

Translations

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

1) translation: 5 units left
 $W(0, -4), X(0, 0), Y(2, -1), Z(4, -5)$

2) translation: 2 units down
 $H(0, -3), G(1, 0), F(3, -2)$

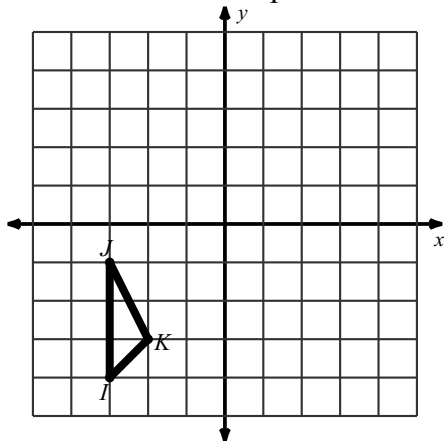
3) translation: 2 units left and 2 units up
 $K(-3, -3), L(-3, 0), M(-2, -3)$

4) translation: $(x, y) \rightarrow (x - 4, y + 4)$
 $M(2, -2), L(3, 1), K(4, 1), J(5, -3)$

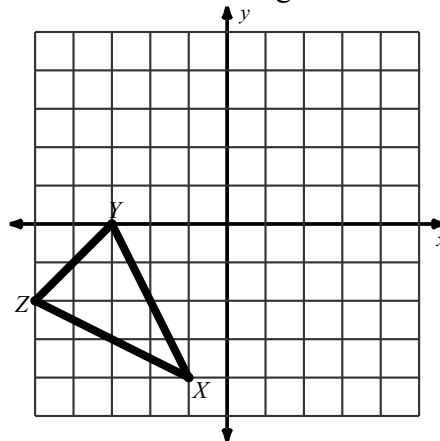
5) translation: $(x, y) \rightarrow (x, y + 5)$
 $G(2, -3), F(4, -2), E(5, -4)$

6) translation: $(x, y) \rightarrow (x - 4, y - 1)$
 $I(-1, 3), J(3, 5), K(3, 2)$

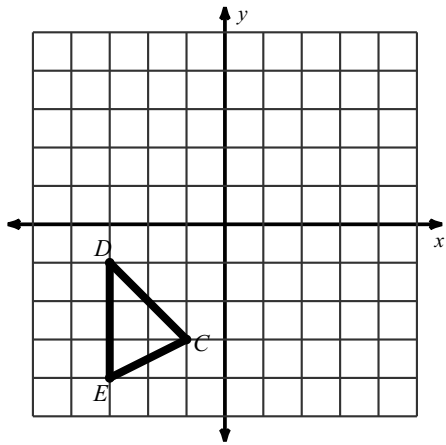
7) translation: 4 units up



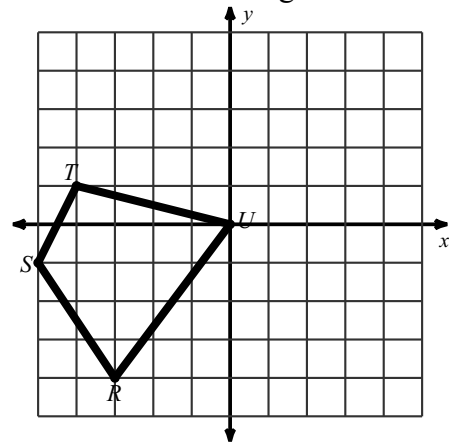
8) translation: 4 units right and 1 unit down



9) translation: 1 unit left and 6 units up

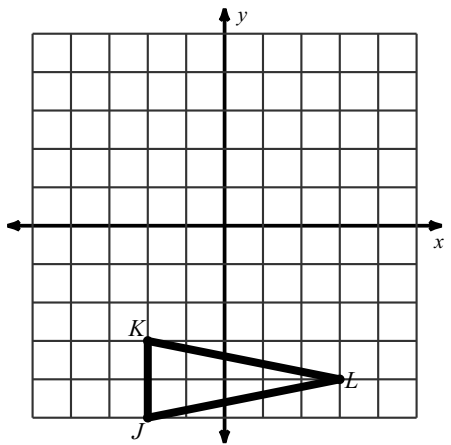


10) translation: 2 units right and 1 unit up

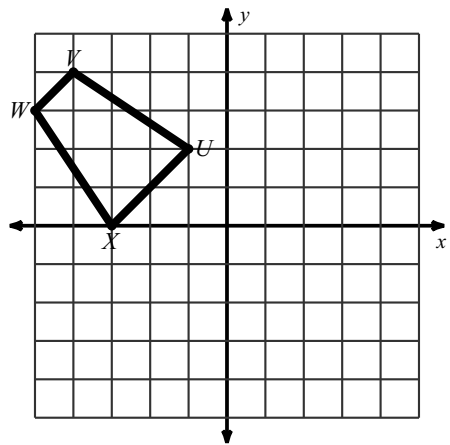


Graph the image of the figure using the transformation given.

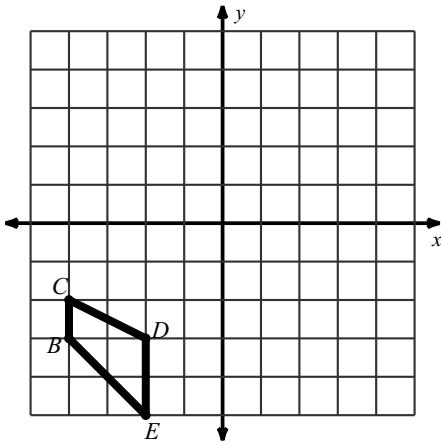
11) translation: $(x, y) \rightarrow (x, y + 4)$



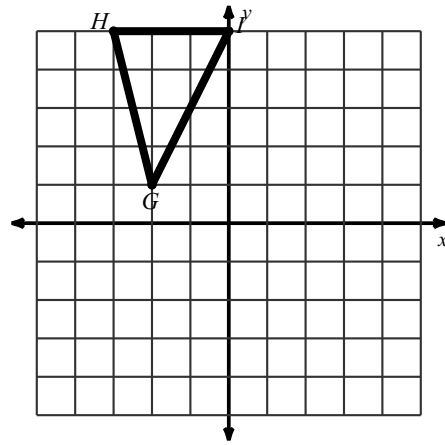
12) translation: $(x, y) \rightarrow (x + 5, y - 2)$



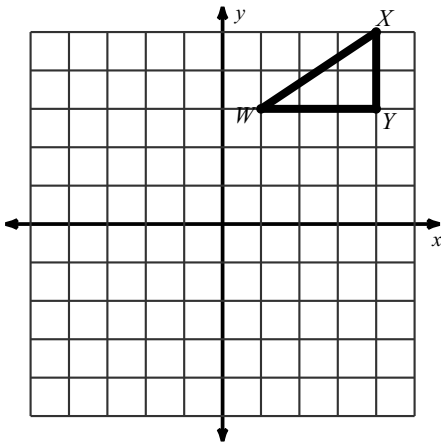
13) translation: $(x, y) \rightarrow (x + 2, y + 6)$



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



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



16) translation: $(x, y) \rightarrow (x + 6, y + 3)$

