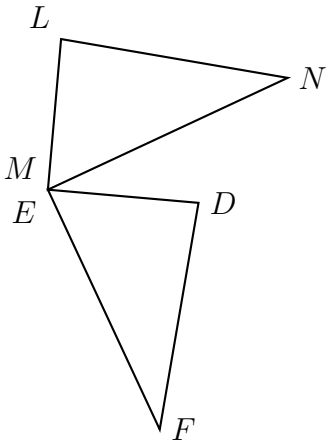
8.4 Classwork: Rotation

1. A rotation maps triangle DEF onto triangle LMN.

   Write the letter or letters for each corresponding object.



   (a) $E \rightarrow$

   (b) $F \rightarrow$

   (c) $DF \rightarrow$

2. 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°

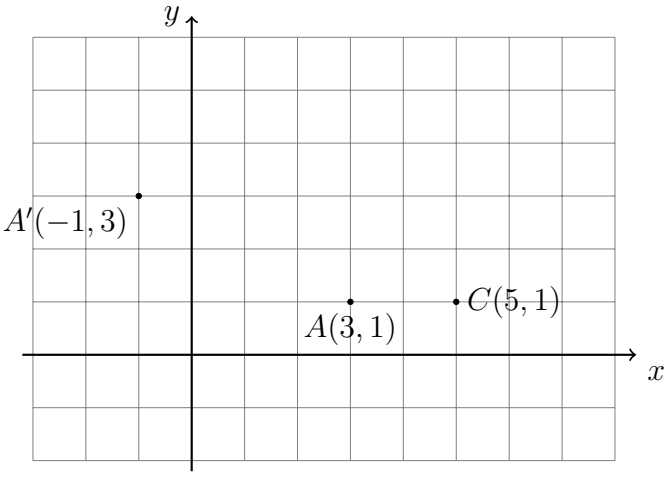
   (B) Counter clockwise 180°

   (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.

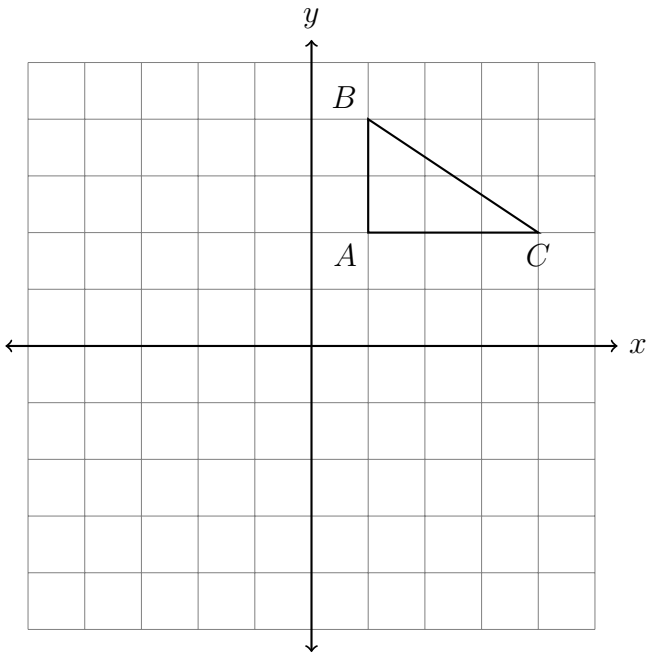


3. Rotate the triangle 90° clockwise around the origin, $\triangle ABC \rightarrow \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.

