Secondary Math 1 Geometry   Name_____

Unit 10.1 worksheet Translations   Period____

Write a rule to describe each transformation.

1) $X(-5, -2)$ to $X'(0, -5)$

   translation: $(x, y) \rightarrow (x + 5, y - 3)$

2) $F(-4, -1)$ to $F'(-4, 3)$

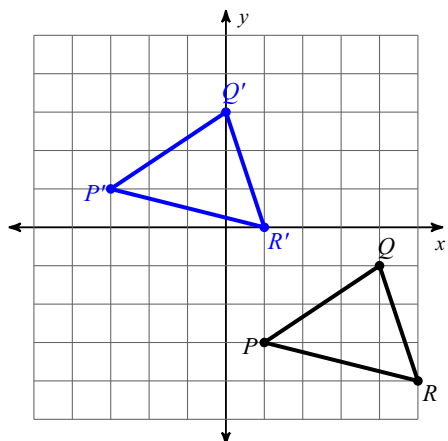   translation: $(x, y) \rightarrow (x, y + 4)$

3) $I(-4, 4)$ to $I'(3, -2)$

   translation: $(x, y) \rightarrow (x + 7, y - 6)$

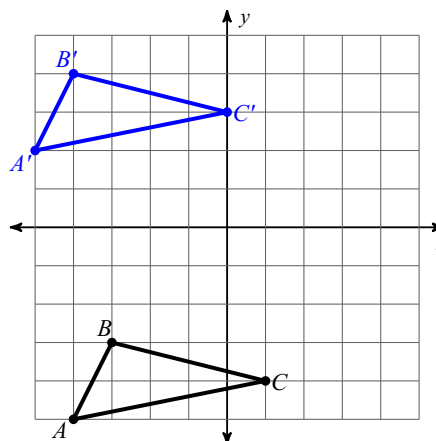4) $F(4, -4)$ to $F'(2, 2)$

   translation: $(x, y) \rightarrow (x - 2, y + 6)$
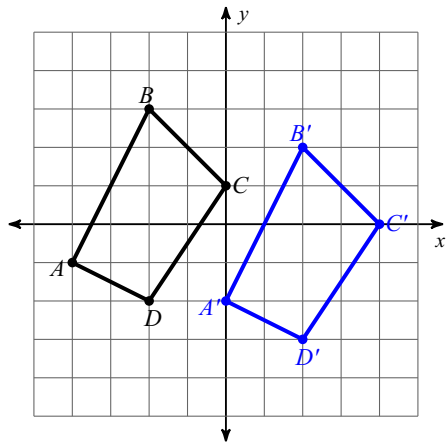
5)

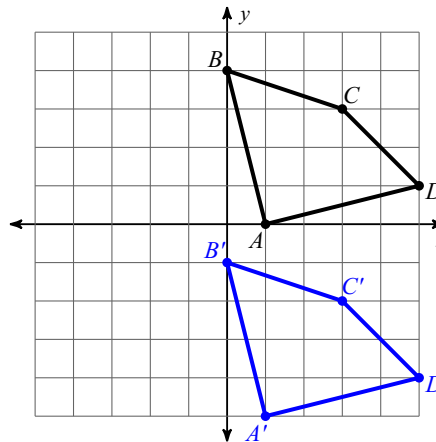   translation: $(x, y) \rightarrow (x - 4, y + 4)$

6)

   translation: $(x, y) \rightarrow (x - 1, y + 7)$

7)

