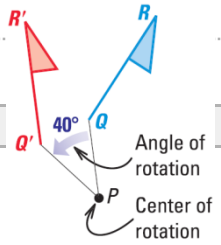
Geometry

4.3 Perform Rotations



Rotation

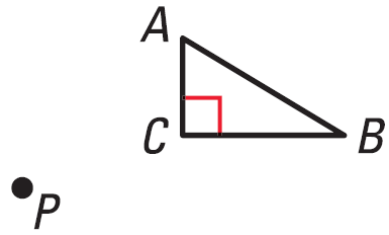
- Figure is _____ about a _____ called _____
- The amount of _____ is _____

Rotation Theorem

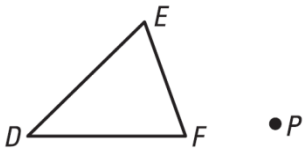
A rotation is a _____.

Draw a rotation of ΔABC about P.

1. Draw a segment from A to P.
2. Draw a ray to form a 120° angle with $\overline{PA}$
3. Draw A' so that $PA' = PA$
4. Repeat steps 1-3 for each vertex. Draw $\Delta A'B'C'$.



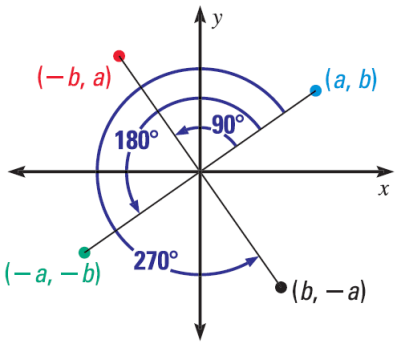
Draw a 50° counterclockwise rotation of ΔDEF about P.



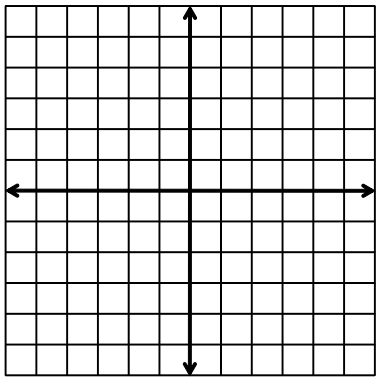
Geometry 4.3 Name: _____

Coordinate Rules for Counterclockwise Rotations about the Origin

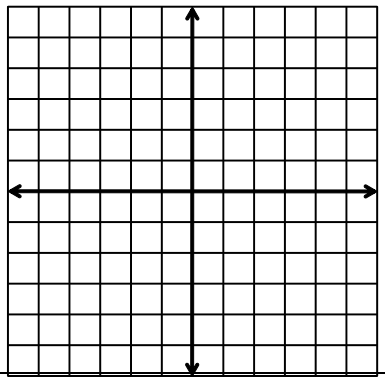
- 90°: (a, b) → _____
- 180°: (a, b) → _____
- 270°: (a, b) → _____



If E(-3, 2), F(-3, 4), G(1, 4), and H(2, 2). Find the image matrix for a 270° rotation about the origin.

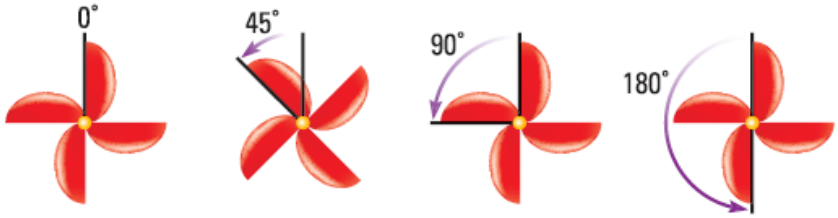


Graph $\overline{RS}$ with endpoints $R(1, -3)$ and $S(2, -6)$ and its image after the composition.
Rotation: 180° about the origin
Reflection: in the y-axis

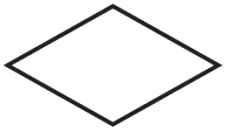


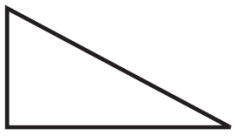
Rotational Symmetry

- The figure can be _____ to itself by a _____ of _____ or _____ about the _____ of the figure
- The center of rotation is called the _____



Does the figure have rotational symmetry? What angles?





Assignment: 188 #2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 40, 42, 43, 46, 47 = 20