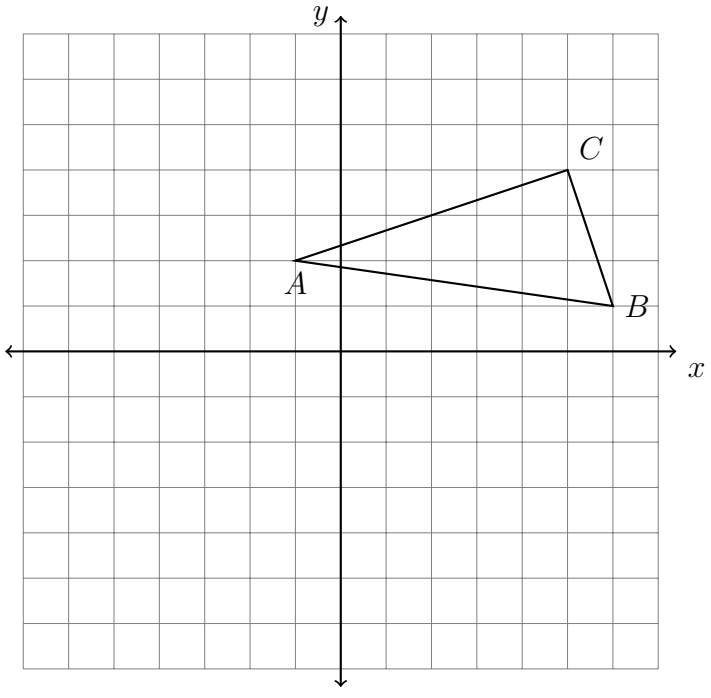
$A(1,2) \rightarrow$

$B(1,4) \rightarrow$

$C(4,2) \rightarrow$



4. $\triangle ABC$ 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.

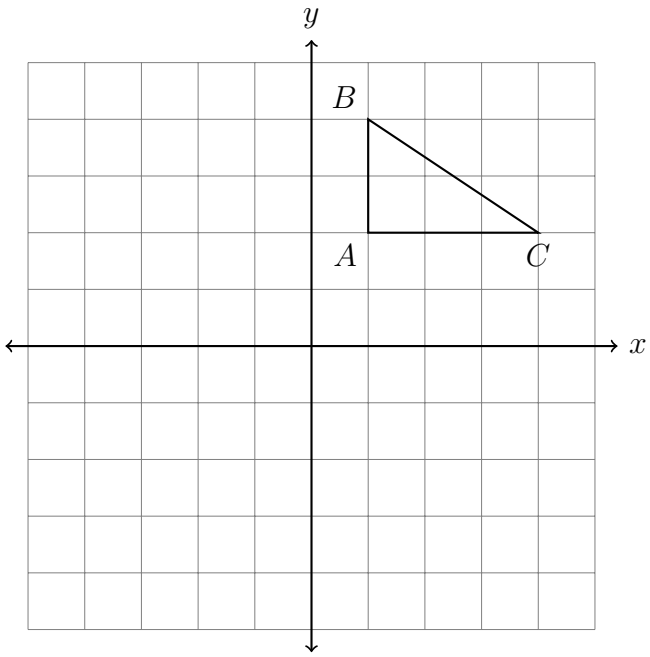


5. Rotate the triangle 90° clockwise around the origin, $\triangle ABC \to \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.

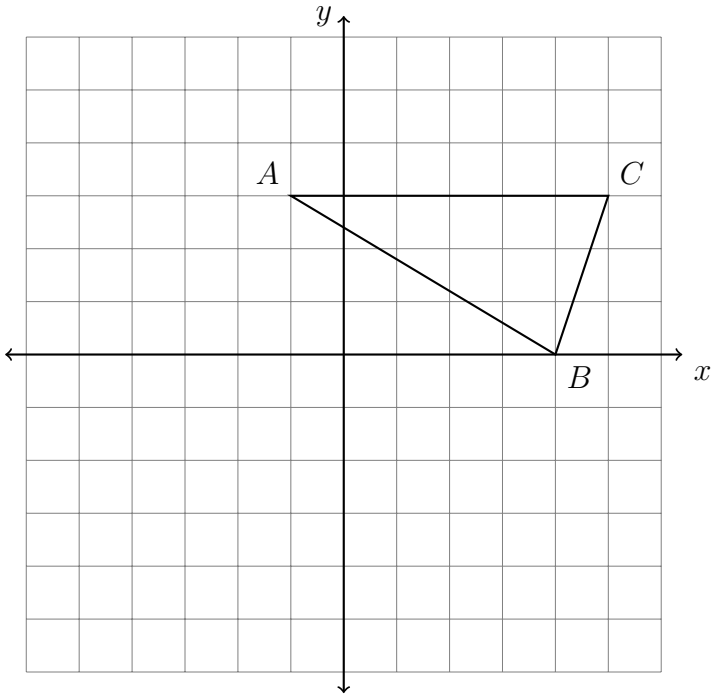
$A(1,2) \to$

$B(1,4) \to$

$C(4,2) \to$



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



7. A dilation centered at A maps $\triangle ABC \to \triangle ADE$. Given that $BC = 8$, $DE = 14$.

   Write the value of the scale factor k.