Rigid Transformation
Rotation

Rigid transformation: A movement that *preserves* the ***distance*** and ***angle measures*** of a shape. That is, it *preserves* the *size* and *shape* of the pre-image to the image.

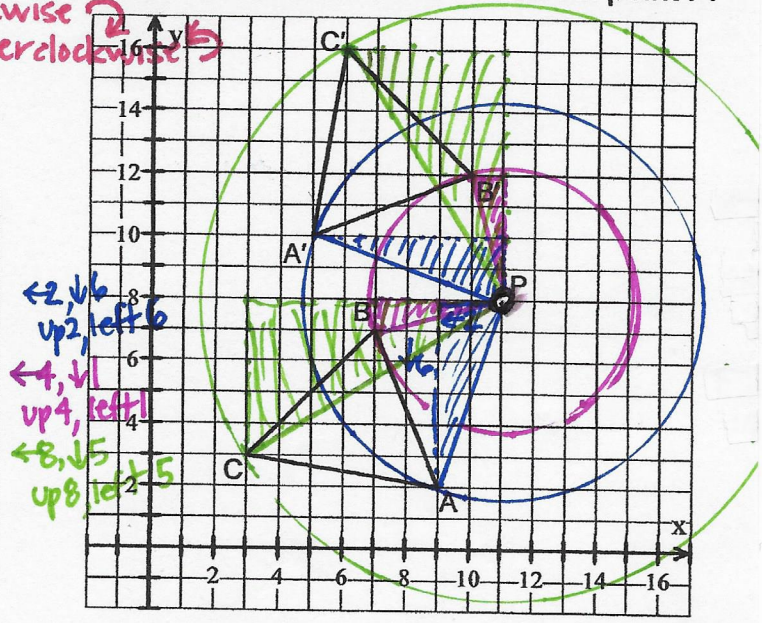
Rotation: A transformation that moves a set of points along concentric circles through the same angle of rotation (#degrees) around a fixed center point.

A rotation is specifically described by BOTH the direction (clockwise / counterclockwise) and degrees of the turn around a specific fixed center point.

Segments connecting corresponding points of the pre-image and image to center point:

- are the same LENGTH (radii of the same circle or Pythagorean Thm)
- form an angle = degree of rotation

ΔABC is rotated 90° clockwise about point P.



Example: Rotate ΔABC 90° counterclockwise about (4, 2) and list the new vertices.

A′ : (-2, -7)

B′ : (3, -9)

C′ : (1, -4)