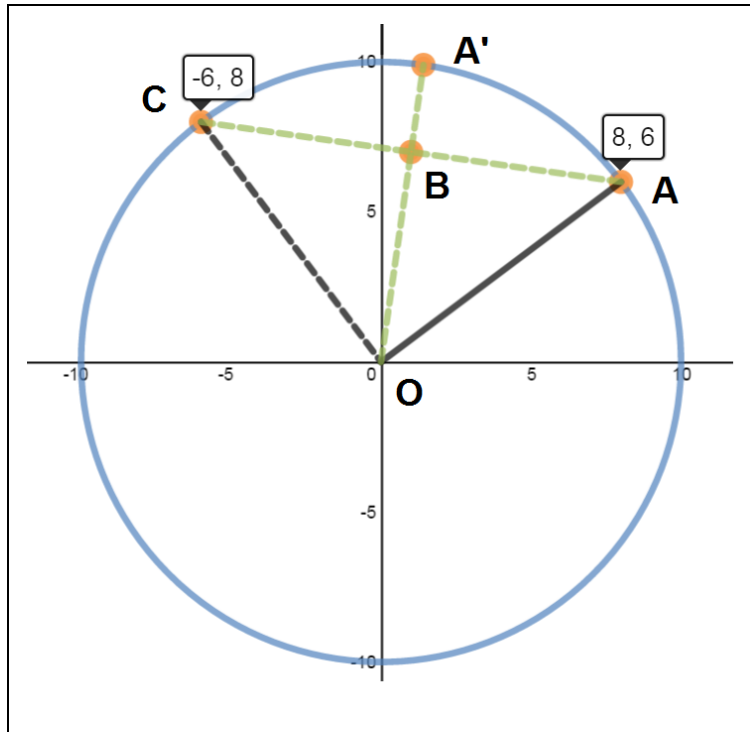


## Follow That Point!

1. Where does point A end up after it's been rotated 45 degrees counterclockwise? Use this diagram and the questions below to find point A's new coordinates.



- In the diagram above, what are the coordinates of point B?
  - What is the ratio of the length of line segment  $OB$  to line segment  $OA'$ ?
  - Use the coordinates of point B and the ratio of line segments to find point  $A'$ .
2. Rotate each of the following points by 45 degrees counterclockwise, and find their new coordinates.
- $(-6, 8)$
  - $(16, 12)$
  - $(24, 10)$
3. Suppose that you rotated by 45 degrees a point whose coordinates are  $(a, b)$ . What would its new coordinates be?