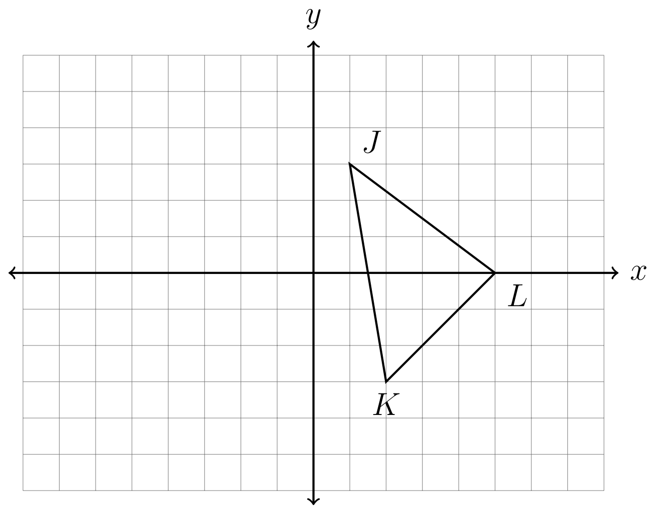
Name:

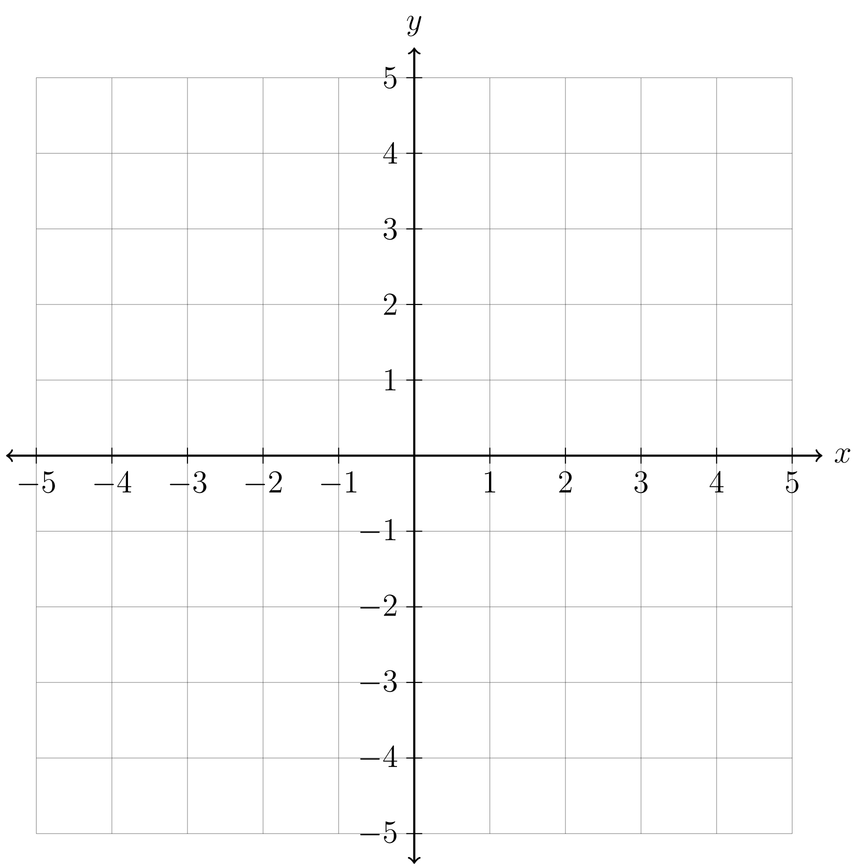
BECA / Dr. Huson / Geometry 5 Congruence Transformations

