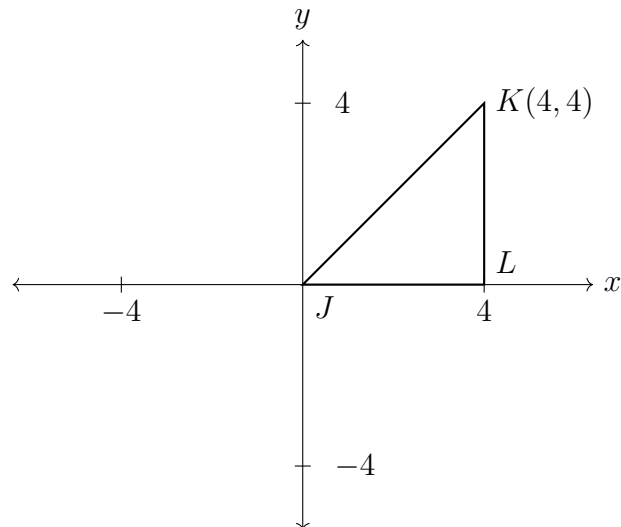


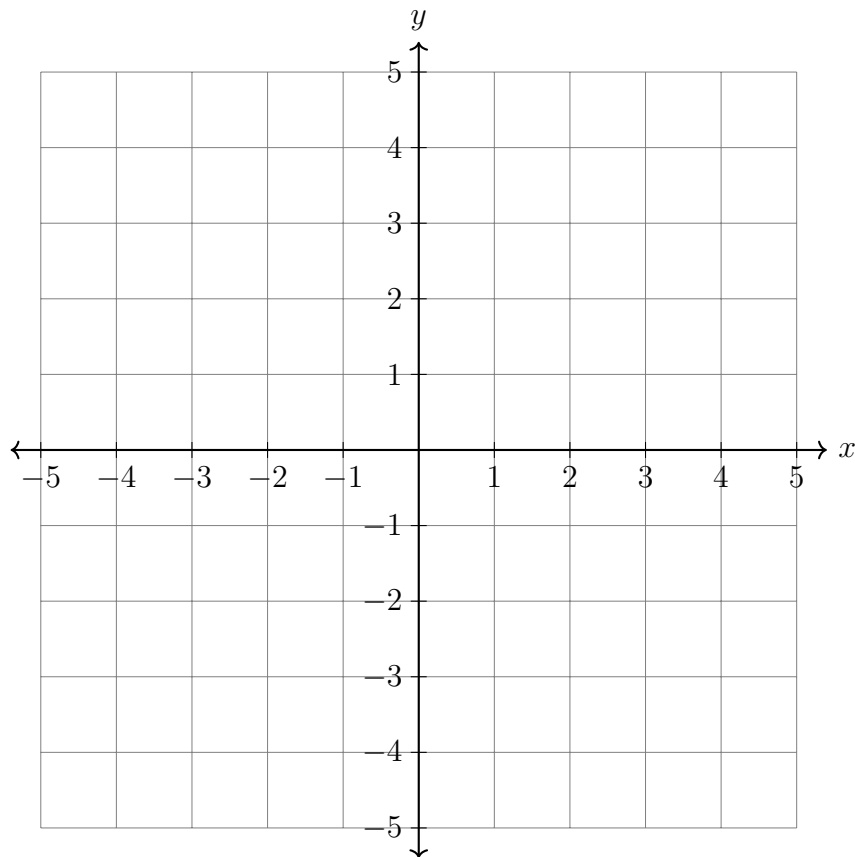
1.19 Classwork: Rotation

CCSS.HSG.CO.A.5

1. Rotate $\triangle JKL$ counterclockwise 90° around the origin, labeling the image $\triangle J'K'L'$.

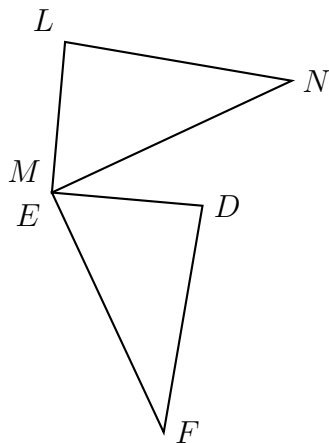


2. On the axes below, mark and label the origin, $O(0,0)$. Plot the point $P(4,1)$ and segment \overline{OP} . Graph its image, $\overline{O'P'}$, after a 90° counterclockwise rotation around the origin. Mark P' and write it down as a coordinate pair.



