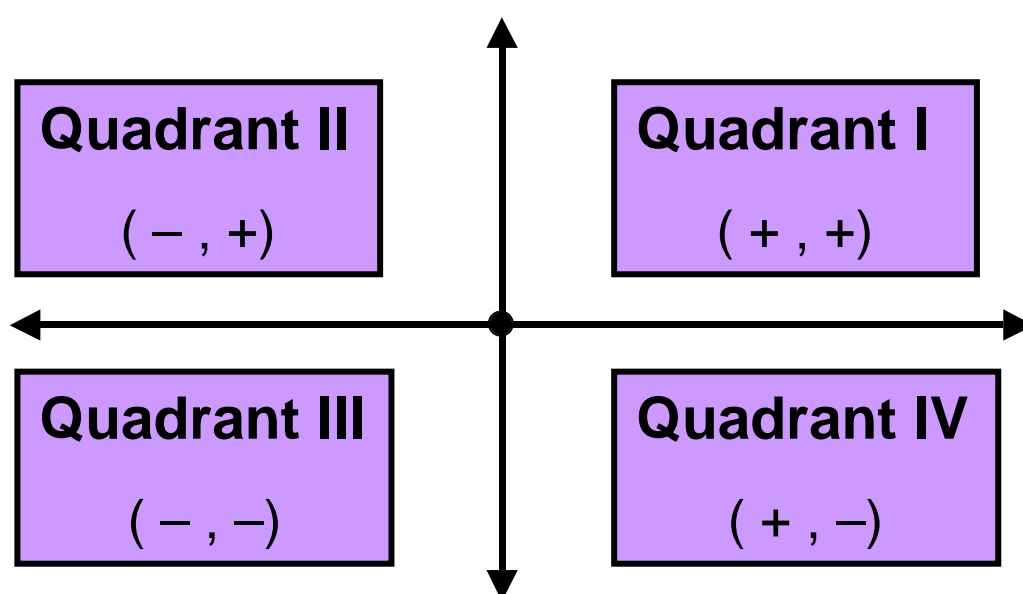


The Coordinate System

You may have noticed in Part 1 that all the graphing was done in only one part of the coordinate grid. That part is called Quadrant I. Both the x-coordinate and the y-coordinate are 0 or positive in Quadrant I.

The x-axis and y-axis divide the plane into 4 quadrants.



Quadrant I: Both the x-coordinate and y-coordinate are positive.

Quadrant II: The x-coordinate is negative and the y-coordinate is positive.

Quadrant III: Both the x-coordinate and the y-coordinate are negative.

Quadrant IV: The x-coordinate is positive and the y-coordinate is negative.

Follow the same procedure for graphing points, as you did in Part 1 – Ordered Pairs.

First, move horizontally \longleftrightarrow

Positive (+) coordinate : move to the right

Negative (-) coordinate : move to the left

Second, move vertically \updownarrow

Positive (+) coordinate : move up

Negative (-) coordinate : move down

Example 1:

Graph $(-4,3)$

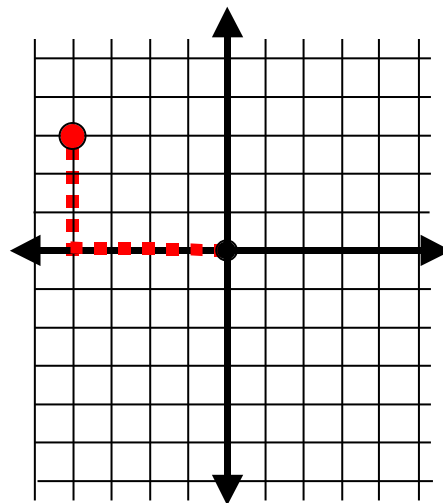
Always begin at the origin.

The x-coordinate is -4 .

The negative sign tells you to go 4 units to the **left** of the origin.

The y-coordinate is 3. No sign means that it is positive and you should go **up** 3 units.

Ordered pair $(-4,3)$ is now graphed.



Important: Always go horizontally \longleftrightarrow first.

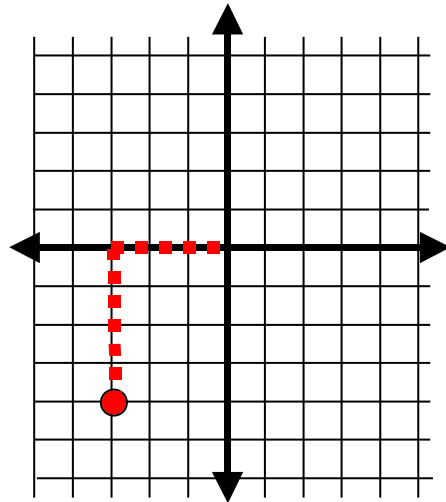
Example 2:

Graph $(-3, -4)$

Always begin at the origin.

The x-coordinate is -3 .
The negative sign tells you to go 3 units to the **left** of the origin.

The y-coordinate is -4 .
The negative sign tells you to go **down** 4 units.



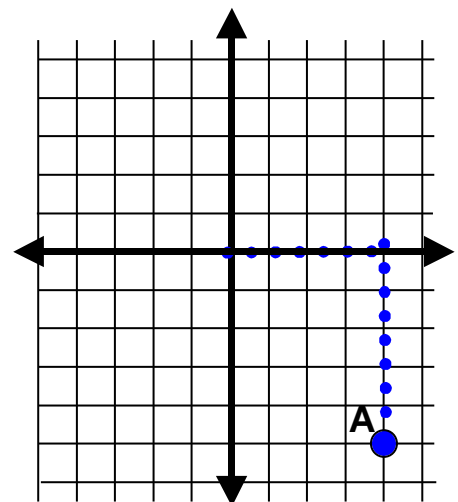
Ordered pair $(-3, -4)$ is now graphed.

Example 3:

Name the ordered pair for point A.

Go **right** on the x-axis to find the x-coordinate of point A, which is 4.

Go down along the y-axis to find the y-coordinate. Because we went **down**, the y-coordinate will be negative. It is -5 .



The ordered pair for point A is $(4, -5)$.