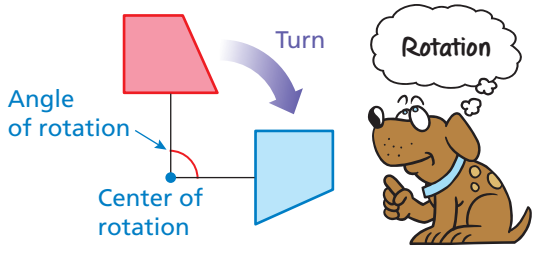
REVIEW: Rotations

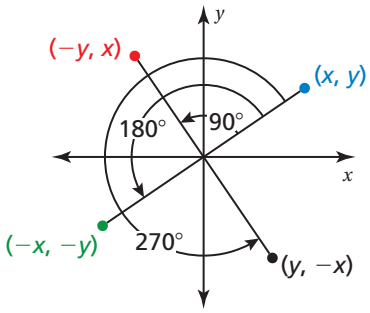
Name _____

Key Concept and Vocabulary



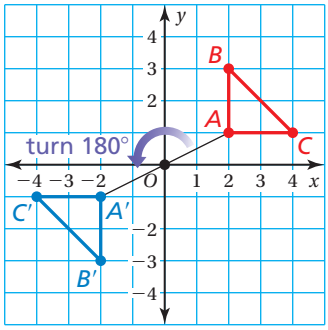
Visual Model

You can use coordinate rules for counterclockwise rotations about the origin.



Skill Example

1.



The coordinates of the image are $A'(-2, -1)$, $B'(-2, -3)$, and $C'(-4, -1)$.

Application Example

2. Your location on a carnival ride is represented by the point (2, 6) in a coordinate plane. At the end of the ride, your location has rotated 90° counterclockwise about the origin. What is your new location?

$$(x, y) \longrightarrow (-y, x)$$

$$(2, 6) \longrightarrow (-6, 2)$$

∴ Your new location is at $(-6, 2)$.

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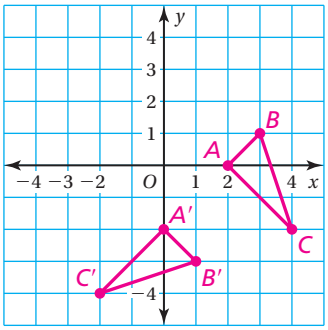
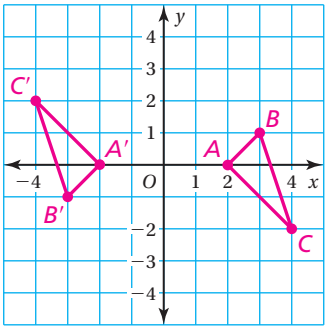
Check your answers at BigIdeasMath.com.

The vertices of a triangle are $A(2, 0)$, $B(3, 1)$, and $C(4, -2)$. Draw the figure and its image after the rotation about the origin.

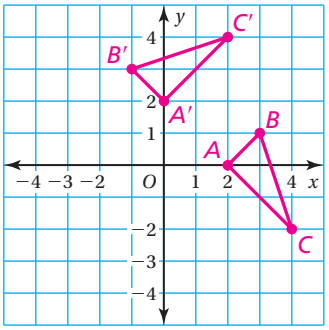
3. 270° counterclockwise



4. 180°



5. 270° clockwise



6. SPINNER A game spinner is shown in the coordinate plane. What coordinates do the spinner point to after a rotation of 90° clockwise about the origin?

$(-2, 4)$