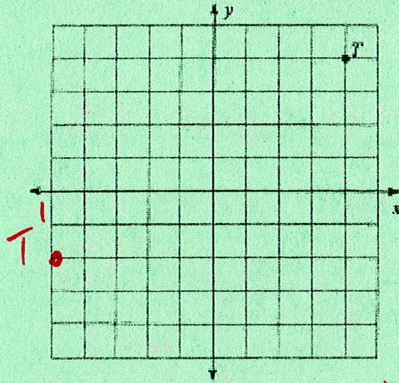


Practice- Translations

Directions:

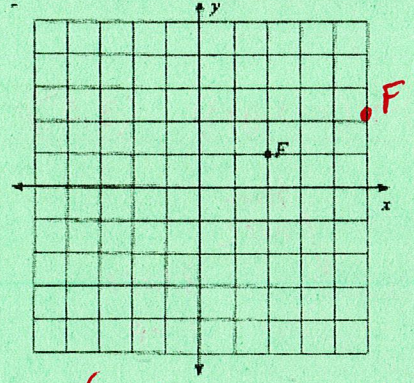
A) Graph the image of the figure using the transformation given, and then B) write it as a rule using arrow notation and vector notation.

1) translation: 9 units left and 6 units down



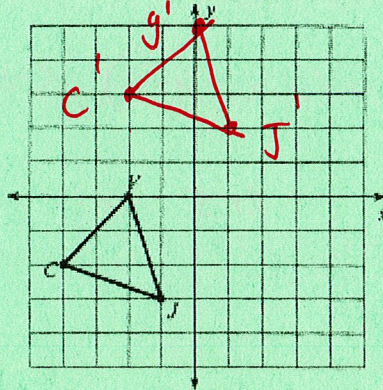
Rule: $(x,y) \rightarrow (x-9, y-6) \langle -9, -6 \rangle$

2) translation: 3 units right and 1 unit up



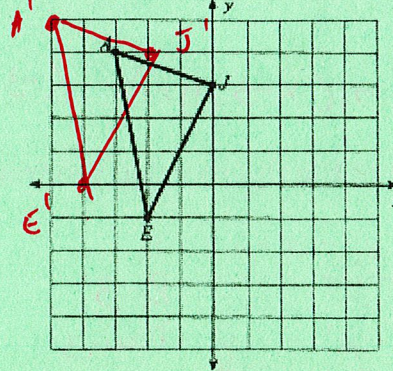
Rule: $(x,y) \rightarrow (x+3, y+1) \langle 3, 1 \rangle$

3) translation: 2 units right and 5 units up



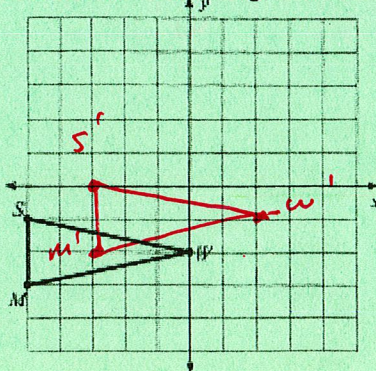
Rule: $(x,y) \rightarrow (x+2, y+5) \langle 2, 5 \rangle$

4) translation: 2 units left and 1 unit up



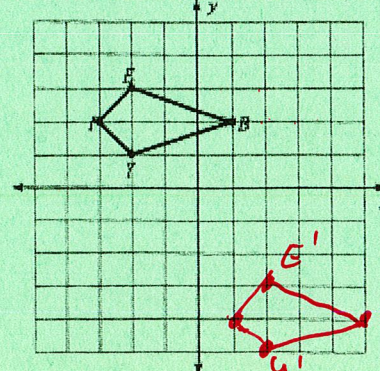
Rule: $(x,y) \rightarrow (x-2, y+1) \langle -2, 1 \rangle$

