

Determine the coordinates of the image, plot the image and determine if it is a rigid transformation or not.

PRE-IMAGE	Transformation	COORDINATES	PLOT THE IMAGE
	<p><b>a) Pre-Image Points</b>                      A (1, -4) → (1-5, -4+3)                      B (2, -1) → (2-5, -1+3)                      C (6, -4) → (6-5, -4+3)</p> <p><b>Coordinate Rule</b>                      (x, y) → (x - 5, y + 3)</p> <p>*this change needs to happen to each point</p>	<p><b>Image Points</b>                      A' ( <u>-4</u>, <u>-1</u> )                      B' ( <u>-3</u>, <u>2</u> )                      C' ( <u>1</u>, <u>-1</u> )</p> <p>Rigid Motion? <b>Yes</b> or No</p> <p>Transformation Type:  <u>Translation</u></p>	
	<p><b>b) Pre-Image Points</b>                      A (1, -4)                      B (2, -1)                      C (6, -4)</p> <p><b>Coordinate Rule</b>                      (x, y) → (-x, y)</p> <p>*change sign on x's, leave y the same</p>	<p><b>Image Points</b>                      A' ( <u>-1</u>, <u>-4</u> )                      B' ( <u>-2</u>, <u>-1</u> )                      C' ( <u>-6</u>, <u>-4</u> )</p> <p>Rigid Motion? <b>Yes</b> or No</p> <p>Transformation Type:  <u>Reflection</u></p>	
	<p><b>c) Pre-Image Points</b>                      A (-2, 1)                      B (-1, 2)                      C (3, 1)</p> <p><b>Coordinate Rule</b>                      (x, y) → (2x, 2y)</p>	<p><b>Image Points</b>                      A' ( <u>-4</u>, <u>2</u> )                      B' ( <u>-2</u>, <u>4</u> )                      C' ( <u>6</u>, <u>2</u> )</p> <p>Rigid Motion? Yes or <b>No</b></p> <p>Transformation Type:  <u>Dilation</u></p>	
	<p><b>d) Pre-Image Points</b>                      A (1, -3)                      B (2, 0)                      C (6, -3)</p> <p><b>Coordinate Rule</b>                      (x, y) → (-x, -y)</p>	<p><b>Image Points</b>                      A' ( <u>-1</u>, <u>3</u> )                      B' ( <u>-2</u>, <u>0</u> )                      C' ( <u>-6</u>, <u>3</u> )</p> <p>Rigid Motion? <b>Yes</b> or No</p> <p>Transformation Type:  <u>Rotation/Double Reflection</u></p>	
	<p><b>e) Pre-Image Points</b>                      A (-1, -2)                      B (0, 1)                      C (4, -2)</p> <p><b>Coordinate Rule</b>                      (x, y) → (-2y, -x)</p>	<p><b>Image Points</b>                      A' ( <u>4</u>, <u>1</u> )                      B' ( <u>-2</u>, <u>0</u> )                      C' ( <u>4</u>, <u>-4</u> )</p> <p>Rigid Motion? Yes or <b>No</b></p> <p>Transformation Type:  <u>Other</u></p>	

\*2 times y-coord becomes the next x-coord, opp of x becomes new y

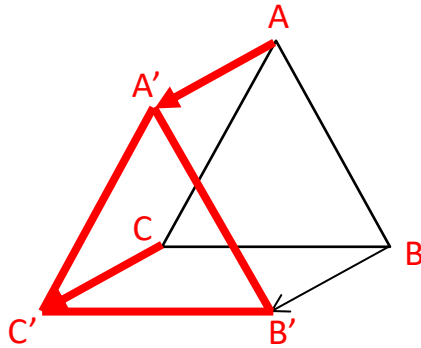
**Translation:** a transformation where every point of the preimage moves the same amount in the same direction to form the image.

Using the preimages below and the given translation vector, translate the preimages. Label the images appropriately.

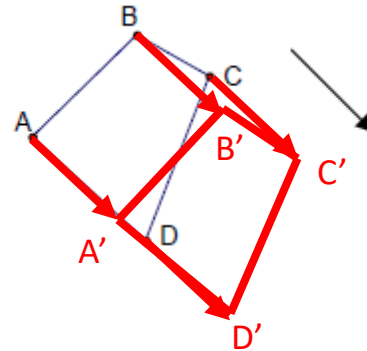
**Drawing Method:**

a.

- 1) Draw a ray that is parallel and congruent ( $\cong$ ) to the one given at each corner.
- 2) Place each image point at end of ray.
- 3) Connect to form shape
- 4) Label

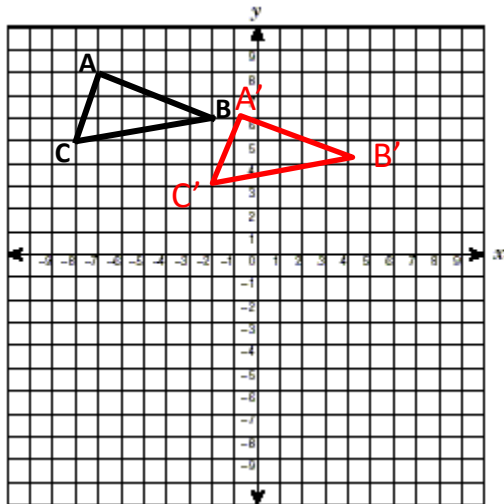


b.



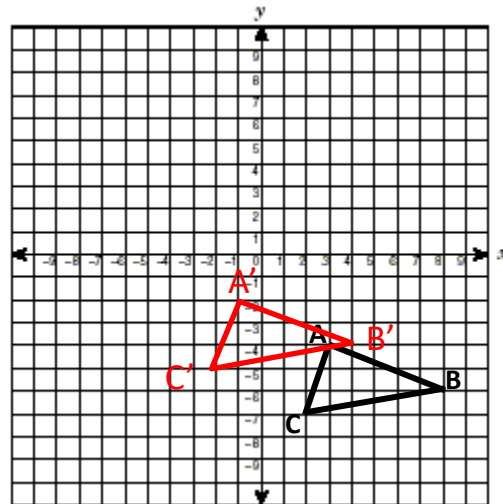
**Coordinate Method:**

a.  $(x, y) \rightarrow (x + 6, y - 2)$  Translation



Count up two and left 4 for each corner to place image

- b. Translate the preimage up 2 and left 4.



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