5.4 Classwork: Mixed congruence transformations **CCSS.HSN.RN.A.2**

1. Do Now: Reflect $\triangle JKL$ across the y-axis, labeling the image $\triangle J'K'L'$.

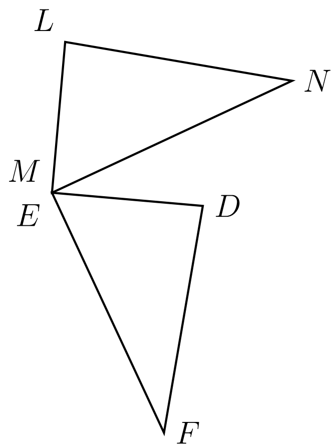


2. On the axes below, mark and label the origin, $O(0,0)$. Plot the point $P(4,1)$ and segment $\overline{OP}$. Graph its image, $\overline{O'P'}$, after a 90° counterclockwise rotation around the origin. Mark P' and write it down as a coordinate pair.



3. A rotation maps triangle DEF onto triangle LMN.

Write the letter or letters for each corresponding object.



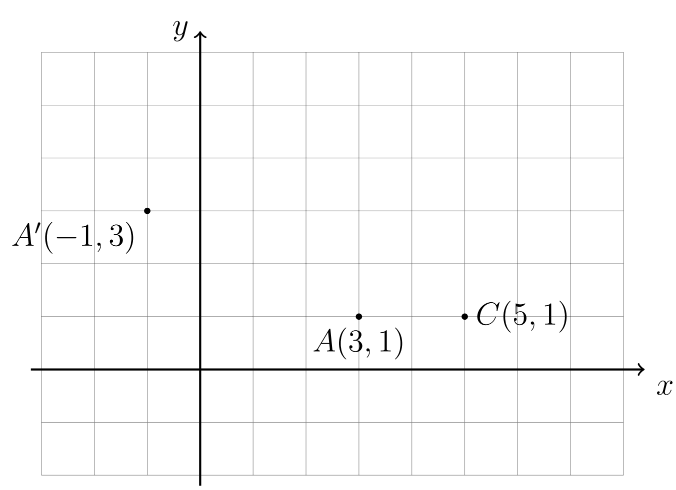
(a) $E \rightarrow$

(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) Which correctly identifies the rotation?
   (A) Clockwise 180°
   (B) Counter clockwise 180°
   (C) Clockwise 90°
   (D) Counter clockwise 90°
   (E) None of the above



(b) If the same translation is applied to $C(5,1) \rightarrow C'(x,y)$, plot and label the point C' as an ordered pair.

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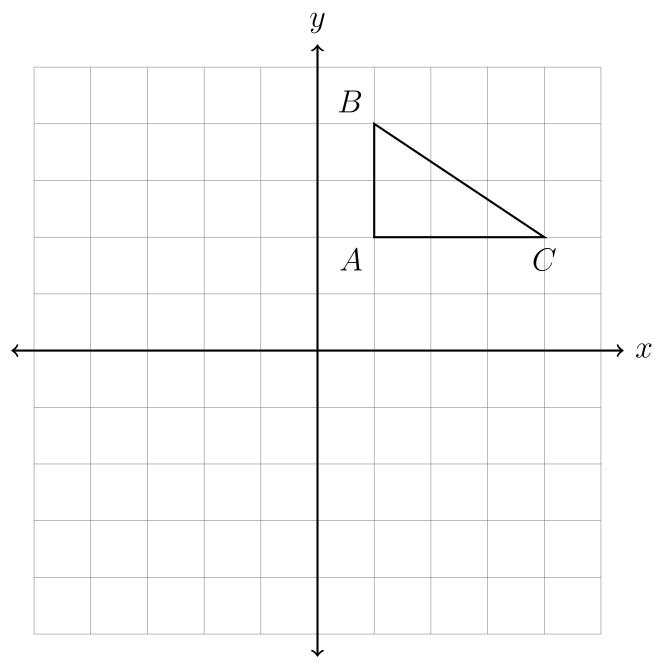
5. Rotate the triangle 90° clockwise around the origin, $\triangle ABC \rightarrow \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.

