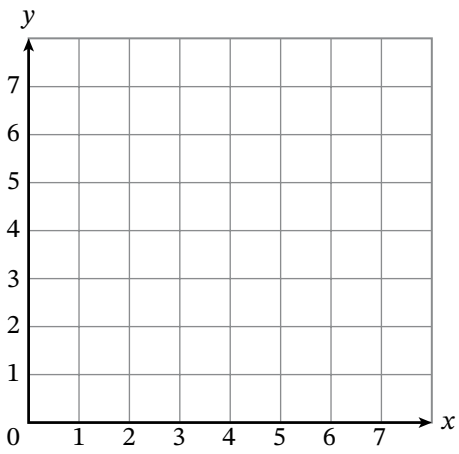
12

Name _____ Date _____

1. Use the coordinate plane to complete parts (a)–(c).

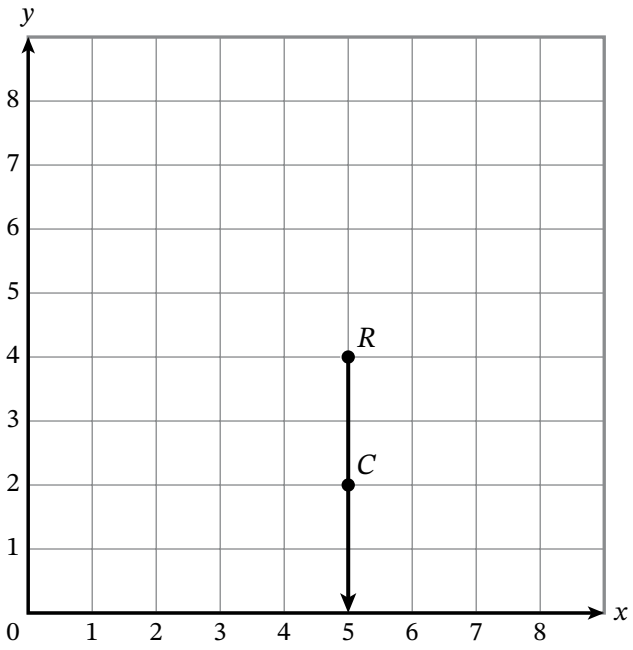


a. Draw a horizontal line segment with a length of 4 units and one endpoint at (2, 4).

b. Write the ordered pair for the other endpoint.

c. All points on the line segment have the same _____-coordinate but different _____-coordinates.

2. Use the graph of $\overleftrightarrow{RC}$ to complete parts (a)–(d).



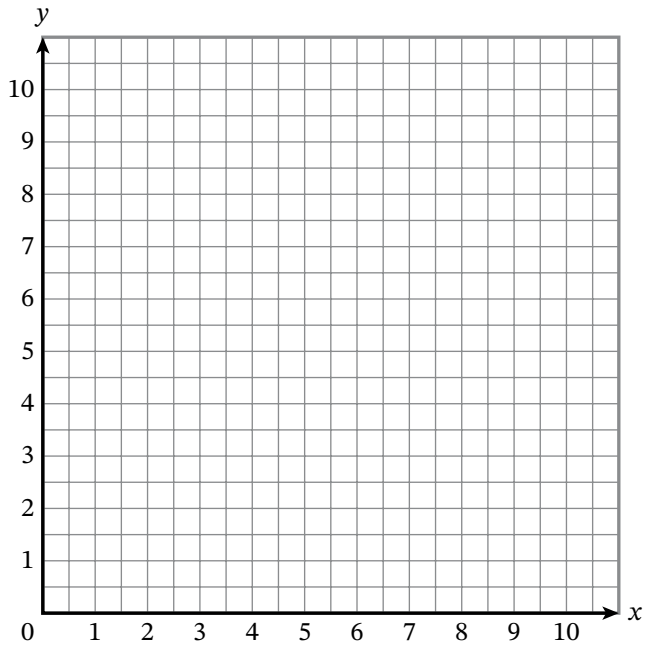
a. Plot point G so that $\angle CRG$ is a right angle.

b. Plot point F so that $\angle CRF$ is an obtuse angle.

c. Plot point M so that $\angle CRM$ is an acute angle.

d. Explain how you know $\angle CRM$ is an acute angle.

