Triangle OAB has $O = (0,0)$

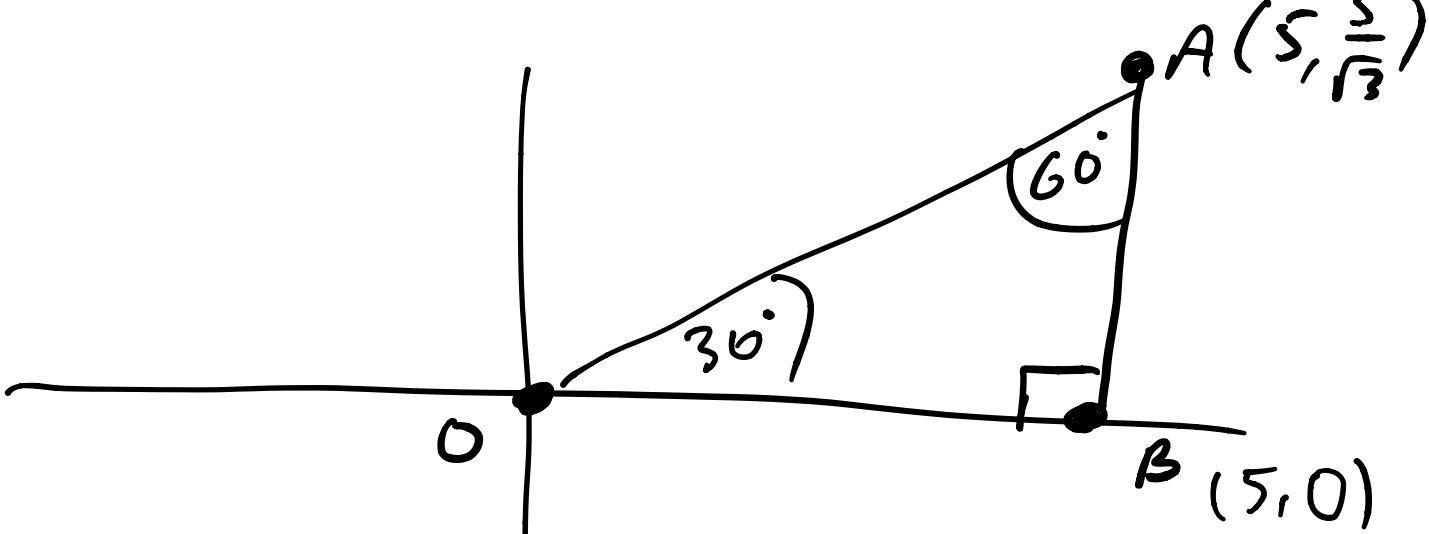
$B = (5,0)$

A in first quadrant

$\angle ABO = 90^\circ$

$\angle AOB = 30^\circ$

If OA rotated 90° counterclockwise, what are coordinates of image of A?



$$\tan(60^\circ) = \frac{OB}{AB} = \frac{5}{AB}$$

$$\frac{\sin(60^\circ)}{\cos(60^\circ)} = \frac{\sqrt{3}}{2} \div \frac{1}{2} = \sqrt{3}$$

So $\sqrt{3} = \frac{5}{AB} \Rightarrow AB = \frac{5}{\sqrt{3}}$

Rotate 90° counterclockwise:

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

So new coordinates are

$$\left(\frac{-5}{\sqrt{3}}, 5\right)$$