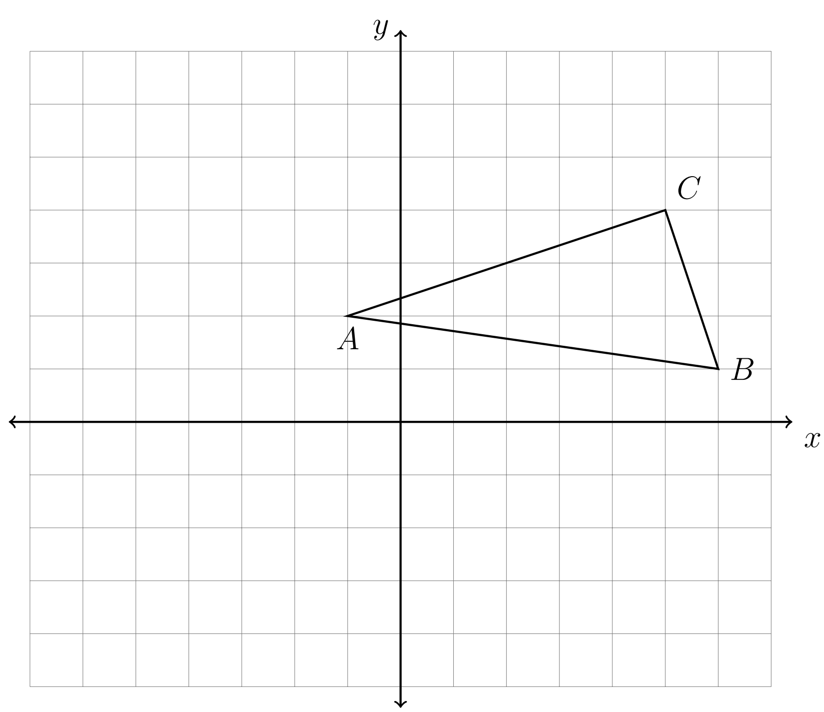
$A(1,2) \rightarrow$

$B(1,4) \rightarrow$

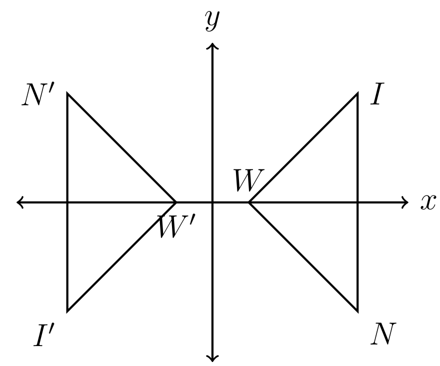
$C(4,2) \rightarrow$



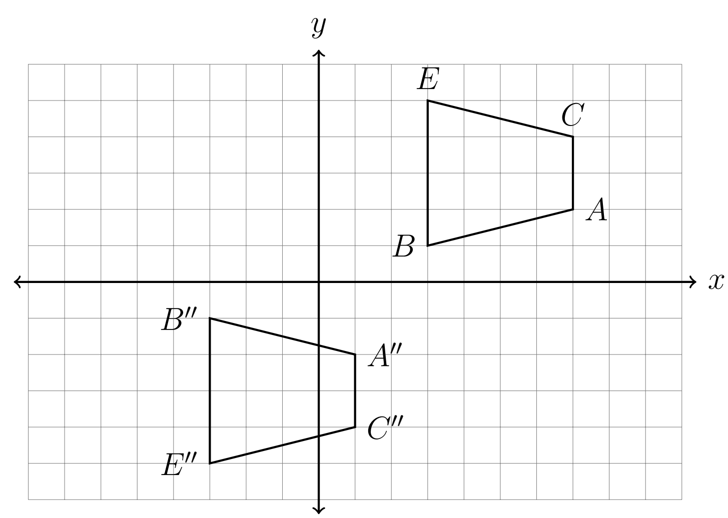
6. $\triangle ABC$ is shown with vertices $A(-1,2)$, $B(6,1)$, and $C(5,4)$. Rotate the triangle 90° counter clockwise around the origin. Write down its coordinates in a table and plot and label it on the graph.



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



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 $\triangle QRP$.