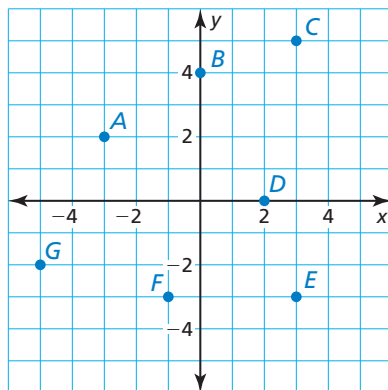


Maintaining Mathematical Proficiency

Using a Coordinate Plane

Example 1 What ordered pair corresponds to point A?



Point A is 3 units to the left of the origin and 2 units up. So, the x -coordinate is -3 and the y -coordinate is 2 .

► The ordered pair $(-3, 2)$ corresponds to point A.

Use the graph to answer the question.

1. What ordered pair corresponds to point G?
2. What ordered pair corresponds to point D?
3. Which point is located in Quadrant I?
4. Which point is located in Quadrant IV?

Rewriting Equations

Example 2 Solve the equation $3x - 2y = 8$ for y .

$$3x - 2y = 8$$

Write the equation.

$$3x - 2y - 3x = 8 - 3x$$

Subtract $3x$ from each side.

$$-2y = 8 - 3x$$

Simplify.

$$\frac{-2y}{-2} = \frac{8 - 3x}{-2}$$

Divide each side by -2 .

$$y = -4 + \frac{3}{2}x$$

Simplify.

Solve the equation for y .

5. $x - y = 5$

6. $6x + 3y = -1$

7. $0 = 2y - 8x + 10$

8. $-x + 4y - 28 = 0$

9. $2y + 1 - x = 7x$

10. $y - 4 = 3x + 5y$

11. **ABSTRACT REASONING** Both coordinates of the point (x, y) are multiplied by a negative number. How does this change the location of the point? Be sure to consider points originally located in all four quadrants.