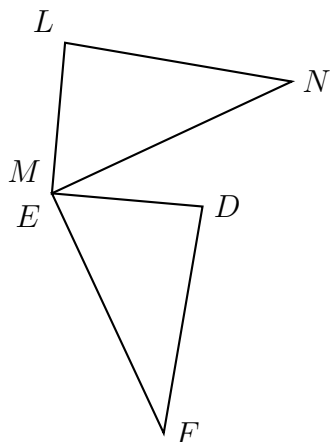


## 5.4 Rotation

1. Do Now: A rotation maps triangle  $DEF$  onto triangle  $LMN$ .

Write the letter or letters for each corresponding object.



(a)  $E \rightarrow$

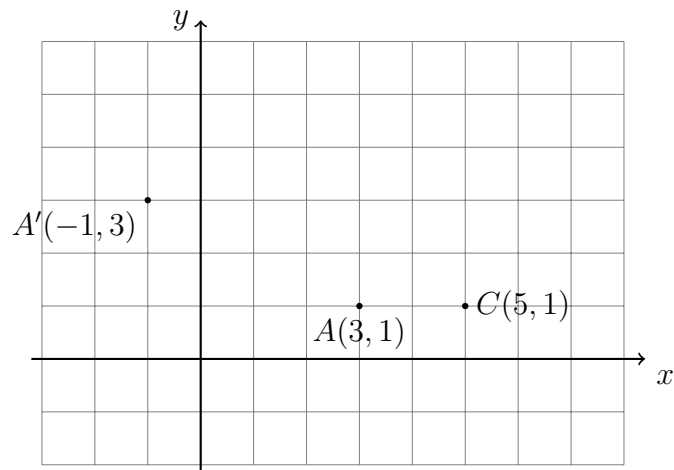
(b)  $F \rightarrow$

(c)  $DF \rightarrow$

2. Do Now: 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  $180^\circ$
- (B) Counter clockwise  $180^\circ$
- (C) Clockwise  $90^\circ$
- (D) Counter clockwise  $90^\circ$
- (E) None of the above



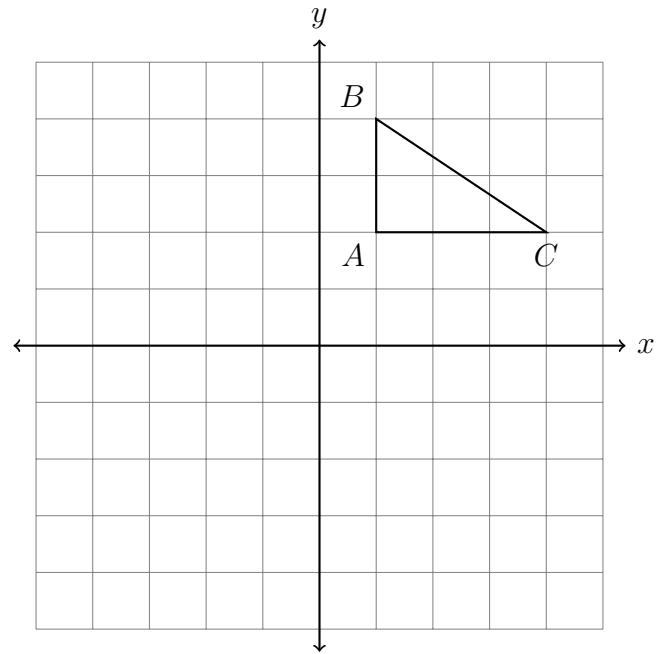
(b) If the same translation is applied to  $C(5, 1) \rightarrow C'(x, y)$ , plot and label the point  $C'$  as an ordered pair.

3. Rotate the triangle  $90^\circ$  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.

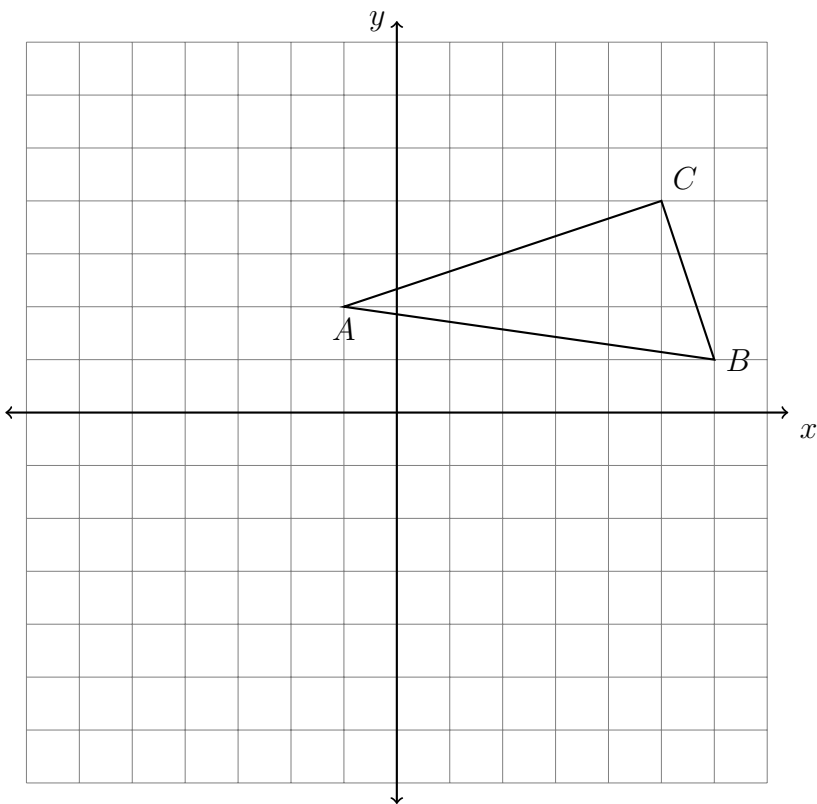
$$A(1, 2) \rightarrow$$

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

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

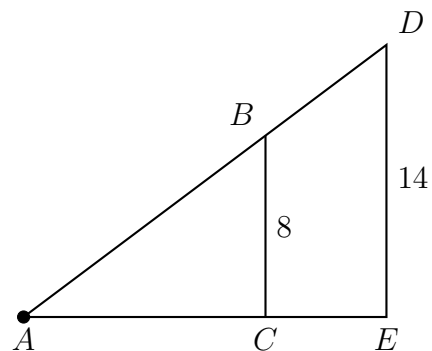


4.  $\triangle ABC$  is shown with vertices  $A(-1, 2)$ ,  $B(6, 1)$ , and  $C(5, 4)$ . Rotate the triangle  $90^\circ$  counter clockwise around the origin. Write down its coordinates in a table and plot and label it on the graph.



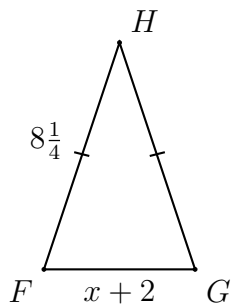
5. Do Now: A dilation centered at  $A$  maps  $\triangle ABC \rightarrow \triangle ADE$ . Given that  $BC = 8$ ,  $DE = 14$ .

Write the value of the scale factor  $k$  in the box.



6. Exam review: The perimeter of the isosceles  $\triangle FGH$  is  $19\frac{1}{2}$  with  $\overline{FH} \cong \overline{GH}$ . If  $FG = x + 2$  and  $FH = 8\frac{1}{4}$ , find  $x$ .

Show your work with an equation.



Write the value of  $x$  in the box.