

side-to-side

Quick review: The **domain** is the set of all possible **x-values** on the graph. The **range** is the set of all **low point + up + down** possible **y-values** on the graph. **high point**

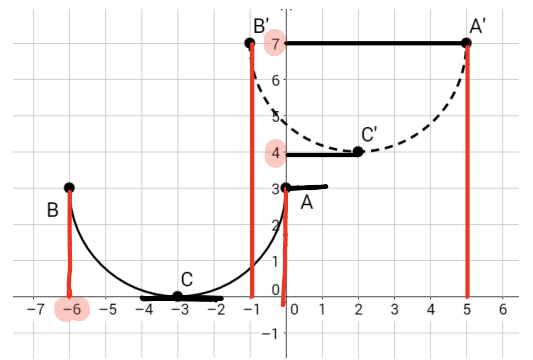
1. Describe the translation(s) from the pre-image to the image.

a. Given the following graph, state the domain and range of the pre-image:

Domain:  $-6 \leq x \leq 0$  Range:  $0 \leq y \leq 3$

b. State the domain and range of the image:

Domain:  $-1 \leq x \leq 5$  Range:  $4 \leq y \leq 7$



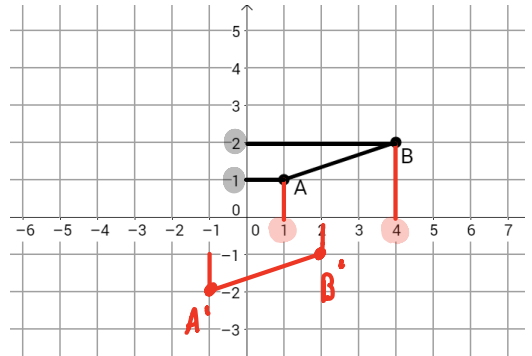
2. Draw and label the image of  $\overline{AB}$  translated left 2 and down 3.

a. State the domain and range of the pre-image:

Domain:  $1 \leq x \leq 4$  Range:  $1 \leq y \leq 2$

b. State the domain and range of the image:

Domain:  $-1 \leq x \leq 2$  Range:  $-2 \leq y \leq -1$



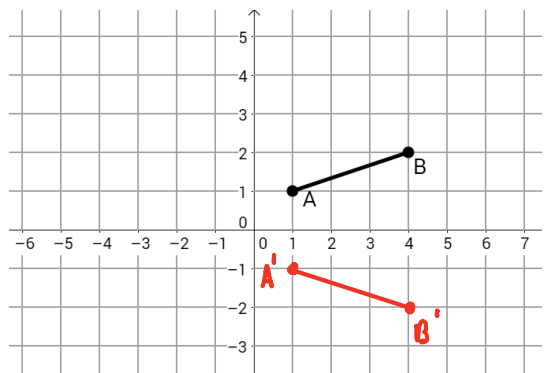
3. Draw and label the image of  $\overline{AB}$  reflected over the x-axis.

a. State the domain and range of the pre-image:

Domain:  $1 \leq x \leq 4$  Range:  $1 \leq y \leq 2$

b. State the domain and range of the image:

Domain:  $1 \leq x \leq 4$  Range:  $-2 \leq y \leq -1$



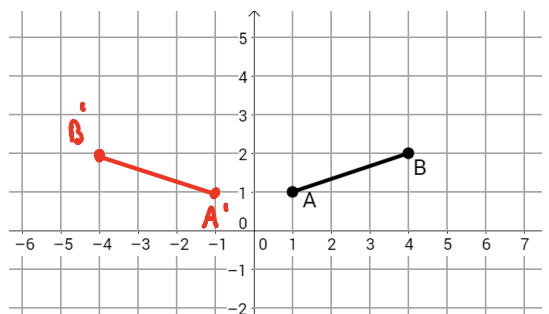
4. Draw and label the image of  $\overline{AB}$  reflected over the y-axis.

a. State the domain and range of the pre-image:

Domain:  $1 \leq x \leq 4$  Range:  $1 \leq y \leq 2$

b. State the domain and range of the image:

Domain:  $-4 \leq x \leq -1$  Range:  $1 \leq y \leq 2$



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

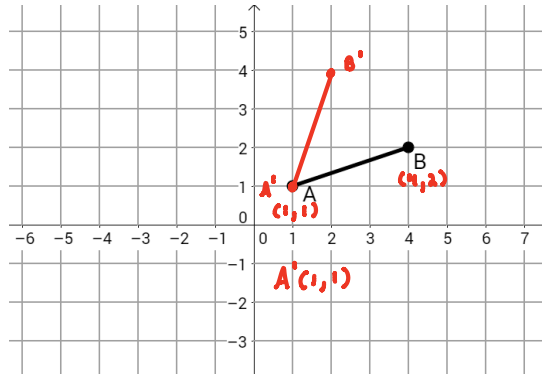
5. Draw and label the image of  $\overline{AB}$  reflected over the line  $y = x$ .

a. State the domain and range of the pre-image:

Domain:  $1 \leq x \leq 4$  Range:  $1 \leq y \leq 2$

b. State the domain and range of the image:

Domain:  $1 \leq x \leq 2$  Range:  $1 \leq y \leq 4$



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

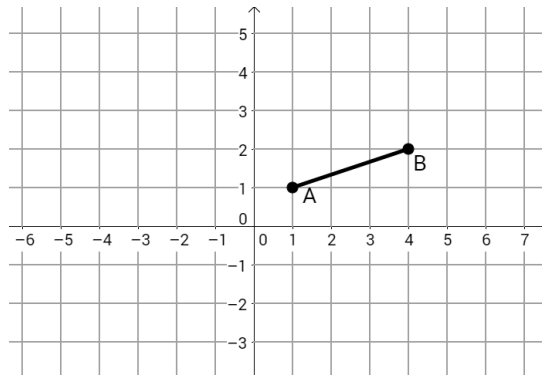
6. Draw and label the image of  $\overline{AB}$  rotated  $90^\circ$ .

a. State the domain and range of the pre-image:

Domain:  $1 \leq x \leq 4$  Range:  $1 \leq y \leq 2$

b. State the domain and range of the image:

Domain:  $-2 \leq x \leq -1$  Range:  $1 \leq y \leq 4$



7. Draw and label the image of  $\overline{AB}$  dilated by a factor of 3 with a center of (0,0)

a. State the domain and range of the pre-image:

Domain:  $1 \leq x \leq 4$  Range:  $1 \leq y \leq 2$

b. State the domain and range of the image:

Domain:  $3 \leq x \leq 12$  Range:  $3 \leq y \leq 6$