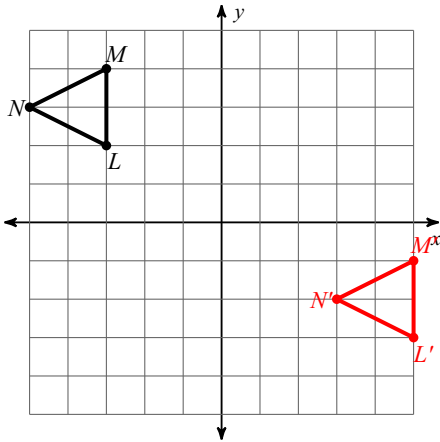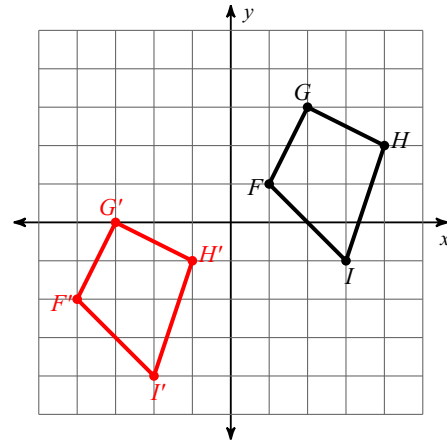   translation: $(x, y) \rightarrow (x + 4, y - 1)$

8)

   translation: $(x, y) \rightarrow (x, y - 5)$

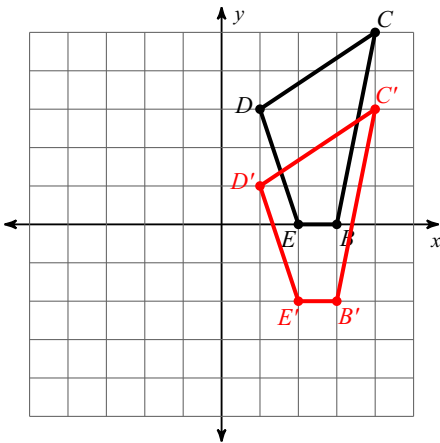**Graph the image of the figure using the transformation given.**

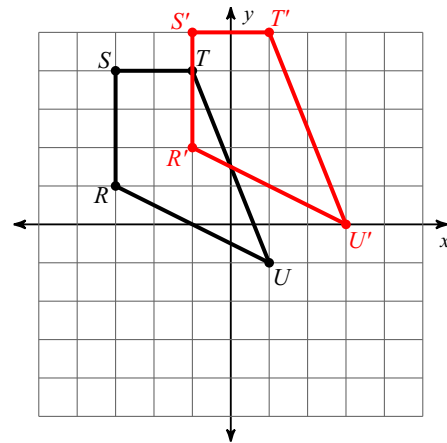9) translation: $(x, y) \rightarrow (x + 8, y - 5)$

10) translation: $(x, y) \rightarrow (x - 5, y - 3)$
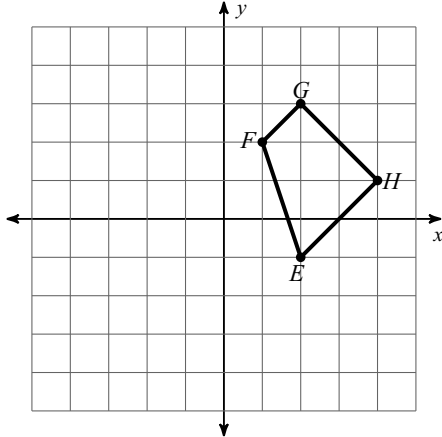

11) translation: $(x, y) \rightarrow (x, y - 2)$

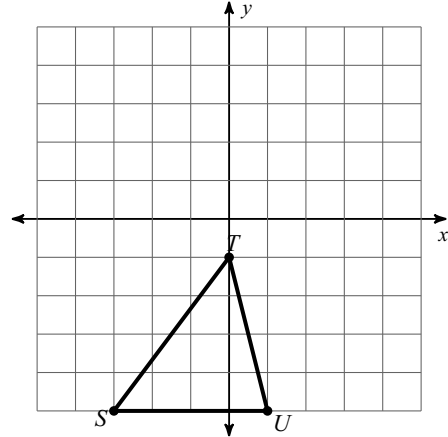12) translation: $(x, y) \rightarrow (x + 2, y + 1)$

Find the coordinates of the vertices of each figure after the given transformation.

13) translation: $(x, y) \rightarrow (x - 1, y - 2)$

$E'(1, -3), F'(0, 0), G'(1, 1), H'(3, -1)$

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

$S'(-5, -4), T'(-2, 0), U'(-1, -4)$