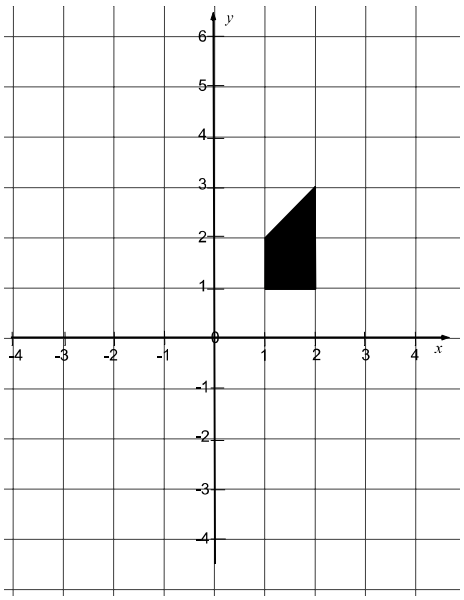
Describe in words a single transformation that maps the original figure to the new image.

2. A figure is reflected over the line $y = -1$ to give the image below. Complete on the blank grid the position of the original figure before the transformation:

Before:

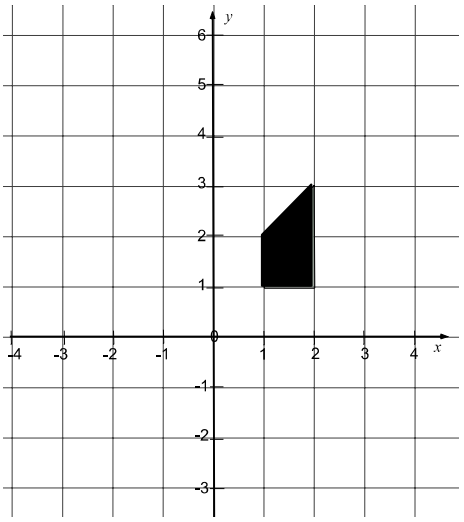


After:

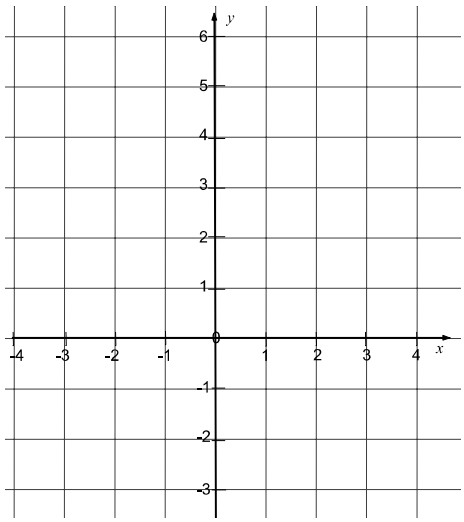


3. The figure below is rotated through 90° clockwise around (0,0):

Before:



After:



Complete on the blank grid the image after the transformation and describe the effect of the transformation on (x,y):

$$(x, y) \rightarrow (\_\_\_\_, \_\_\_\_)$$

Explain your answer:

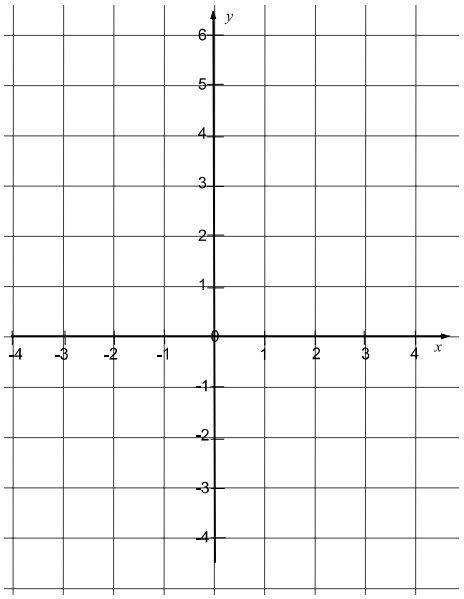
Card Set: Transformations (1)

