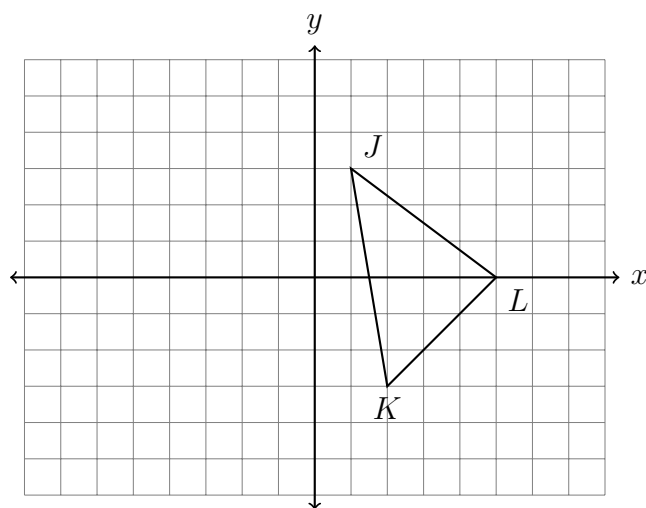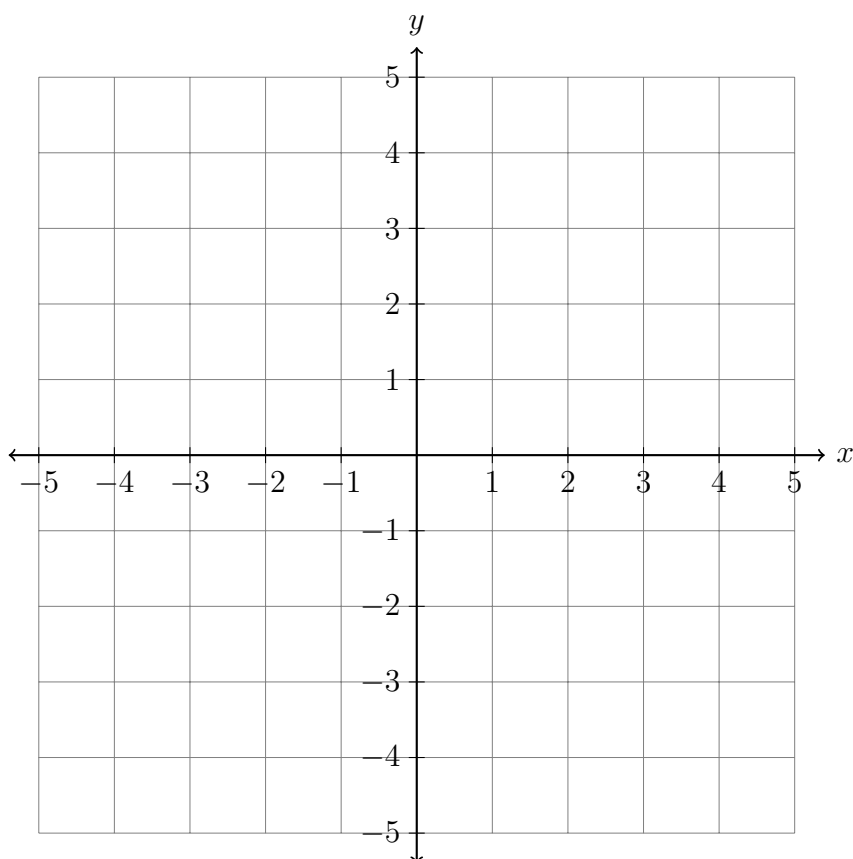Name:

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5.3 Classwork: Rotation   CCSS.HSG.CO.A.5

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.

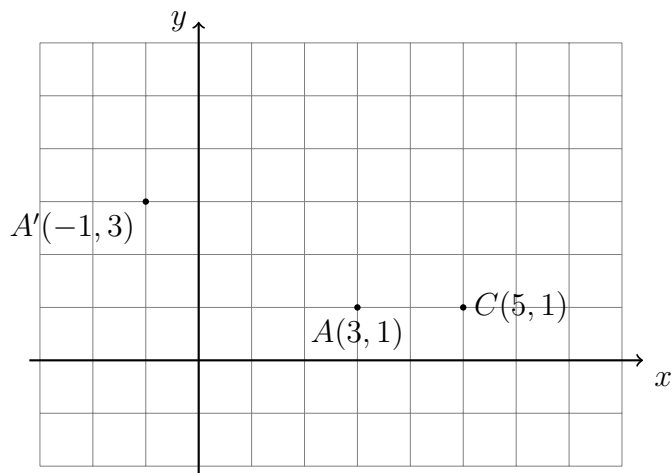   Write the letter or letters for each corresponding object.
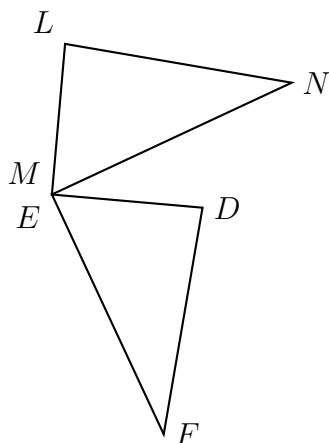
   (a) $E \to$

   (b) $F \to$

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

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

   (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 $C(5,1) \to C'(x,y)$, plot and label the point C' as an ordered pair.

