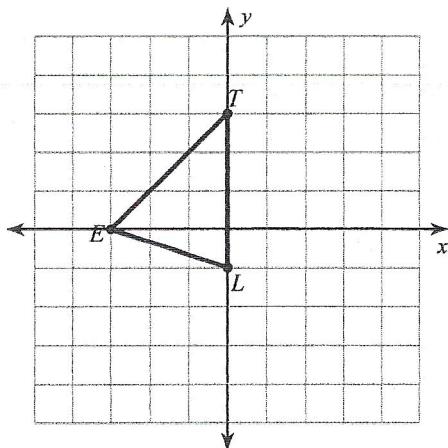


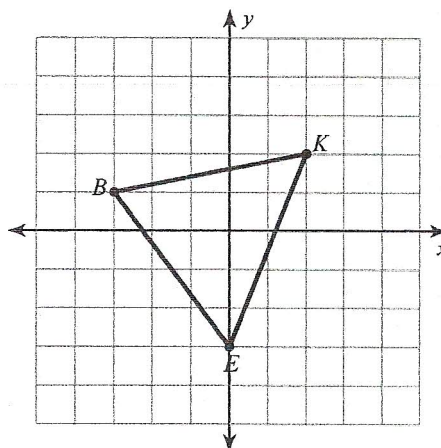
Transformations Practice

Graph the image of the figure using the transformation given.

1) translation: $(x, y) \rightarrow (x + 3, y - 1)$



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



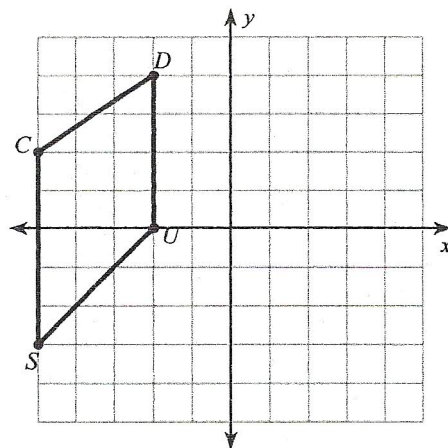
Find the coordinates of the vertices of each figure after the given transformation.

3) translation: $(x, y) \rightarrow (x, y - 5)$
 $Y(-5, 1), E(-3, 5), F(-3, 1)$

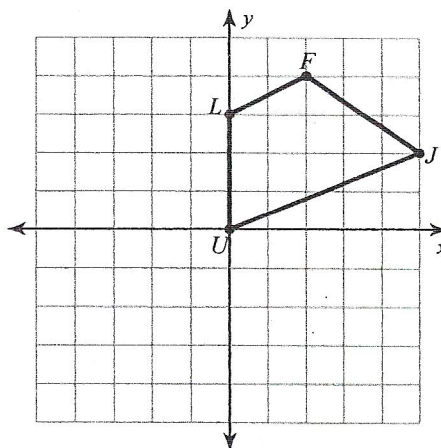
4) translation: $(x, y) \rightarrow (x - 2, y - 1)$
 $I(-1, -1), Z(2, 3), D(3, 1)$

Graph the image of the figure using the transformation given.

5) reflection across the x-axis



6) reflection across $y = -x$



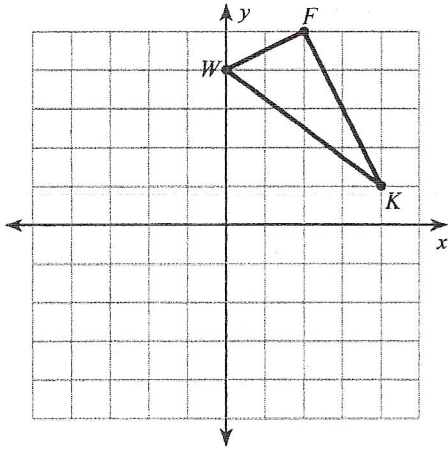
Find the coordinates of the vertices of each figure after the given transformation.

7) reflection across $x = -1$
 $K(-3, 5), I(-2, 5), D(-2, 2)$

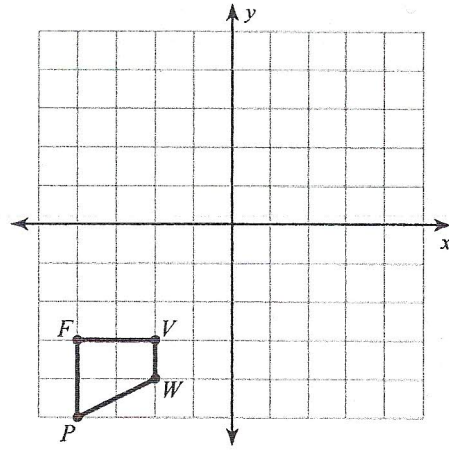
8) reflection across the y-axis
 $D(-4, -3), A(-4, 2), S(0, 3), G(-1, -1)$

Graph the image of the figure using the transformation given.

9) rotation 90° counterclockwise about the origin



10) rotation 180° about the origin



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

11) rotation 90° counterclockwise about the origin
 $M(-2, -3)$, $B(-3, -1)$, $Y(-1, 1)$, $K(3, -1)$

12) rotation 90° clockwise about the origin
 $M(-4, 1)$, $J(-4, 2)$, $N(-1, 4)$, $T(-3, 1)$