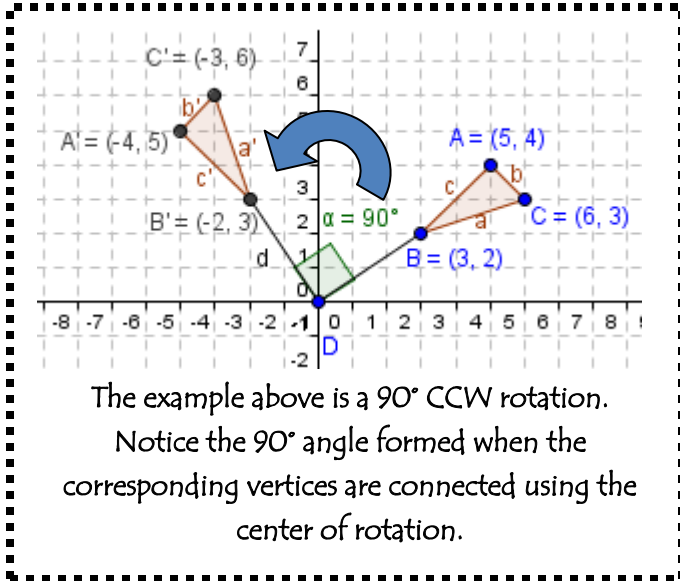


Rotations



Rotations are “turns” that can move clockwise (CW) or Counter Clockwise (CCW). How far you turn is measured in degrees. The most common rotations are 90° , 180° , or 270° . Rotations do not change the size or shape of the object, so the images would be **CONGRUENT**.

Effect on Coordinates: These only apply when the center of rotation is the origin.

When a point (x,y) is rotated **counterclockwise** about the origin, the following rules are true:

1. For a rotation of 90° $(x,y) \rightarrow (-y, x)$.
2. For a rotation of half turn or 180° $(x,y) \rightarrow (-x, -y)$.
3. For a rotation of 270° $(x,y) \rightarrow (y, -x)$.

When a point (x,y) is rotated **clockwise** about the origin, the following rules are true:

1. For a rotation of 90° $(x,y) \rightarrow (y, -x)$.
2. For a rotation of half turn or 180° $(x,y) \rightarrow (-x, -y)$.

Remember a coordinate pair is written as (x,y)