Unit 8: Congruence transformations

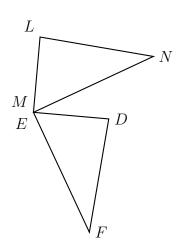
6 January 2023

Name:

## 8.4 Classwork: Rotation

1. A rotation maps triangle DEF onto triangle LMN.

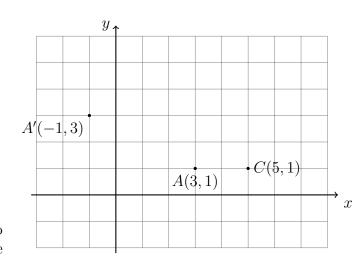
Write the letter or letters for each corresponding object.



- (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?

point C' as an ordered pair.

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



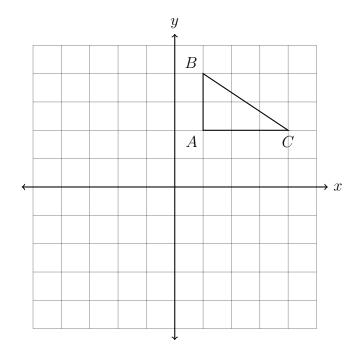
(b) If the same translation is applied to  $C(5,1) \to C'(x,y)$ , plot and label the

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.

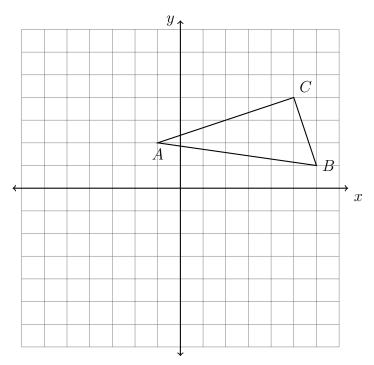
$$A(1,2) \rightarrow$$

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

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



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.

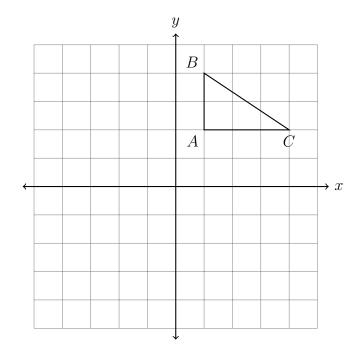


5. Rotate the triangle 90° clockwise around the origin,  $\triangle ABC \rightarrow \triangle A'B'C'$ . Complete the table of the coordinates and plot and label the image on the grid.

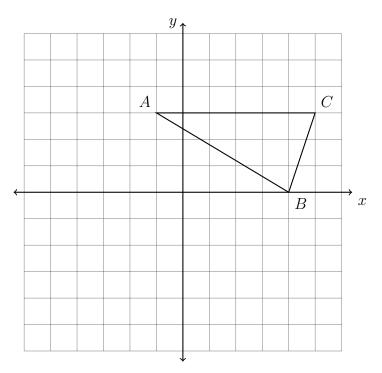
$$A(1,2) \rightarrow$$

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

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



6.  $\triangle ABC$  is shown with vertices A(-1,3), 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  $\triangle ABC \rightarrow \triangle ADE$ . Given that BC = 8, DE = 14. Write the value of the scale factor k.

