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Ordered Pairs

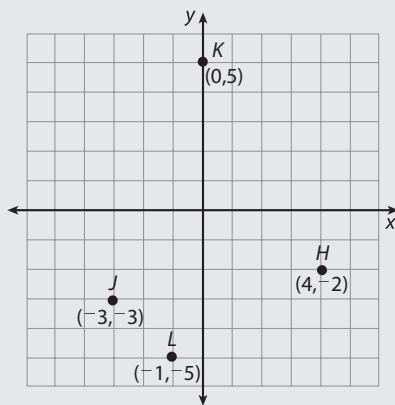
1.C.1.b

Example

The following ordered pairs represent points H , J , K , and L : $H(4, -2)$; $J(-3, -3)$; $K(0, 5)$; and $L(-1, -5)$.

Part A

Graph and label each point in the coordinate plane below.



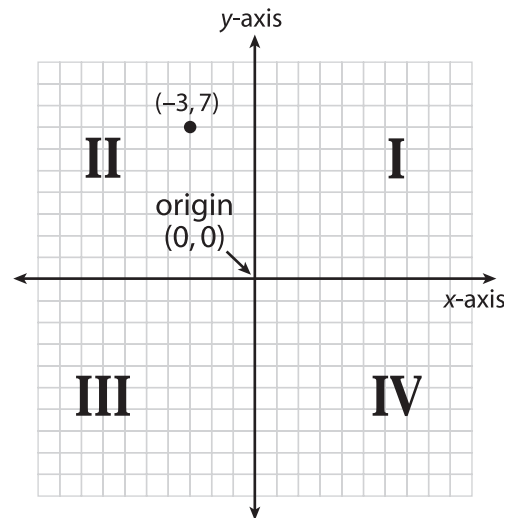
Part B

Use what you know about graphing ordered pairs to explain how you graphed the points. Use words, numbers, and/or symbols in your explanation.

I plotted each point by looking at its x-coordinate and y-coordinate.
Starting at the origin, I moved left if the x-coordinate was negative and right if it was positive. I moved up if the y-coordinate was positive and down if it was negative.

Review

A **coordinate plane** is a grid made by the intersection of vertical and horizontal lines. It is divided by the x - and y -axes into 4 **quadrants** named with roman numerals.



The x -axis is the **horizontal axis** and the y -axis is the **vertical axis**. They meet at the **origin**.

Points are named by **ordered pairs** of numbers. The first number describes the point's position right and left (**x -coordinate**). The second number describes its position up and down (**y -coordinate**).

Positive x -coordinates are to the right of the origin, negative x -coordinates are to the left.

Positive y -coordinates are above the origin, negative below it.

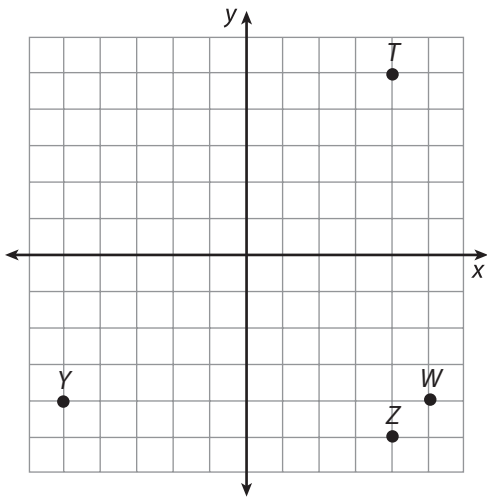
Thinking It Through

Solve —*Draw It* Plot the points. Remember that the first number gives location right and left. The second number gives location up and down.

Ordered Pairs

Directions: Mark the circle with the letter of the best answer. For student-produced responses, be sure to write your answer and fill in the circles.

- 1** Look at the points graphed on the coordinate plane below.



What is the y -coordinate of T ?

	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

- 2** Suppose you were given a coordinate plane with points $B(-4, 6)$, $C(5, 6)$, and $D(5, -6)$ plotted.

If you wanted to place a new point E so that you could form rectangle $BCDE$, where would you place it?

- Ⓕ $(-5, -6)$
 Ⓖ $(-4, -6)$
 Ⓗ $(-4, 6)$
 Ⓙ $(4, -6)$



Draw It! Drawing is one of the best ways to understand coordinate planes. Even a quick sketch will help.

- 3** Which best describes the location of point $W(-7, 0)$?

- Ⓐ on the x -axis
 Ⓑ at the origin
 Ⓒ in quadrant IV
 Ⓓ on the y -axis