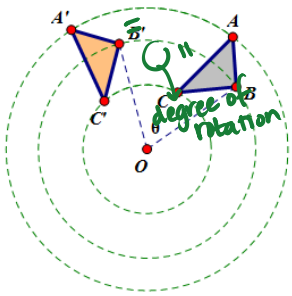
Day 4

Section 9.3 Notes - Rotations

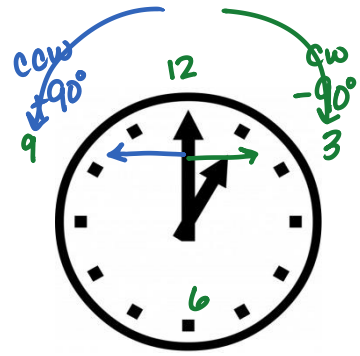
Target 9.3: Identify and draw rotations.



Every rotation must have 3 things.

1. center of rotation (a pt.)
2. degree of rotation (θ)
3. direction of rotation
   - ★ clockwise = negative direction
   - ★ counterclockwise = positive direction

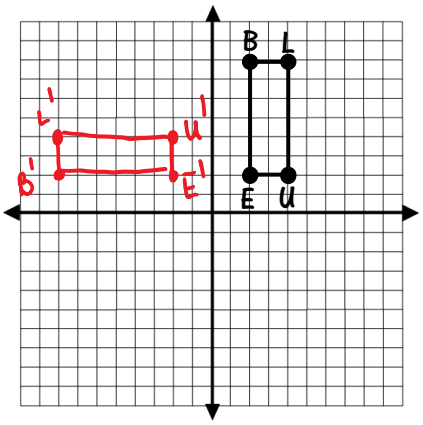
Note: distance from preimage to center of rotation is equal to the distance from center to image.



Part 1: Rotations: Using the preimage, we will rotate the figure 90° , 180°, or 270° in the positive direction which means counter clockwise about the origin.

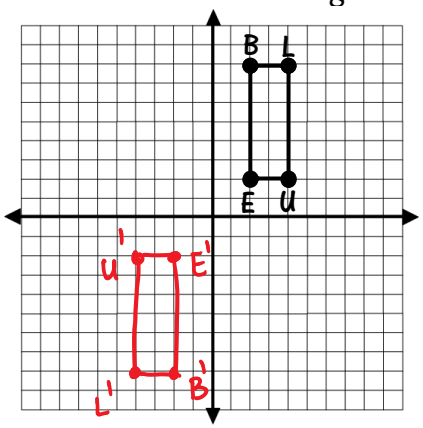
ccw once

1. Rotate 90° about the origin = $R_{(90°, (0,0))}$



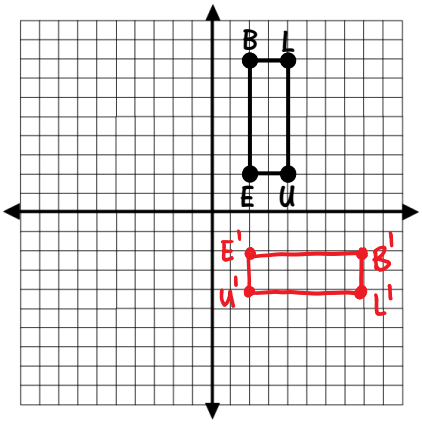
ccw 2 times

2. Rotate 180° about the origin = $R_{(180°, (0,0))}$



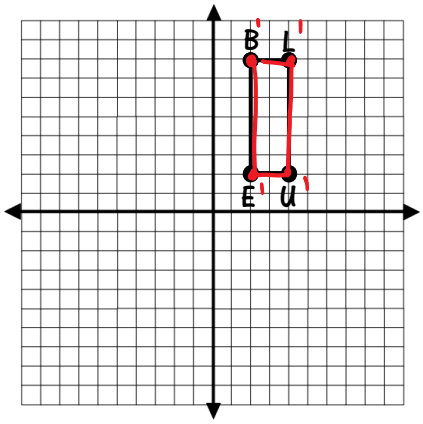
ccw 3 times

3. Rotate 270° about the origin = $R_{(270°, (0,0))}$



ccw 4 times.. wait!! it's the same

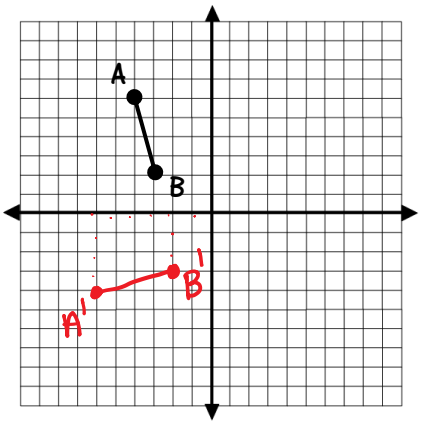
4. Rotate 360° about the origin = $R_{(360°, (0,0))}$



Part 2: Individual Practice: Using the preimage, rotate the figure 90° , 180°, or 270° in the positive direction about the origin.

CCW once

5. Rotate 90° about the origin = $R_{(90°, (0,0))}$

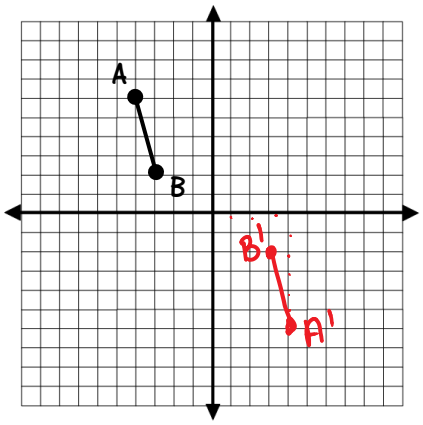


A'(-6,-4)

B'(-2,-3)

CCW twice

6. Rotate 180° about the origin = $R_{(180°, (0,0))}$

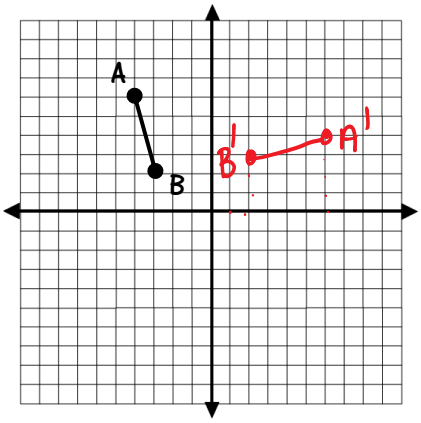


A'(4,-6)

B'(3,-2)

CCW 3 times

7. Rotate 270° about the origin= $R_{(270°, (0,0))}$

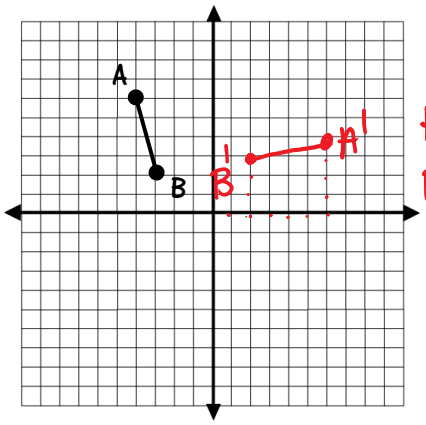


A'(6,4)

B'(2,3)

8. Rotate -90° about the origin = $R_{(-90°, 0,0))}$

cw once!



A'(6,4)

B'(2,3)

**Which direction do you rotate if it is a negative degree?* CLOCKWISE 90°

☆ Rotating 270° is the same as -90°!

COOL!