

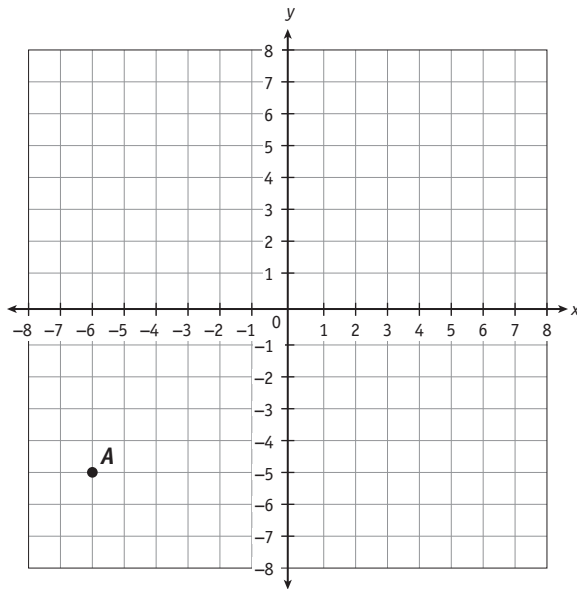
The coordinate plane is a grid that is used to locate points by using numbers. A coordinate plane is made of two axes. One axis is the horizontal axis, often referred to as the x -axis. The other axis is the vertical axis, often referred to as the y -axis.

Each point is assigned an ordered pair, which is a point's location given its x -coordinate first and its y -coordinate second. The point where the two axes meet is called the origin. The origin is located at $(0, 0)$. For the x -coordinate, values to the left of 0 are negative and values to the right of 0 are positive. For the y -coordinate, values below 0 are negative and values above 0 are positive.

Maps of towns and states use coordinate planes to give locations.

EXAMPLE 1

What is the location of point A on the coordinate grid below?



Step 1: Find the value of the x -coordinate. Count the number of units to the left of 0.

Step 2: Find the value of the y -coordinate. Count the number of units below 0.

Step 3: Write the ordered pair.

A is located 6 units to the left of 0.
The x -coordinate is -6 .

A is located 5 units below 0.
The y -coordinate is -5 .

The ordered pair is $(-6, -5)$.

Solution: Point A is located at $(-6, -5)$.

You can plot points on a coordinate grid using these rules.

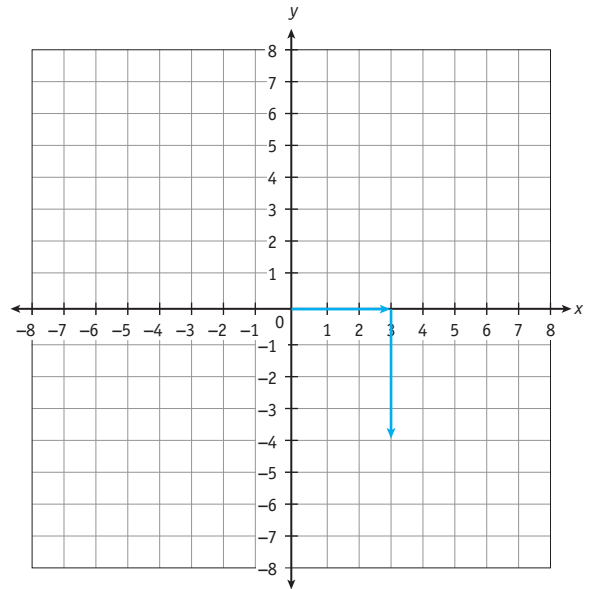
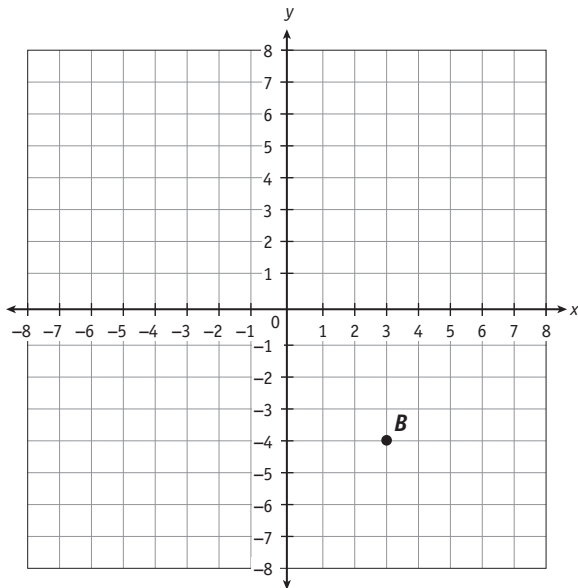
- The first coordinate tells the number of units to the left or right of 0.
- The second coordinate tells the number of units below or above 0.

EXAMPLE 2

Plot point B at $(3, -4)$ on a coordinate grid.

- Step 1:* Starting at $(0, 0)$, move 3 units to the right.
- Step 2:* From that point, $(3, 0)$, move 4 units down.
- Step 3:* Plot point B .

Solution:



TRY THESE

Copy the grid at right.

For questions 1 through 6, give the coordinates of each point.

- | | | |
|--------|--------|--------|
| 1. C | 2. D | 3. E |
| 4. F | 5. G | 6. H |

Plot each point on the coordinate grid.

7. Point J at $(3, -7)$
8. Point K at $(-8, 6)$
9. Point L at $(-3, -5)$
10. If you connect points D , E , and H , what polygon would you form? Describe it as specifically as you can. Explain why your answer is correct.

