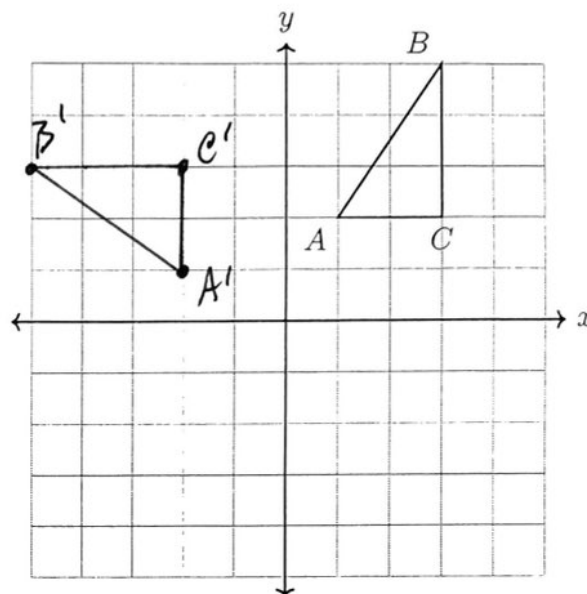**7.4 Extension: Rotation not around the origin**   CCSS.HSG.CO.A.5

1. Rotate the triangle 90° counterclockwise around the origin, $\triangle ABC \rightarrow \triangle A'B'C'$.
Complete the table of the coordinates and plot and label the image on the grid.

$A(1,2) \rightarrow A'(-2, 1)$

$B(3,5) \rightarrow B'(-5, 3)$

$C(3,2) \rightarrow C'(-2, 3)$
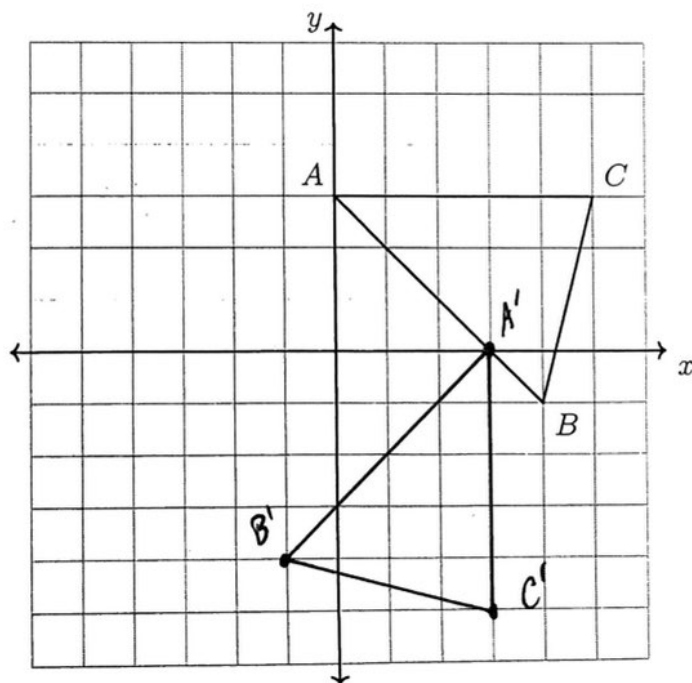

2. $\triangle ABC$ is shown with vertices $A(0,3)$, $B(4,-1)$, and $C(5,3)$. Rotate the triangle 90°
clockwise around the origin. Write down its coordinates in a table and plot and label it
on the graph.

$A(0,3) \rightarrow A'(3, 0)$

$B(4,-1) \rightarrow B'(-1,-4)$

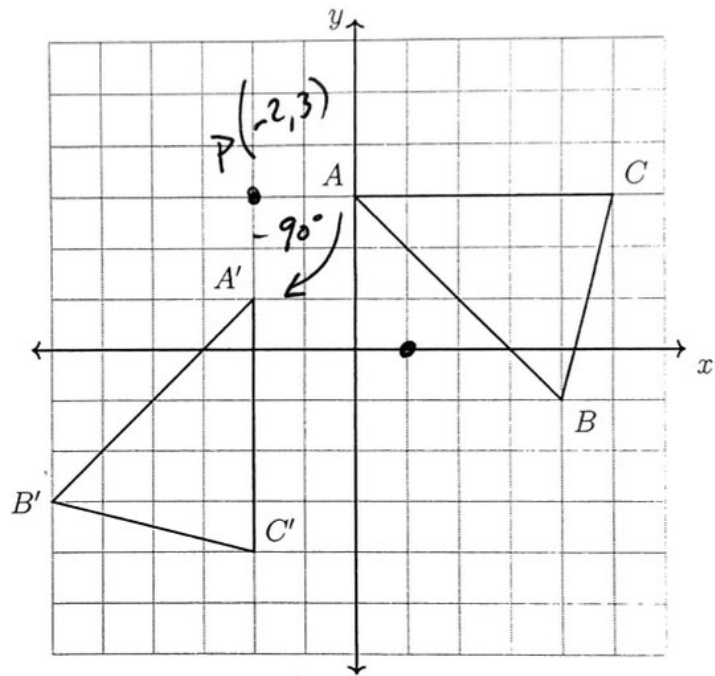$C(5, \frac{3}{4}) \rightarrow C'(3,-5)$

Challenge

3. A rotation *not* centered at the origin maps $\triangle ABC \to \triangle A'B'C'$ as shown in the diagram below. Mark the center of rotation on the grid and label it P. Tn the left, completely specify the transformation, including the coordinates of the center of rotation, the direction, and the magnitude in degrees.

Rotate 90° clockwise

Around P(-2,3)

4. Rotate $\triangle ABC$ 90° counterclockwise around the point P. (label the image)