T1

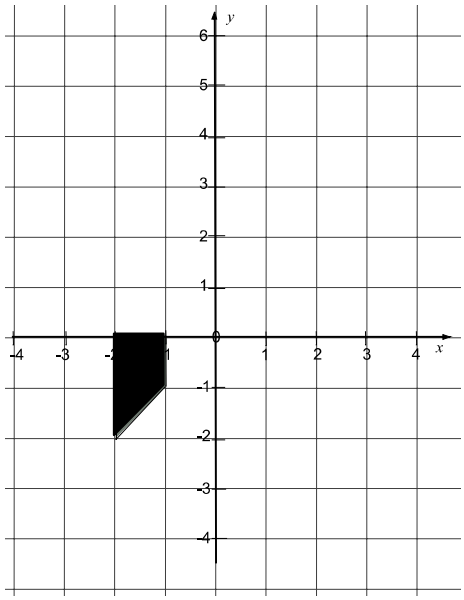
$(x, y) \rightarrow (\_\_\_\_, \_\_\_\_)$

Reflection over the x-axis

Before



After

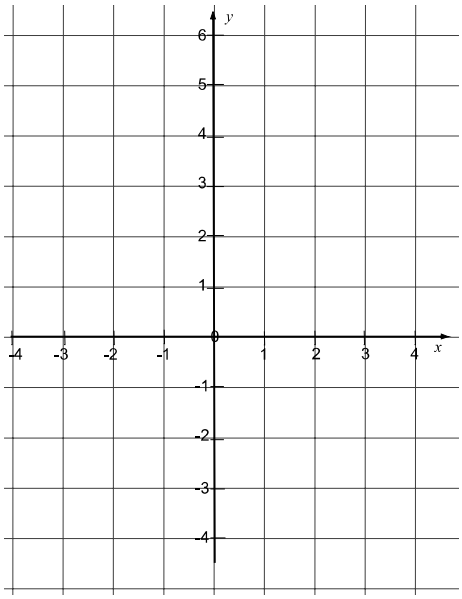


T2

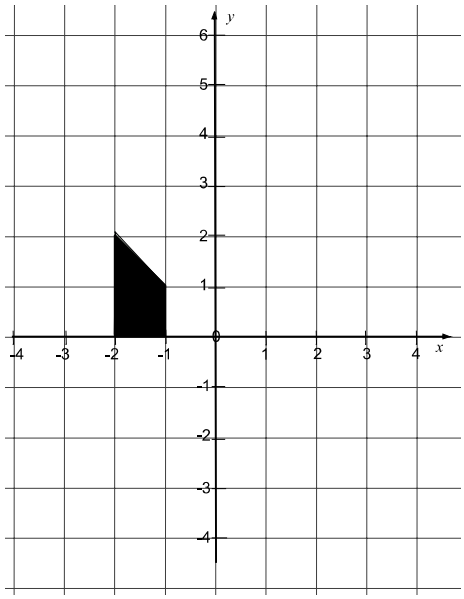
$(x, y) \rightarrow (\_\_\_\_, \_\_\_\_)$

Translation -2 units vertically

Before



After

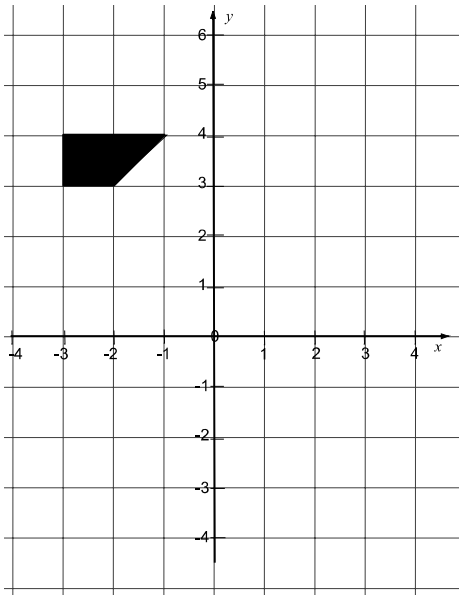


Card Set: Transformations (2)

