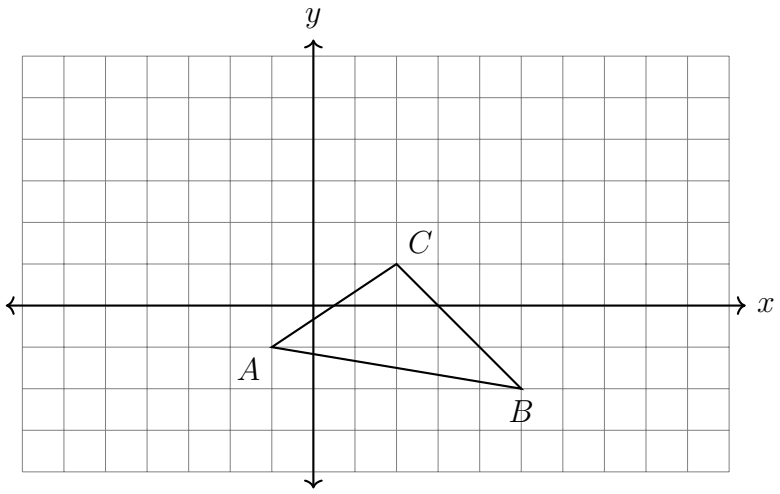
**8.6 Homework: Mixed congruence transformations** **CCSS.HSG.CO.A.5**

1. Do Now: Slide $\triangle ABC$ to the right three and up four. Label the image $\triangle A'B'C'$.




2. A vector from the origin $\overrightarrow{OA}$ is shown rotated counterclockwise around $O$.
   (a) Using a protractor, measure the angle of rotation
   (b) Mark and label the point $B(3, -4)$. Draw $\overrightarrow{OB}$.
   (c) Find the measure of the combined angle, $m\angle A'OB$.

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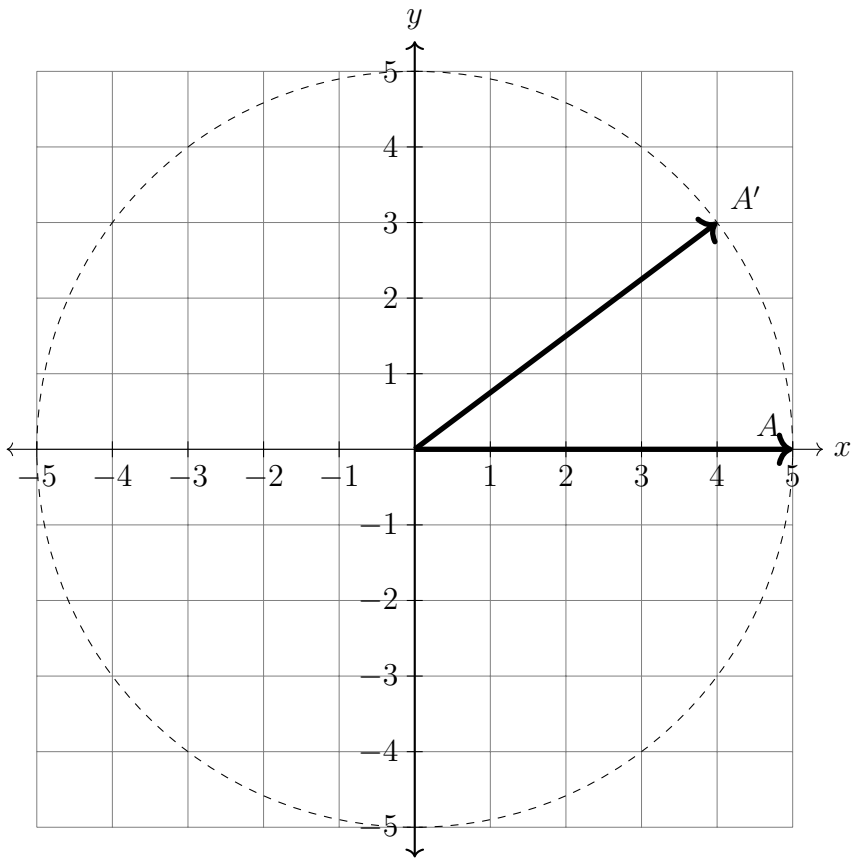
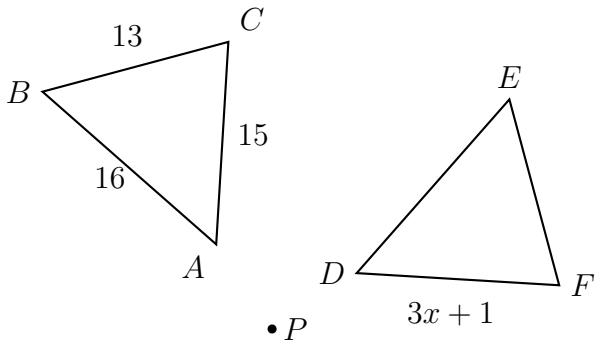


3. In the diagram below, $\triangle ABC$ with sides of 13, 15, and 16, is mapped onto $\triangle DEF$ after a clockwise rotation of 90° about point $P$.




(a) What is $A$ mapped to? $A \rightarrow$

(b) What corresponds to $F$?

(c) Given $DF = 3x + 1$. Find $x$.

4. On the axes below, graph the point $P(2, 4)$ and its image, $P'$, after a rotation of $90°$ counterclockwise around the origin. Label both points as a coordinate pair.