3. Use the coordinate plane to complete parts (a)–(e).



a. Plot and label the following vertices: $D\left(1\frac{1}{2}, 2\right)$, $E\left(1\frac{1}{2}, 8\right)$, $F(4, 8)$, $G(4, 2)$. Connect the vertices to create polygon *DEFG*.

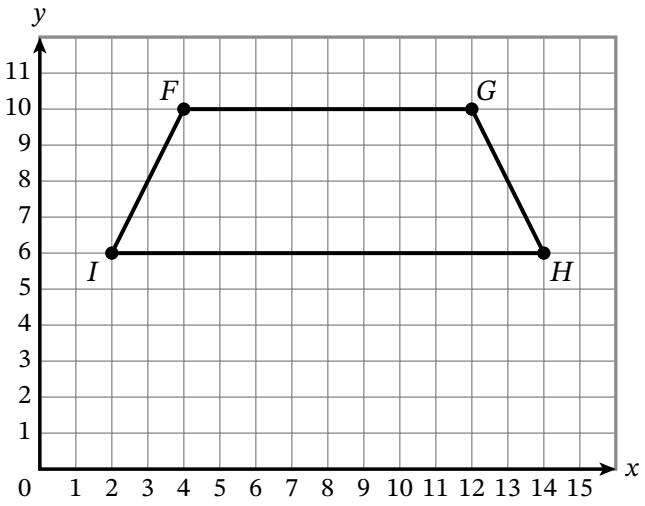
b. Which side has the same length as $\overline{DE}$? Explain.

c. Which sides are perpendicular to $\overline{DG}$?

d. Describe the angles of this polygon.

e. What is the most specific name for polygon *DEFG*?

4. Use the graph of polygon *FGHI* to complete parts (a)–(e).



a. The length of $\overline{FG}$ is _____ units.

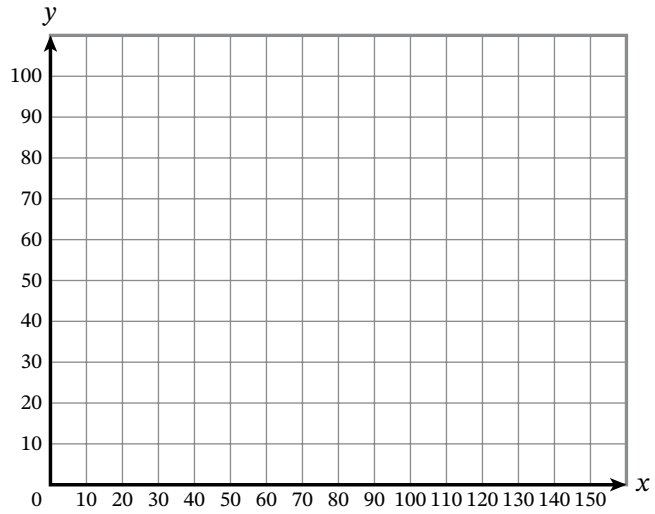
b. The length of $\overline{IH}$ is _____ units.

c. $\overline{FG}$ is parallel to _____.

d. Describe the angles of this polygon.

e. What is the most specific name for polygon *FGHI*?

5. Use the coordinate plane to complete parts (a)–(e).



a. Plot and label the following vertices: $L(110, 30)$, $M(130, 90)$, $N(50, 90)$, $O(30, 30)$. Connect the vertices to create polygon $LMNO$.

b. What is the length of $\overline{NM}$?

c. Is the length of $\overline{OL}$ equal to the length of $\overline{NM}$? Explain.

d. Describe the angles of this polygon.

e. What is the most specific name for polygon $LMNO$?