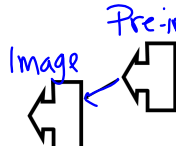


Translation

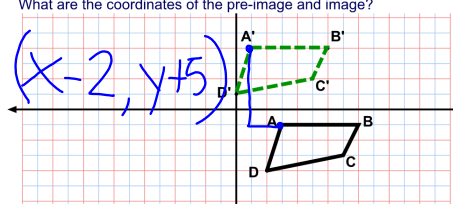
A **translation** is a slide that moves a figure to a different position (left, right, up or down) without changing its size or shape and without flipping or turning it.



You can use a slide arrow to show the direction and distance of the movement.

To complete a translation, move each point of the pre-image and label the new point.

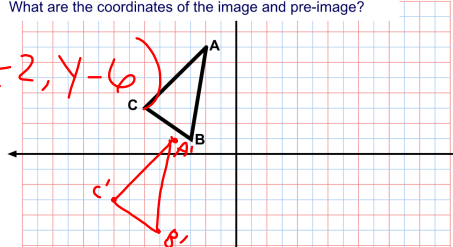
Example: Move the figure left 2 units and up 5 units.
What are the coordinates of the pre-image and image?



Are the line segments in the pre-image and image the same length? In other words, was the size of the figure preserved?

[click to reveal](#)

Translate pre-image ABC 2 left and 6 down.
What are the coordinates of the image and pre-image?

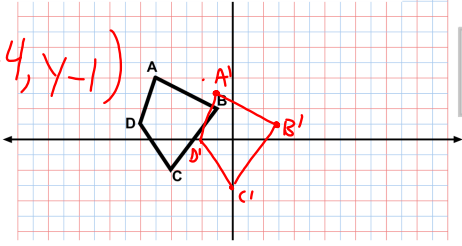


Are the line segments in the pre-image and image the same length? In other words, was the size of the figure preserved?

[click to reveal](#)

Translate pre-image ABCD 4 right and 1 down.
What are the coordinates of the image and pre-image?

$(x+4, y-1)$



Answer

Are the line segments in the pre-image and image the same length? In other words, was the size of the figure preserved?

click to reveal

Translations Rule

Translating left/right changes the x-coordinate.

Translating up/down changes the y-coordinate.

2 Left and 5 Up

- A (3,-1) A' (-1,4)
- B (8,-1) B' (6,4)
- C (7,-3) C' (5,2)
- D (2,-4) D' (0,1)

$(x-2, y+5)$

2 Left and 6 Down

- A (-2,7) A' (-4,1)
- B (-3,1) B' (-5,-5)
- C (-6,3) C' (-8,-3)

$(x-2, y-6)$

5 Left and 3 Up

- A (3,2) A' (-2,5)
- B (7,1) B' (2,4)
- C (4,0) C' (-1,3)
- D (2,-2) D' (-3,1)

$(x-5, y+3)$

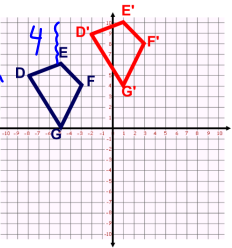
4 Right and 1 Down

- A (-5,4) A' (-1,3)
- B (-1,2) B' (3,1)
- C (-4,-2) C' (0,-3)
- D (-6, 1) D' (-2,0)

$(x+4, y-1)$

1 What rule describes the translation shown?

- A $(x,y) \rightarrow (x-4, y-6)$
- B $(x,y) \rightarrow (x-6, y-4)$
- C $(x,y) \rightarrow (x+6, y+4)$
- D $(x,y) \rightarrow (x+4, y-6)$



Answer
