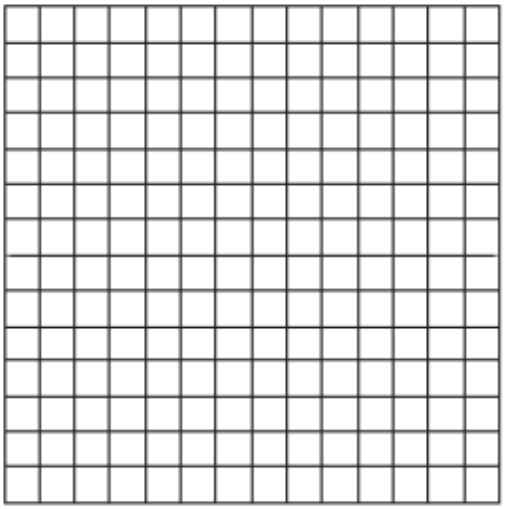
NAME _____ DATE _____ PERIOD _____

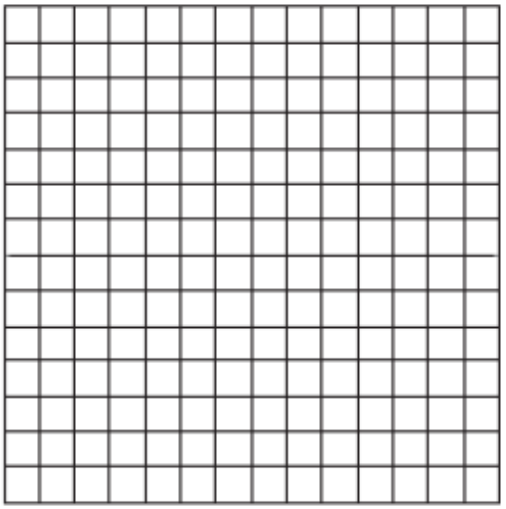
# *Lesson 4.1c_4.2c_ Construct Rotations Homework*

**Triangle XYZ has vertices at $X(3, 1)$, $Y(3, 7)$, and $Z(7, 1)$. Graph triangle $XYZ$ and its image after each rotation. Then give the coordinates of the vertices of the image.**

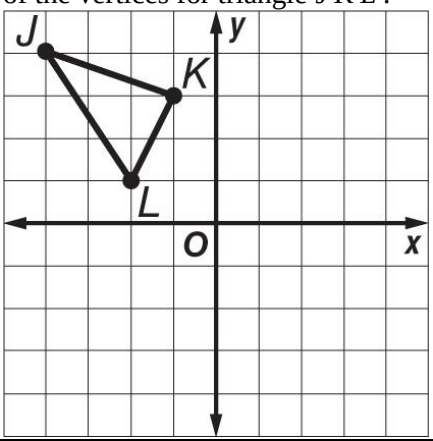
**1.** 180° counterclockwise about vertex $X$



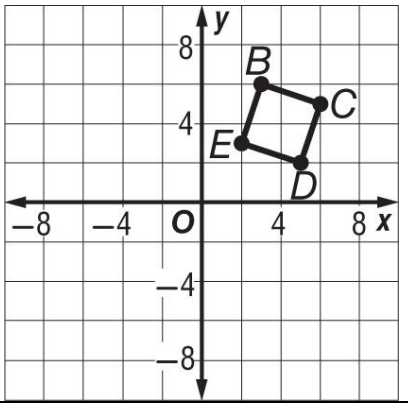
**2.** 90° clockwise about vertex $Z$



**3.** Triangle $JKL$ has vertices $J(-4, 4)$, $K(-1, 3)$, and $L(-2, 1)$. Graph the figure and its rotated image after a clockwise rotation of 90° about the origin. Then give the coordinates of the vertices for triangle $J'K'L'$.




**4.** Quadrilateral $BCDE$ has vertices $B(3, 6)$, $C(6, 5)$, $D(5, 2)$, and $E(2, 3)$. Graph the figure and its rotated image after a counterclockwise rotation of 180° about the origin. Then give the coordinates of the vertices for quadrilateral $B'C'D'E'$.




***WITHOUT GRAPHING:* *state the coordinates for the image under the rotation given.***

**5.** rhombus $WXYZ$ has vertices $W(-3, 4)$, $X(0, 7)$, $Y(3, 4)$, and $Z(0, 1)$; 90°

**6.** $\triangle FGH$ has vertices $F(2, 4)$, $G(5, 6)$, and $H(7, 2)$; 180°