Name:
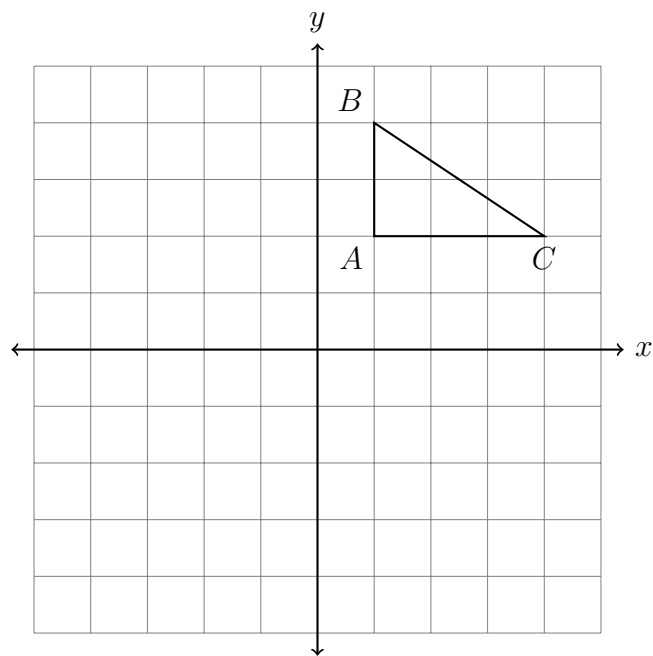
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5. Rotate the triangle $90°$ clockwise around the origin, $\triangle ABC \to \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.
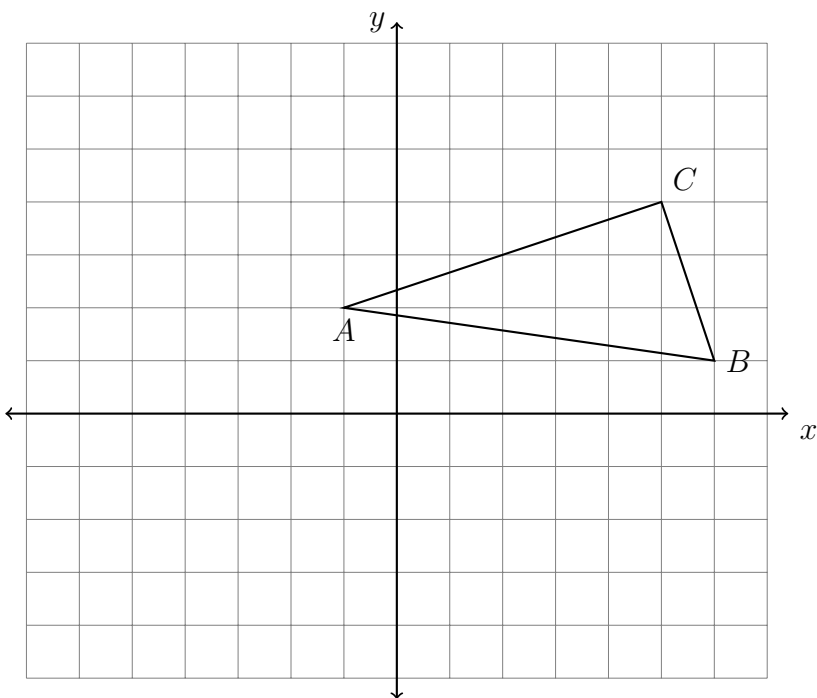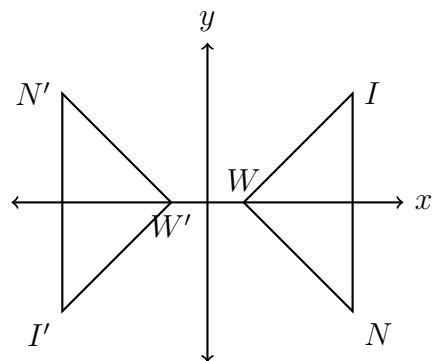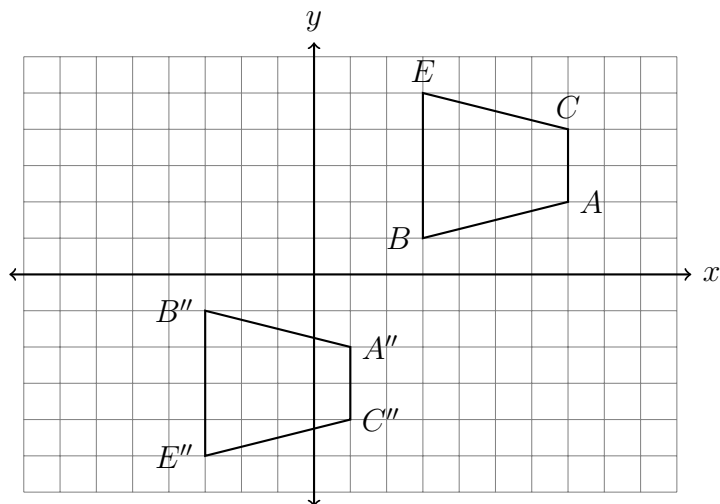
$A(1, 2) \to$

$B(1, 4) \to$

$C(4, 2) \to$

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 $\triangle QRP$.