

Lesson 5-6

<i>rotation</i>	
Definition "twist"	Example

<i>center of rotation</i>	
Definition	Example origin (0,0)

Rotations Around the Origin	
Type	Rule
180°	Multiply both coordinates by -1
90° clockwise	Multiply each x by -1; then switch x and y
90° counter-clockwise	Multiply each y by -1; then switch x and y

Example 3: Graphing Rotations on the Coordinate Plane

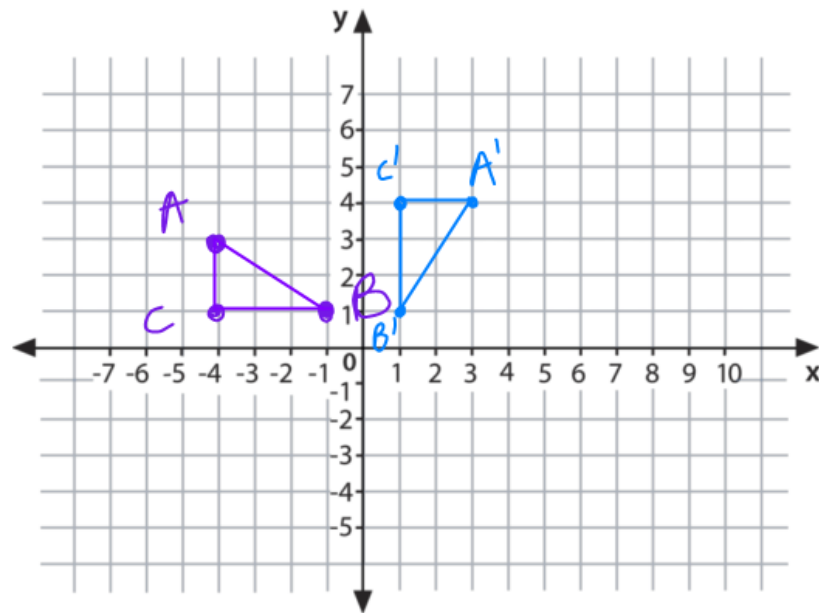
Graph triangle ABC. Then rotate it 90 degrees clockwise around the origin (multiply the x by -1 then switch x and y).

I Do

 $A(-4, 3), B(-1, 1), C(-4, 1)$

$$\textcircled{1} \begin{matrix} \cdot -1 & \cdot -1 & \cdot -1 \\ (4, 3) & (1, 1) & (4, 1) \end{matrix}$$

$$\textcircled{2} A'(3, 4) B'(1, 1) C'(1, 4)$$



Example 3: Graphing Translations on the Coordinate Plane

Graph triangle ABC. Then rotate the triangle 90 degrees counterclockwise about the origin.

You Do

$$A(1, -1), B(1, -3), C(4, -3)$$

(Handwritten corrections: A(1, -1) has a red '-1' under the x-coordinate; B(1, -3) has a red '-1' under the x-coordinate; C(4, -3) has a red '-1' under the x-coordinate.)

$$A'(1, 1) \quad B'(3, 1) \quad C'(3, 4)$$

