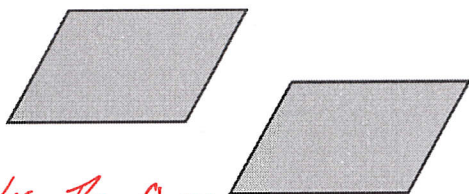


2.2 – Translations

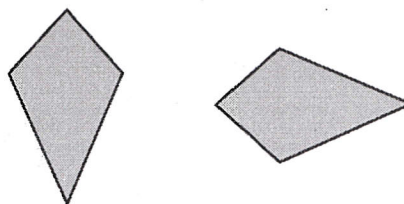
Tell whether the right figure is a translation of the left figure. Explain.

1)



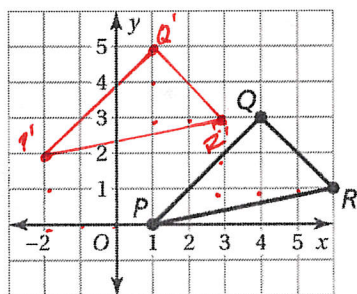
Yes the figure is just moved to the right and down.

2)



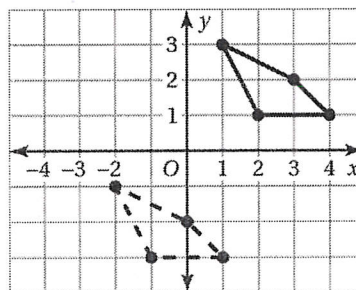
No. The figure is rotated and not translated.

3) Translate the triangle 3 units left and 2 units up. What are the coordinates of the image?



*P'(-2, 3)
Q'(1, 5)
R'(2, 3)*

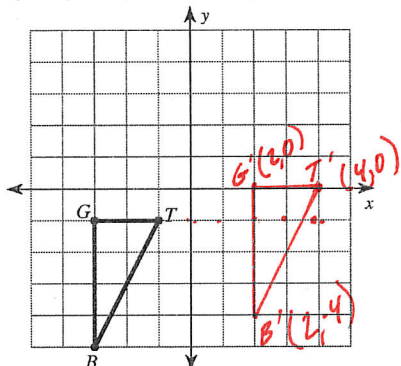
4) Describe *in words* the translation from the solid line figure to the dashed line figure.



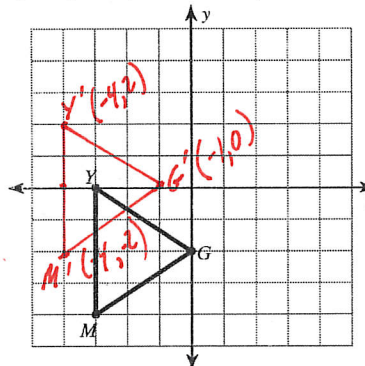
It is moved 3 to the left and 4 down.

Graph the images according to the rule or the vector component. Label the new points correctly with its coordinates.

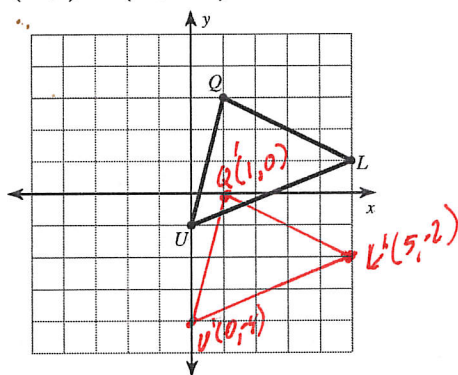
5) $(x, y) \rightarrow (x+5, y+1)$



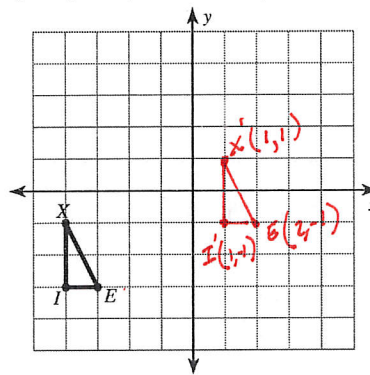
6) $(x, y) \rightarrow (x-1, y+2)$



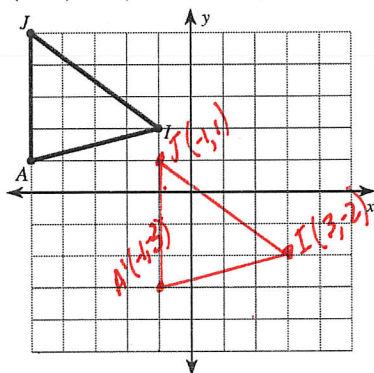
7) $(x, y) \rightarrow (x, y - 3)$



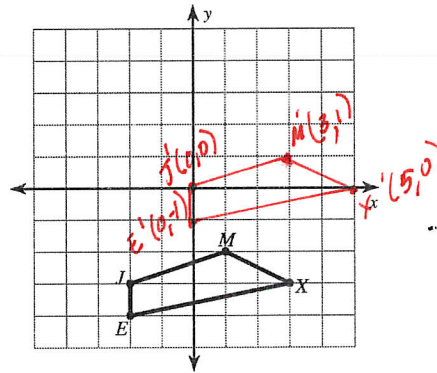
8) $(x, y) \rightarrow (x + 5, y + 2)$



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



10) $(x, y) \rightarrow (x + 2, y + 3)$



Describe the translation of the point to its image.

11) $(1, 5) \rightarrow (-1, 1)$

*Left 2 and Down 4
or $(x, y) \rightarrow (x - 2, y - 4)$*

12) $(-2, -3) \rightarrow (-2, 4)$

*Up 7
 $(x, y) \rightarrow (x, y + 7)$*

- 13) $\triangle XYZ$ has coordinates $X(2, 3)$, $Y(1, 4)$, and $Z(8, 9)$. A translation maps X to $X'(4, 7)$. What are the coordinates for Y' and Z' for this translation?

*$Y'(3, 8)$
 $Z'(10, 13)$*

** Right 2, Up 4*