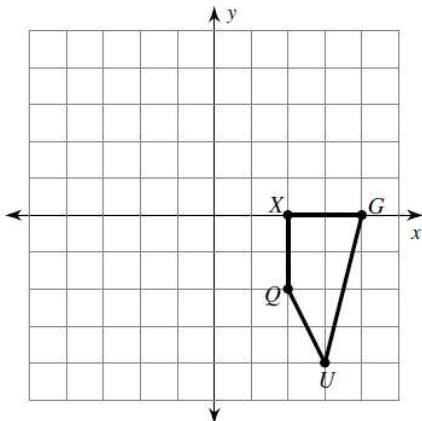


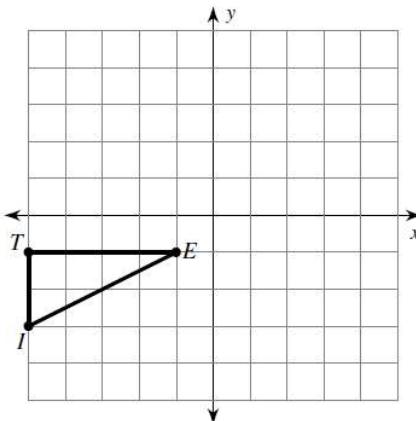
Translations of Shapes

Graph the image of the figure using the transformation given.

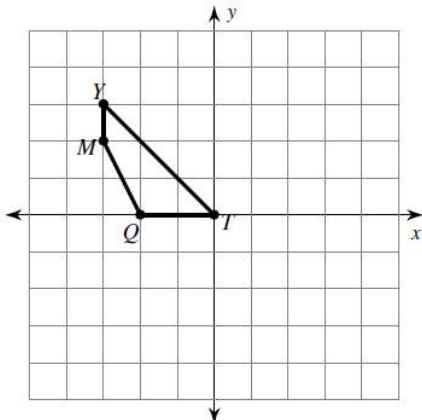
- 1) translation: 1 unit left



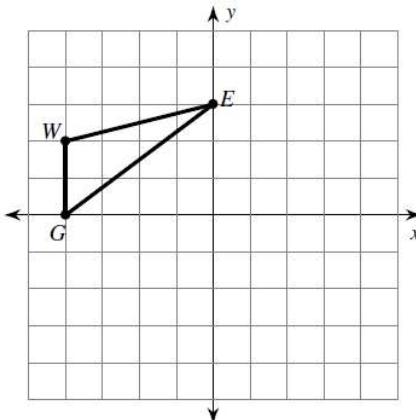
- 2) translation: 1 unit right and 2 units down



- 3) translation: 3 units right

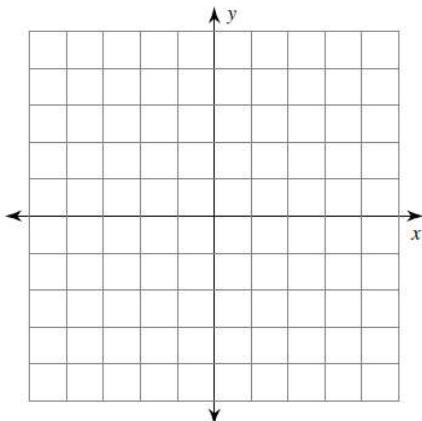


- 4) translation: 1 unit right and 2 units down



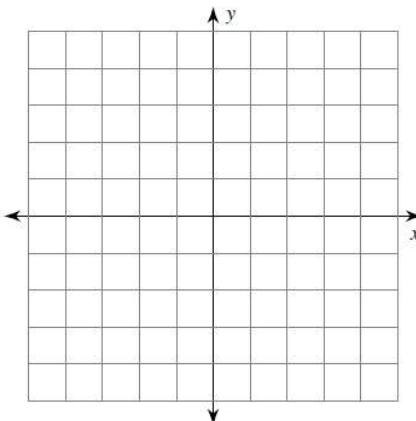
- 5) translation: 5 units up

$$U(-3, -4), M(-1, -1), L(-2, -5)$$



- 6) translation: 3 units up

$$R(-4, -3), D(-4, 0), L(0, 0), F(0, -3)$$



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

- 7) translation: 2 units left and 1 unit down
 $Q(0, -1)$, $D(-2, 2)$, $V(2, 4)$, $J(3, 0)$

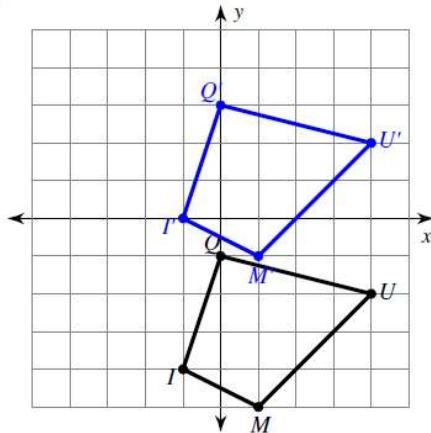
- 8) translation: 2 units down
 $D(-4, 1)$, $A(-2, 5)$, $S(-1, 4)$, $N(-1, 2)$

- 9) translation: 4 units left and 4 units up
 $J(-1, -2)$, $A(-1, 0)$, $N(3, -3)$

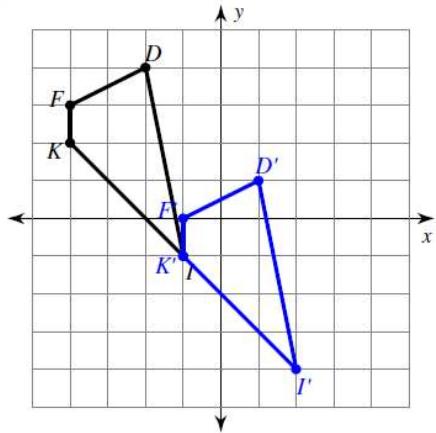
- 10) translation: 3 units right and 4 units up
 $Z(-4, -3)$, $I(-2, -2)$, $V(-2, -4)$

Write a rule to describe each transformation.

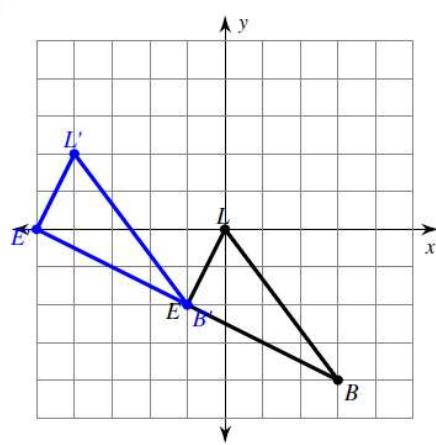
11)



12)



13)



14)