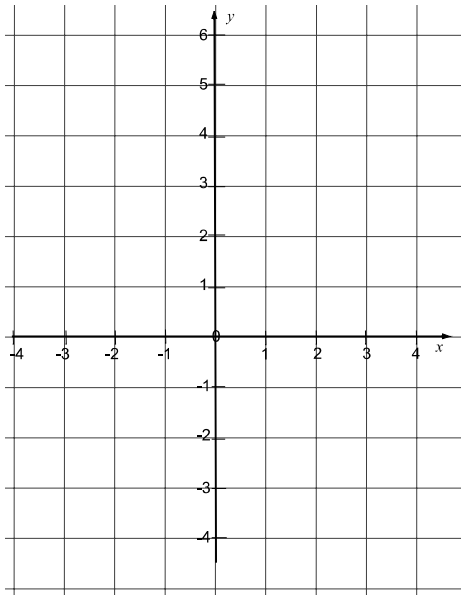
T3

$$(x, y) \rightarrow (-x, -y)$$

Before



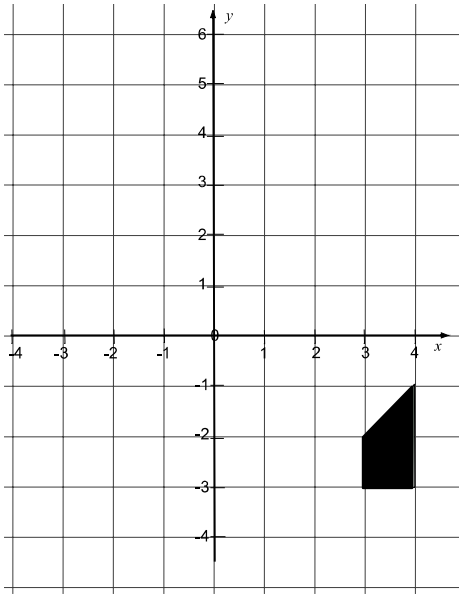
After



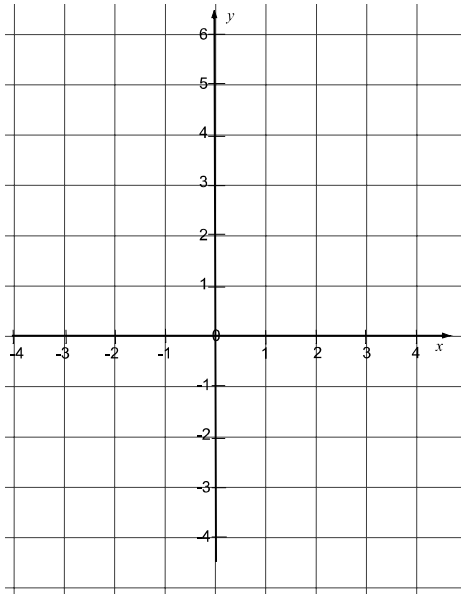
T4

$$(x, y) \rightarrow (x - 2, y + 4)$$

Before



After



Card Set: Transformations (3)

