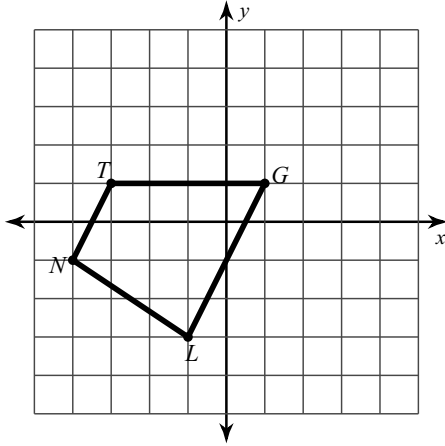


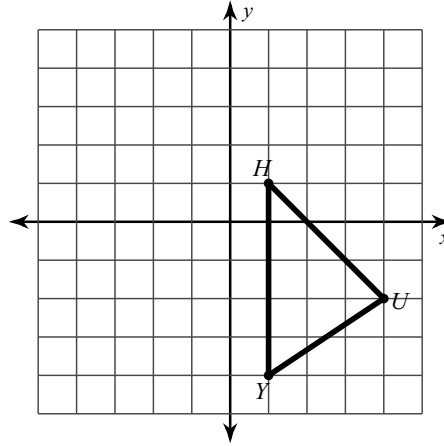
7.1.D1 ~ Transforming Geometric Figures

Graph the image of the geometric figure after the given translation. Label the image accordingly.

1) translation: 4 units right and 1 unit down



2) translation: 6 units left and 3 units up



Determine the coordinates of each translated image without graphing.

3) translation: 3 units up
 $X(1, 1), P(3, 2), H(4, -3)$

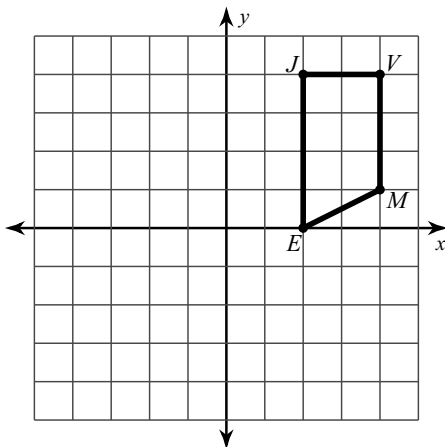
4) translation: 6 units left
 $T(1, 4), R(1, 5), P(4, 3)$

5) translation: 2 units left and 8 units up
 $F(1, -5), Y(0, -3), E(4, -3), G(4, -5)$

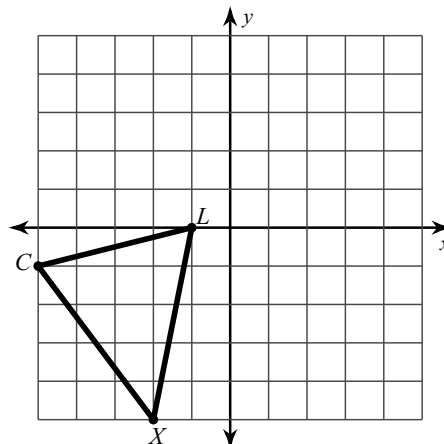
6) translation: 4 units right and 3 units down
 $C(-4, 0), F(-5, 1), Y(-3, 4), U(-1, 2)$

Graph the image of the geometric figure after the given rotation. Label the image accordingly.

7) rotation 180° about the origin



8) rotation 90° counterclockwise about the origin



Determine the coordinates of each rotated image without graphing. (A 90° clockwise rotation (about the origin) is the same as a 270° counterclockwise rotation.)

9) rotation 90° counterclockwise about the origin
 $A(-2, -3), T(-3, 1), H(1, 1), V(2, 0)$

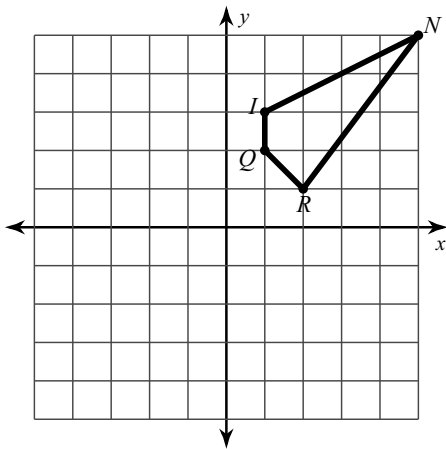
10) rotation 90° clockwise about the origin
 $L(-2, 1), P(-1, 5), G(0, 5), E(3, 1)$

11) rotation 180° about the origin
 $H(-3, -1), N(-4, 4), J(-1, 2)$

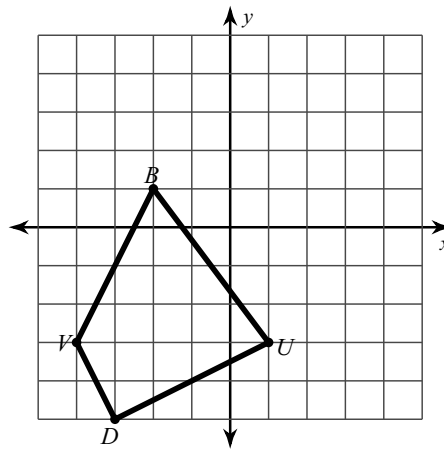
12) rotation 90° counterclockwise about the origin
 $S(-5, -5), P(-1, -1), J(0, -4)$

Graph the image of the geometric figure after the given reflection. Label the image accordingly.

13) reflection across the x-axis



14) reflection across the y-axis



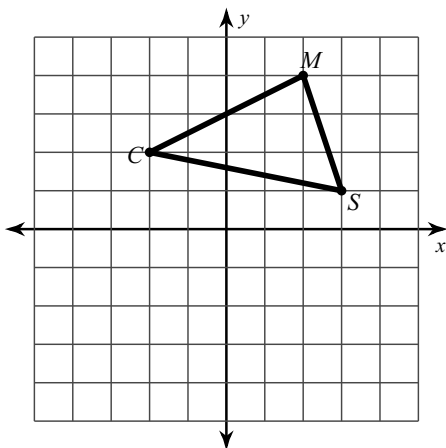
Determine the coordinates of each reflected image without graphing.

15) reflection across the x-axis
 $J(1, 1), W(3, 5), E(5, 3), L(5, 1)$

16) reflection across the y-axis
 $Z(3, 2), S(3, 3), A(4, 3), U(4, 2)$

How would you graph the image of a geometric figure that has been reflected over any horizontal ($y = \#$) or vertical ($x = \#$) line?

17) reflection across $y = 1$



18) reflection across $x = 2$

