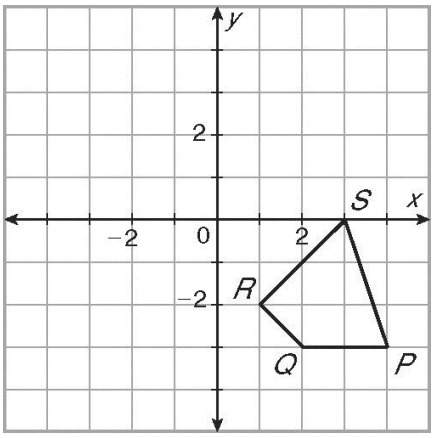
CC Geometry HW#_____ Name_____
Worksheet 9-3 and Review

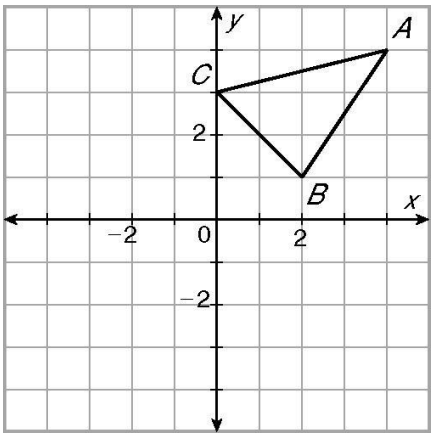
Date_____Per_____Col_____

Rotate the figure with the given vertices about the origin using the given angle of rotation. List the coordinates of the images.

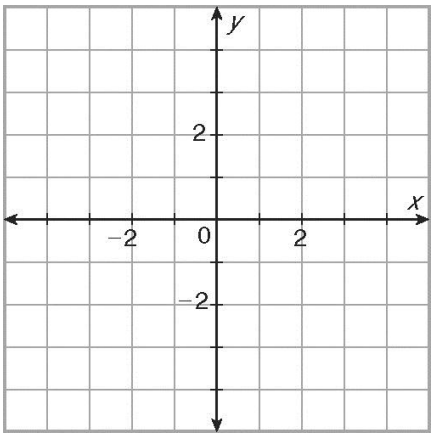
1. $P(4, -3)$, $Q(2, -3)$, $R(1, -2)$, $S(3, 0)$; 180°



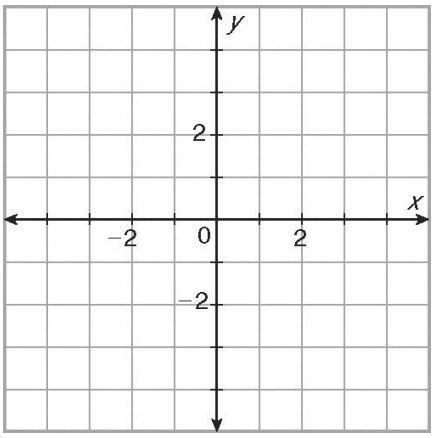
2. $A(4, 4)$, $B(2, 1)$, $C(0, 3)$; 90°



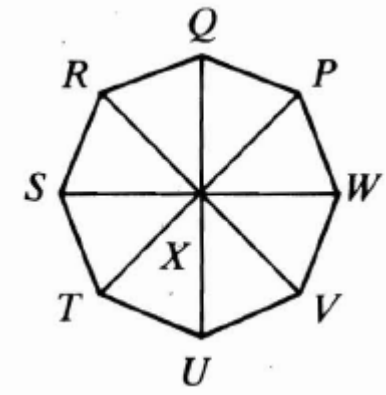
3. $D(-3, 2)$, $E(-4, 1)$, $F(-2, -2)$, $G(-1, -1)$; 90°



4. $J(2, 3)$, $K(3, 3)$, $L(1, -2)$; 180°



5. Octagon $PQRSTUVW$ with center X is divided into 8 congruent triangles. Use point X as the center of rotation.



a. A rotation of 45° maps $Q \rightarrow$ _____.

b. A rotation of 90° maps $T \rightarrow$ _____.

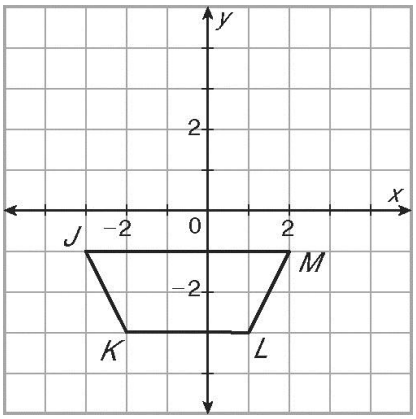
c. A rotation of 225° maps $S \rightarrow$ _____.

d. What angle maps $R \rightarrow U$? _____

e. What angle maps $Q \rightarrow W$? _____

6. Translate the figure with the given vertices along the given vector. List the coordinates of the image.

$J(-3, -1)$, $K(-2, -3)$, $L(1, -3)$, $M(2, -1)$; $\langle -1, 4 \rangle$



10. Leigh and Derek are tossing a Frisbee. Leigh stands at (2, 5) and throws the Frisbee to Derek at (11, 0). Find the translation vector from Leigh to Derek.