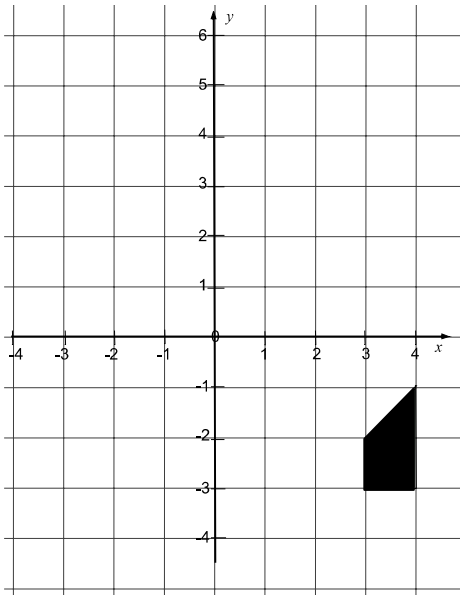
T5

$(x, y) \rightarrow (\_\_\_\_, \_\_\_\_)$

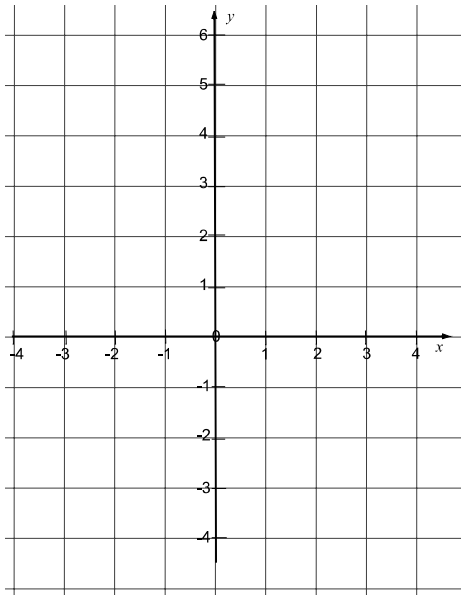
Reflection over the line

$y = x$

Before



After

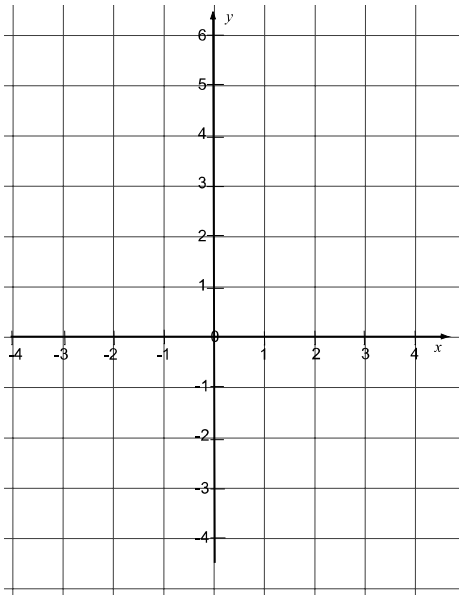


T6

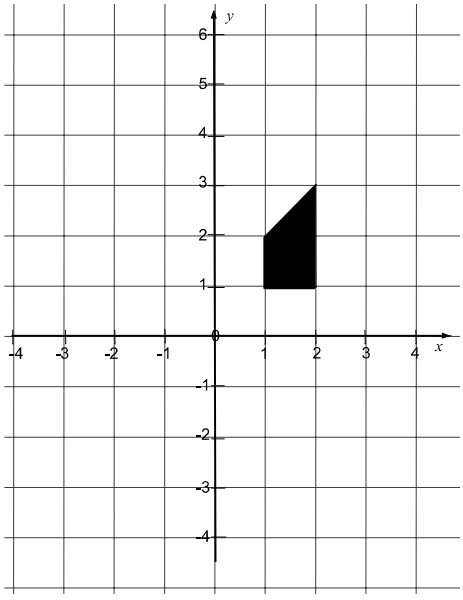
$(x, y) \rightarrow (\_\_\_\_, \_\_\_\_)$

Rotation through 90° clockwise around (1,1)

Before



After

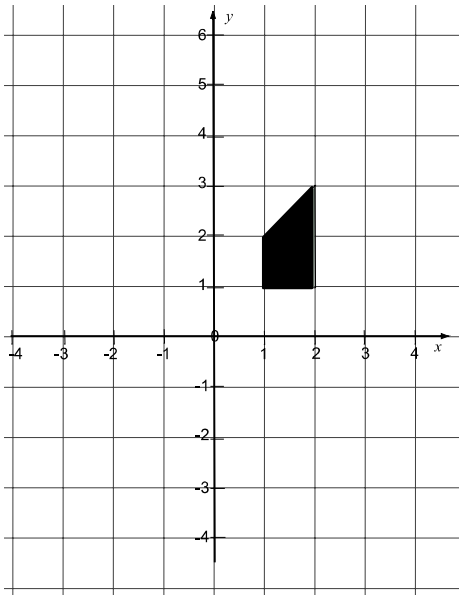


Card Set: Transformations (4)

