

# Image: result of transformation

1.2 Translations & Rules Guided Notes

pre-image: figure before transformation

Translations - a transformation | rule:  $(x, y) \rightarrow '(x, y)$

● that slides each point of a figure the same distance and in the same direction.

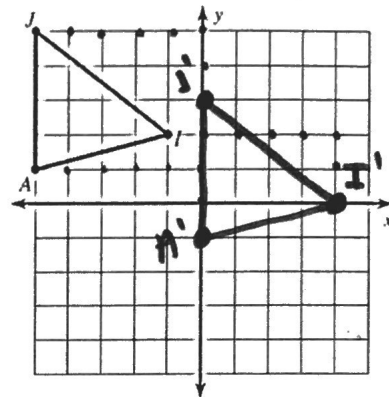
1) Translate  $\triangle JAI$  to the right five units and down two units.

2) Write a rule for this transformation.

$$(x, y) \rightarrow '(x+5, y-2)$$

3) What ordered pair represents  $J'$ ?

$$(0, 3)$$

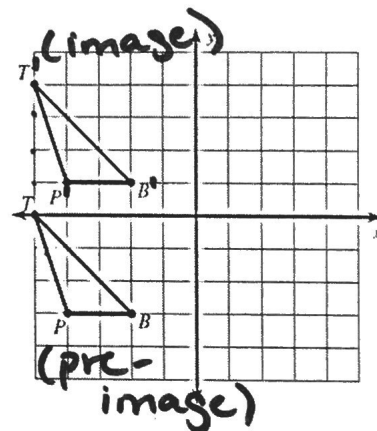


4) What translation has occurred in the figure?

up 4 units

5) What is the rule that represents this translation?

$$*(x, y) \rightarrow '(x, y+4)$$

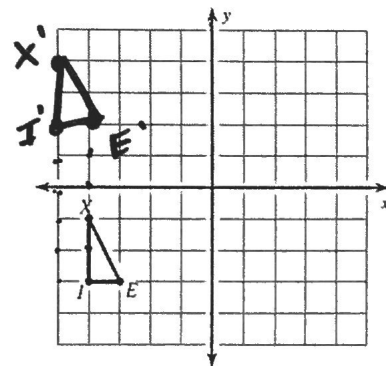


6) If  $(x, y) \rightarrow (x-1, y+5)$  represents a translation for  $\triangle XEI$ , describe the translation.

\* Left 1, up 5 units

7) What would  $X'$  be after the rule is applied?

$$X'(-5, 4)$$



\* 'moving backwards': Go from Image to pre-image.

Ex:  $E'(-5, 2)$

rule:  $(x, y) \rightarrow (x+1, y-2)$

Find E

\* Do opposite:  $(x-1, y+2)$

$E'(-5, 2)$   
 $\begin{matrix} x & y \end{matrix}$

$(-5-1, 2+2) = E(-6, 4)$

Ex:  $B'(4, -2)$

Description: translate 3 right & 1 up.

$(x, y) \rightarrow (x+3, y+1)$

Find B

\* opposite:  $(x-3, y-1)$

$(4-3, -2-1) =$

$B(1, -3)$