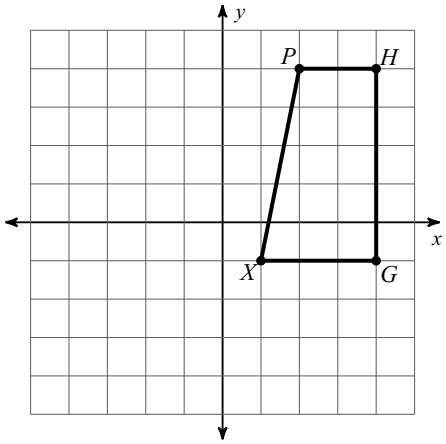
Precalculus Name_____

Assignment #12 - Transformations with Matrices

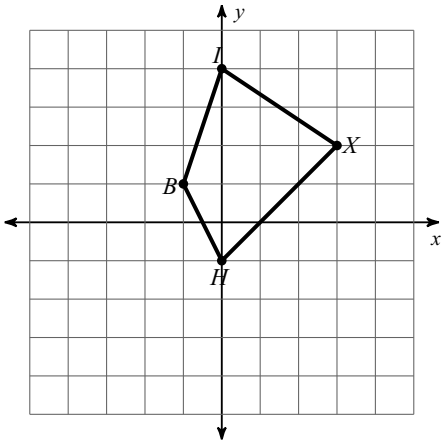
Date_____ Period____

Use Matrices to find the coordinates of the vertices of each figure after the given transformation. Then graph the image.

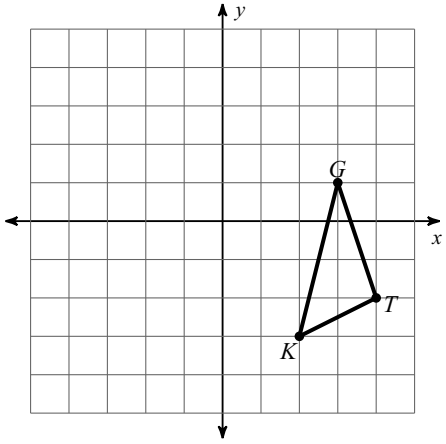
1) reflection across the y-axis



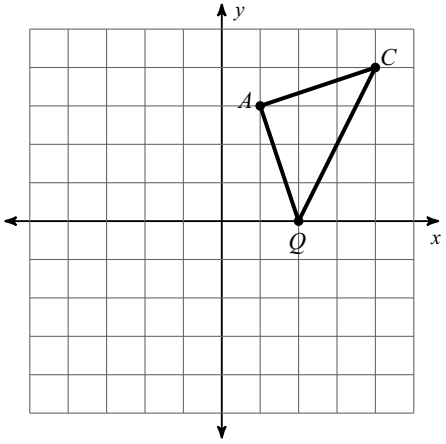
2) reflection across the y-axis



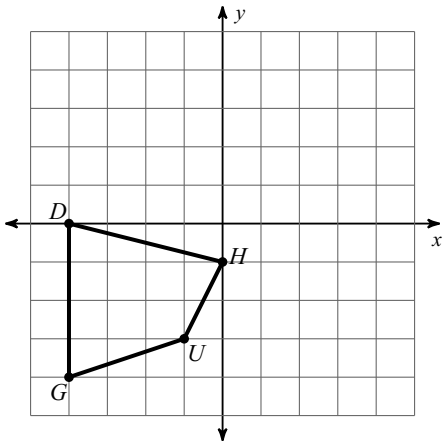
3) reflection across $y = x$



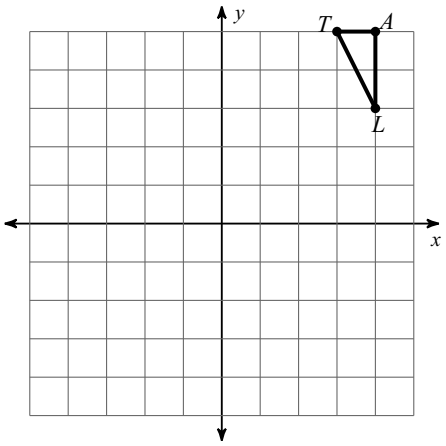
4) reflection across $y = -x$



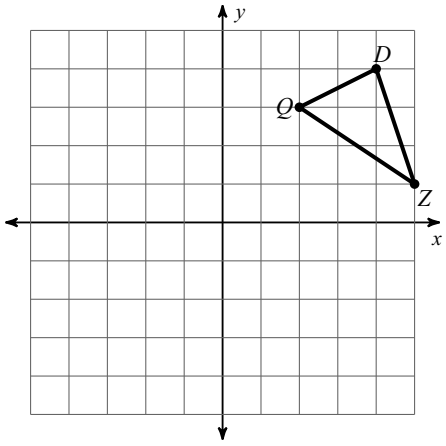
5) rotation 90° counterclockwise about the origin



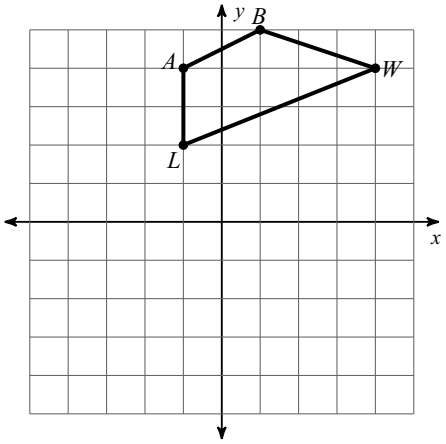
6) rotation 90° counterclockwise about the origin



7) rotation 270° counterclockwise about the origin



8) rotation 90° clockwise about the origin



Use Matrices to find the coordinates of the vertices of each figure after the given transformation.

9) reflection across $y = x$

$$\begin{bmatrix} 2 & 2 & 4 \\ 0 & 5 & 2 \end{bmatrix}$$

10) rotation 180° about the origin

$$\begin{bmatrix} -4 & -5 & -3 & -3 \\ -4 & 1 & 2 & -2 \end{bmatrix}$$

11) rotation 90° clockwise about the origin

$$\begin{bmatrix} 1 & 3 & 3 \\ -4 & -1 & -4 \end{bmatrix}$$

12) reflection across $y = -x$

$$\begin{bmatrix} -5 & -5 & -2 & -3 \\ -3 & -1 & 0 & -3 \end{bmatrix}$$