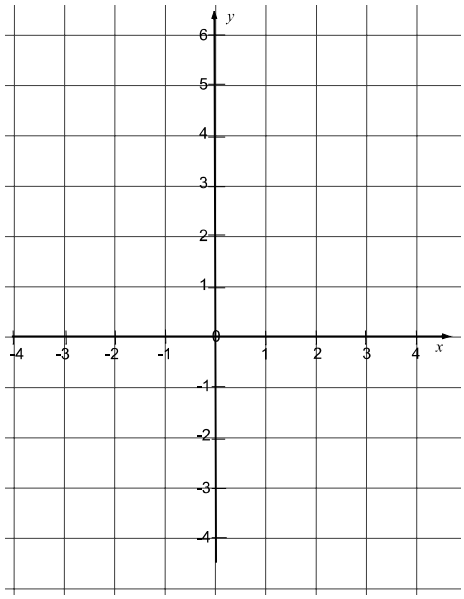
T7

$$(x, y) \rightarrow (-x + 2, y)$$

Before



After

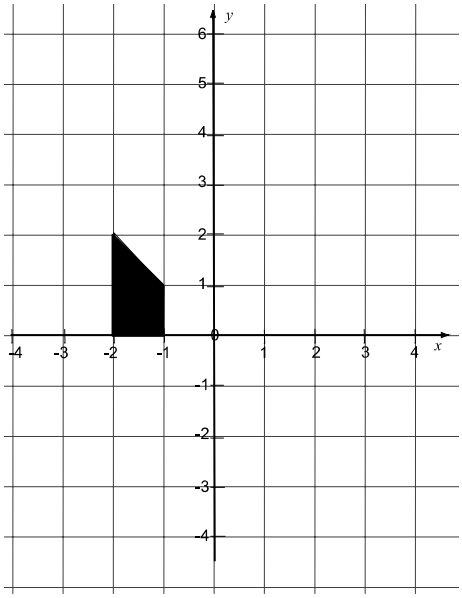


T8

$$(x, y) \rightarrow (\_\_\_\_, \_\_\_\_)$$

Rotation through 90° counterclockwise around (0,0)

Before



After

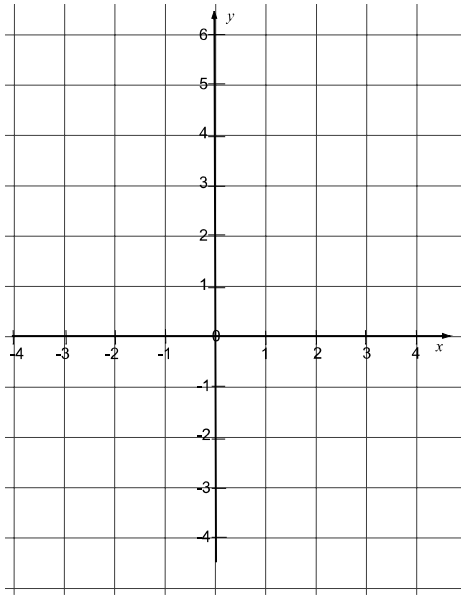
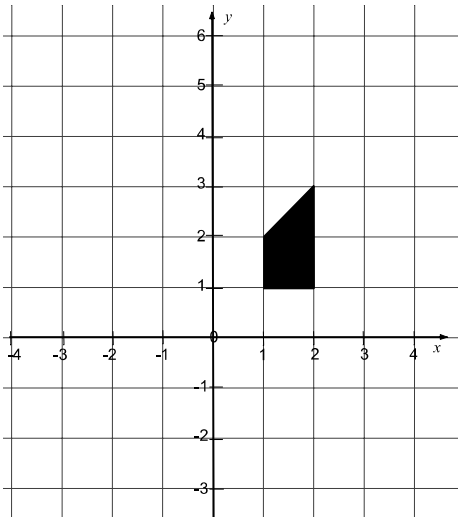


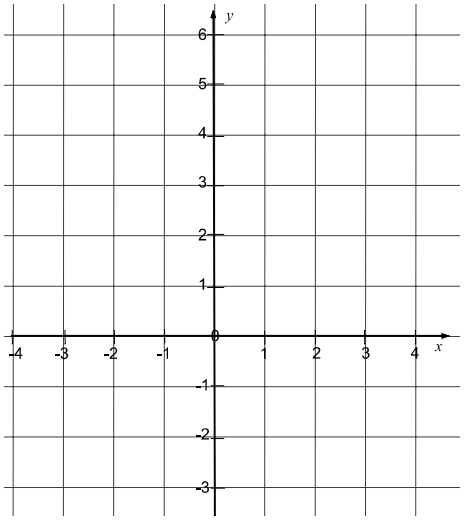
Figure to Figure (revisited)

