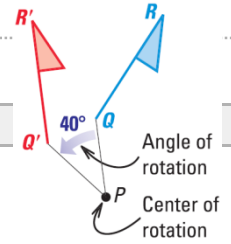


Geometry

4.3 Perform Rotations

Rotation

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

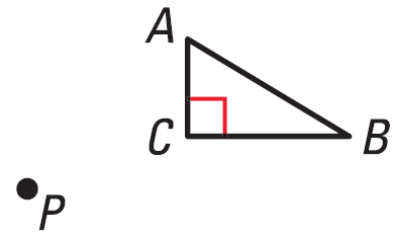


Rotation Theorem

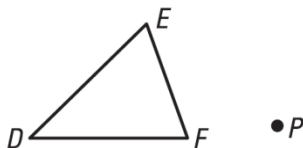
A rotation is a _____.

Draw a rotation of $\triangle ABC$ 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 $\triangle A'B'C'$.



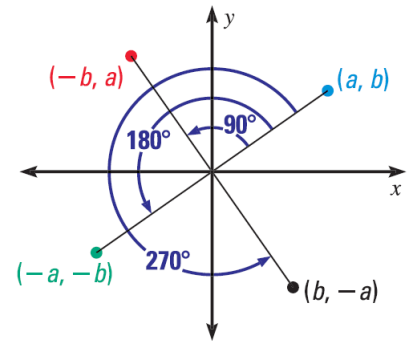
Draw a 50° rotation of $\triangle DEF$ about P .



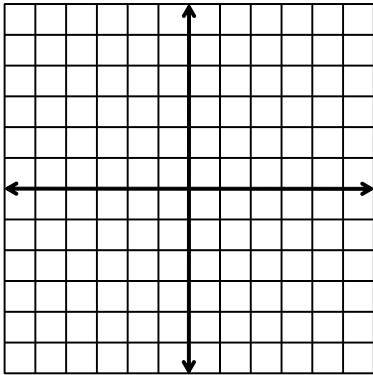
Coordinate Rules for Counterclockwise Rotations about the Origin

- $90^\circ: (a, b) \rightarrow$ _____
- $180^\circ: (a, b) \rightarrow$ _____
- $270^\circ: (a, b) \rightarrow$ _____

Name: _____



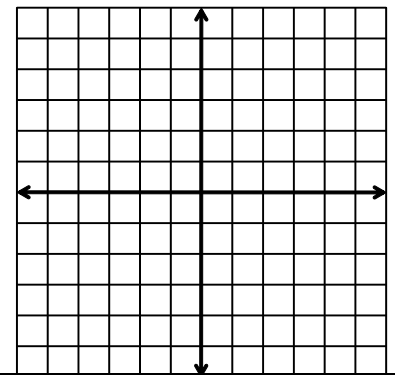
If $E(-3, 2)$, $F(-3, 4)$, $G(1, 4)$, and $H(2, 2)$. Find the image matrix for a 270° rotation about the origin.



Graph \overline{RS} with endpoints $R(1, -3)$ and $S(2, -6)$ and its image after the composition.

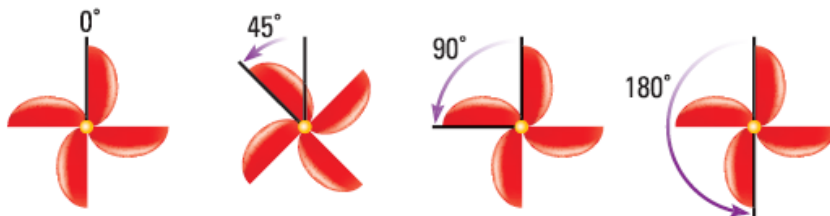
Rotation: 180° about the origin

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?