3. A rotation maps triangle DEF onto triangle LMN .

Write the letter or letters for each corresponding object.



(a) $E \rightarrow$

(b) $F \rightarrow$

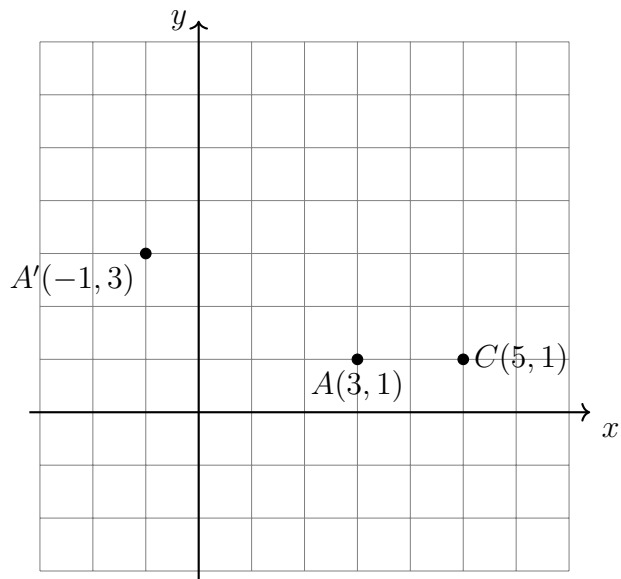
(c) $\overline{DF} \rightarrow$

4. A rotation centered at the origin maps A to A' , as shown, $A(3, 1) \rightarrow A'(-1, 3)$.

(a) Identify the rotation:

- (A) Clockwise 180°
- (B) Counter clockwise 180°
- (C) Clockwise 90°
- (D) Counter clockwise 90°
- (E) None of the above

- (b) Apply the same translation to $C(5, 1) \rightarrow C'(x, y)$. Plot and label the point C' as an ordered pair.

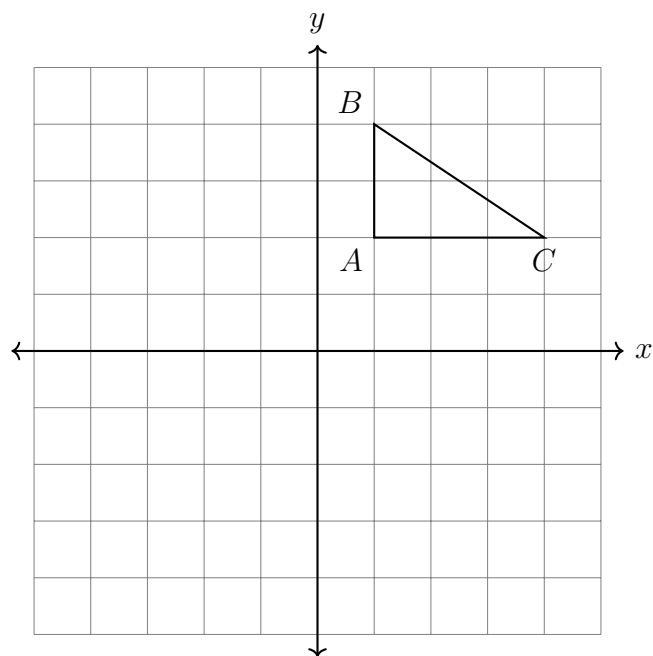


5. Rotate the triangle 90° clockwise around the origin, $\triangle ABC \rightarrow \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.