5) translation: 2 units right and 1 unit up



Rule: $(x,y) \rightarrow (x+2, y+1) \langle 2, 1 \rangle$

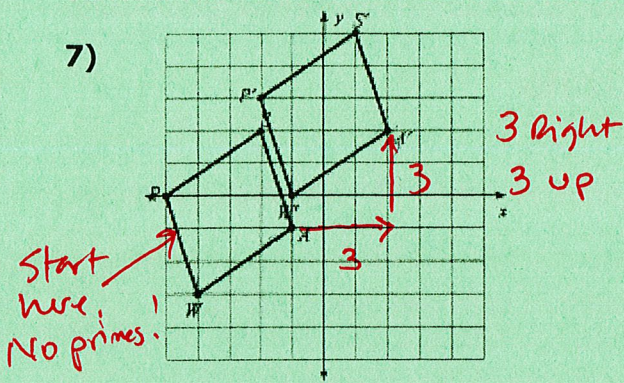
6) translation: 4 units right and 6 units down



Rule: $(x,y) \rightarrow (x+4, y-6) \langle 4, -6 \rangle$

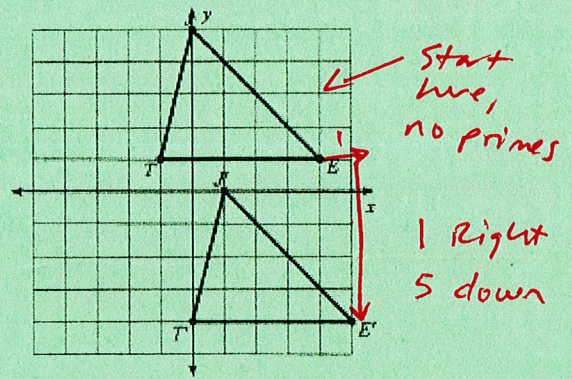
Write a rule to describe each transformation.

7)



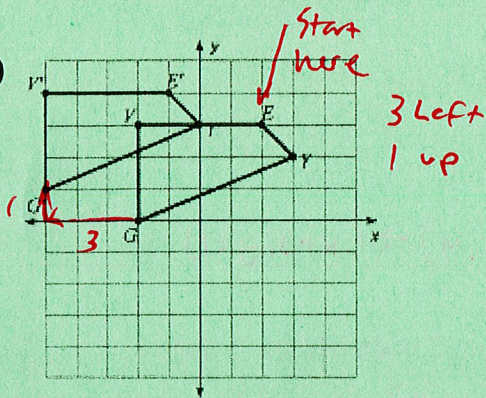
Rule: $(x,y) \rightarrow (x+3,y+3) \langle 3,3 \rangle$

8)



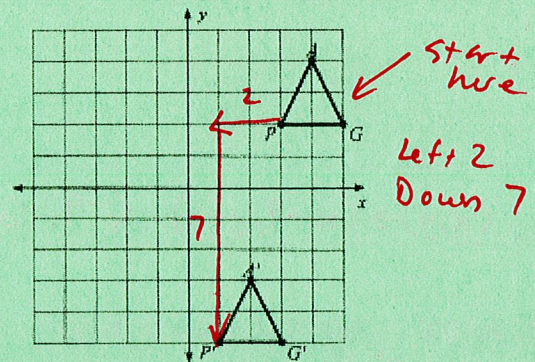
Rule: $(x,y) \rightarrow (x+1,y-5) \langle 1,-5 \rangle$

9)



Rule: $(x,y) \rightarrow (x-3,y+1) \langle -3,1 \rangle$

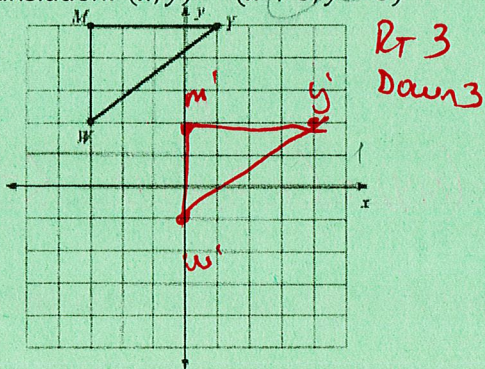
10)



Rule: $(x,y) \rightarrow (x-2,y-7) \langle -2,-7 \rangle$

Graph the image of the figure using the transformation given.

11) translation: $(x,y) \rightarrow (x+3,y-3)$



12) translation: $(x,y) \rightarrow (x+5,y+1)$