1. A transformation is described as $(x, y) \rightarrow (-2 + y, -x)$

Before:



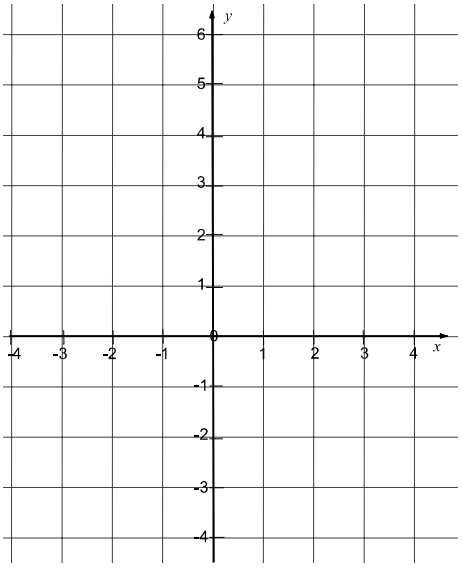
After:



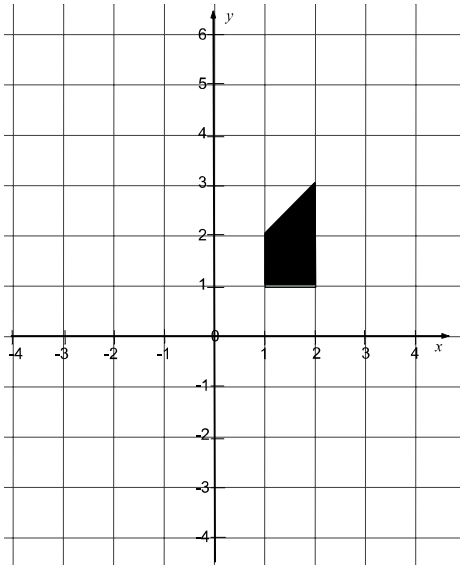
Complete on the blank grid the image after the transformation and describe the single transformation in words.

2. A figure is reflected over the line $y = -x$ to give the image below. Complete on the blank grid the position of the original figure before the transformation:

Before:

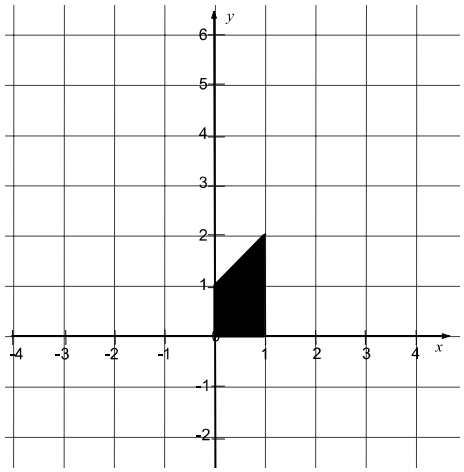


After:

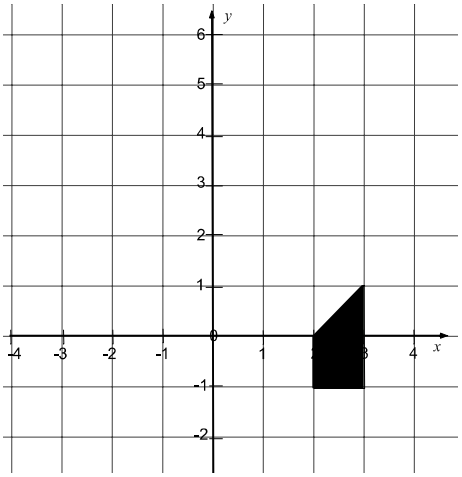


3. The figure below is transformed to give the following image:

Before:



After:



Describe the effect of the transformation on (x,y) and describe the transformation in words:

$$(x, y) \rightarrow (\_\_\_\_, \_\_\_\_)$$