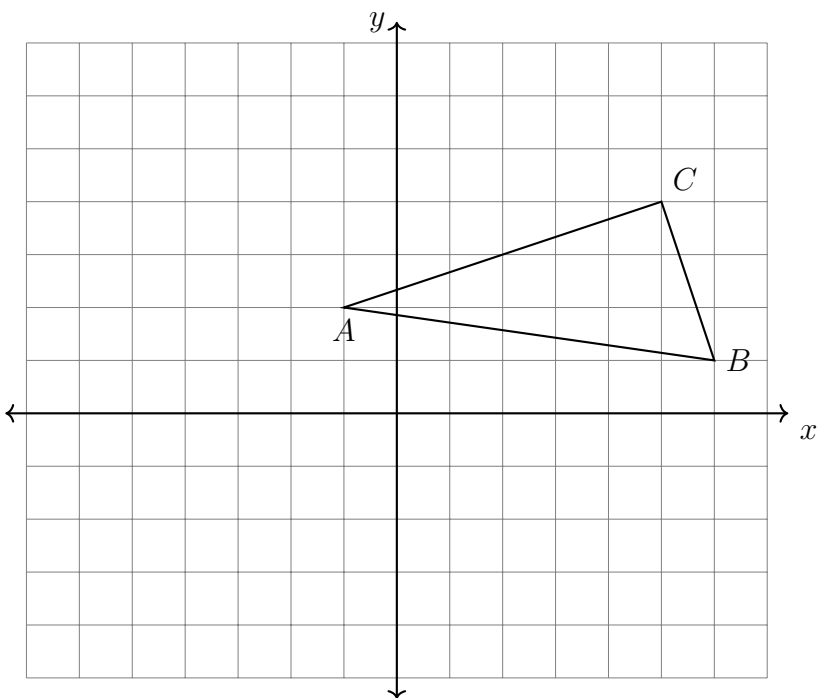
$$A(1, 2) \rightarrow$$

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

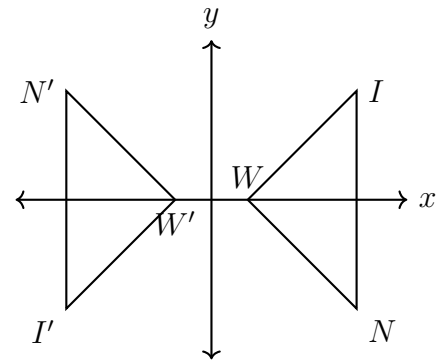
$$C(4, 2) \rightarrow$$



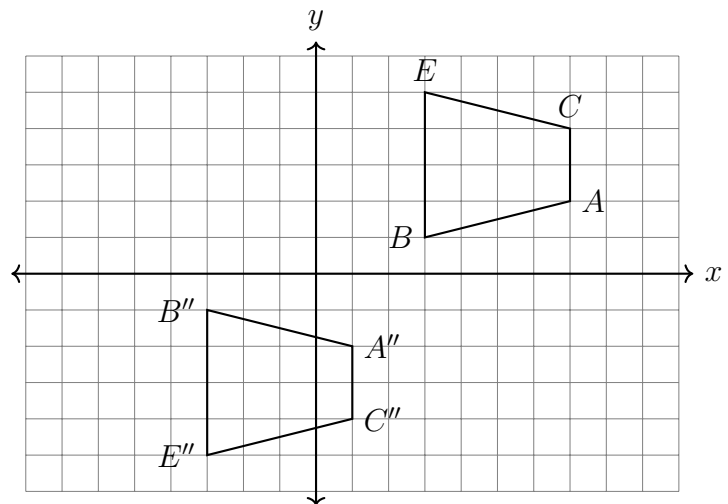
6. $\triangle ABC$ is shown with vertices $A(-1, 2)$, $B(6, 1)$, and $C(5, 4)$. Rotate the triangle 90° counter clockwise around the origin. Write down its coordinates in a table and plot and label it on the graph.



7. Given $\triangle WIN \cong \triangle W'I'N'$. Describe the rigid motion mapping $\triangle WIN \rightarrow \triangle W'I'N'$.



8. Determine and state the sequence of transformations applied to map $BECA$ to $B''E''C''A''$.



9. Determine and state the transformation mapping $\triangle NOP$ onto $\triangle QRP$.

