

# Rotational Symmetry



A shape has rotational symmetry when it looks the same after a rotation.

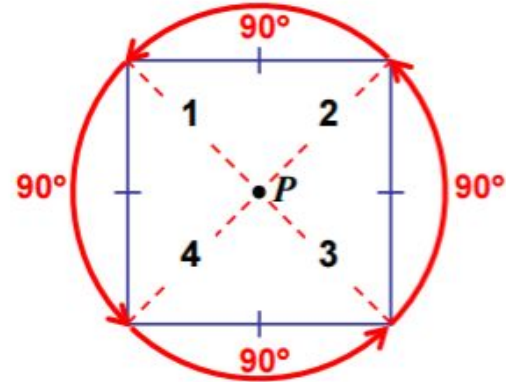


For a shape to have rotational symmetry, the rotation must be  $180^\circ$  or less.

# Magnitude of Rotation

This is the minimum amount of rotation needed for a shape to be mapped onto itself.

The point that is located in the middle, and that is the same distance from each vertex, is the center of symmetry



# Calculating the Magnitude of Rotation

The point that is equidistant from each vertex is the **center of symmetry**.

1. Draw the lines of symmetry. Each line must connect to at least one vertex.
2. Label center point  $P$ .
3. How many lines,  $n$ , are there from  $P$  to the vertices?
4. Calculate the magnitude of rotation,  $\frac{360^\circ}{n}$ .

$$\frac{360^\circ}{4} = 90^\circ$$

# Magnitude of Rotation

