

The Coordinate Plane

Warmup

1.

$$-7 + 3 = \underline{\quad}$$

$$8 + 4 = \underline{\quad}$$

$$-2 + -9 = \underline{\quad}$$

$$4 + 7 = \underline{\quad}$$

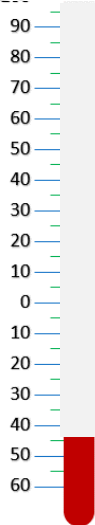
2. *Solve and Check*

$$\frac{p}{12} = 126$$

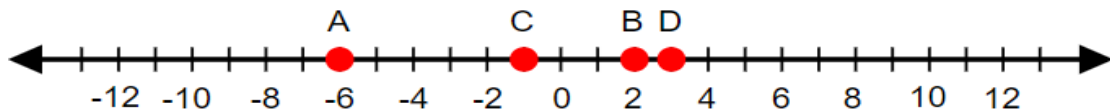
3. Evaluate the Expression
when $a=4$, $b=5$, and $c=7$

$$a(b + c) + 10$$

5.



4.



$$A = \underline{\quad} \quad B = \underline{\quad} \quad C = \underline{\quad} \quad D = \underline{\quad}$$

- I. The Coordinate Plane
- II. Graphing Ordered Pairs
- III. Naming Points with Ordered Pairs

Homeschool



Honor Roll

Learn ~ Persevere ~ Succeed

Pre-Algebra and Geometry I

Wendy Harper

www.HsHonorRoll.com

1. The Coordinate Plane

Coordinate Plane: A coordinate plane results from a vertical number line and a horizontal number line intersecting at their zeros

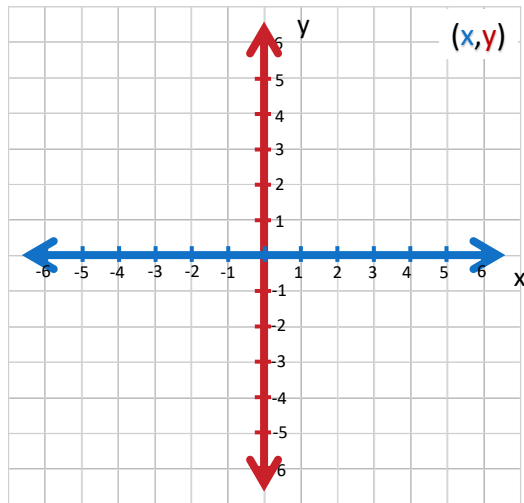
To make the Coordinate Plane, draw two numbers lines. The lines shall be perpendicular to each other, and intersect at the origin of both lines.

The horizontal line is called the x-axis.

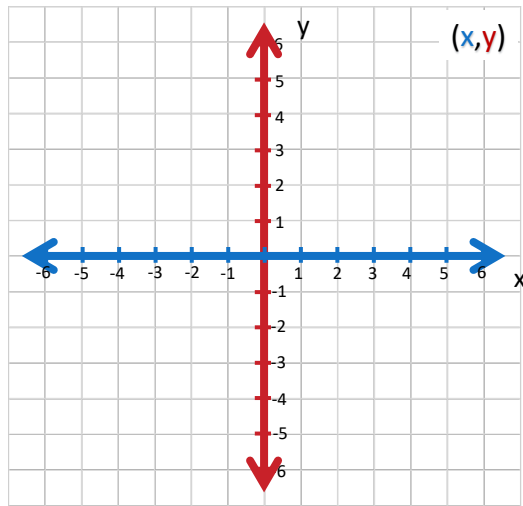


origin: The point of intersection for the x-axis and y-axis. Point $(0,0)$

The vertical line is called the y-axis.

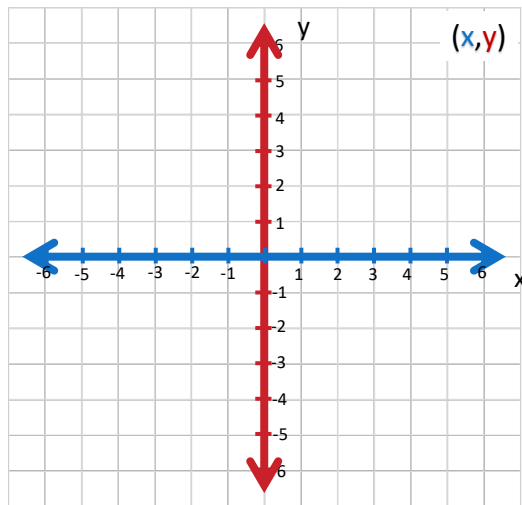


Quadrants: Four sections are made by the intersecting lines of a coordinate plane. Name the top right Quadrant I, then going counter-clockwise name Quadrant II, III, and IV.



I. Graphing Ordered Pairs

Ordered Pair: A pair of numbers written in a specific order. On a coordinate plane an ordered pair (x,y) is used to identify the location of a point.



Graphing Points: Points on the Coordinate plane are identified by two values called an ordered pair. The ordered numbers refer to the (x-value, y-value)

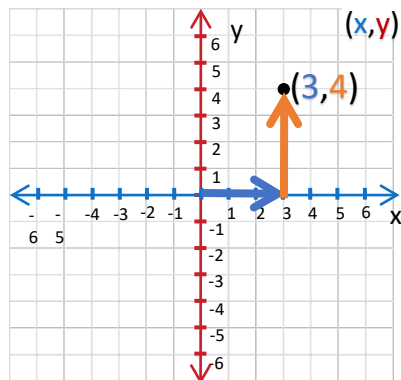
When plotting the point, first identify the location on the x-axis, then move up or down along the y-axis to find the correct location.

Graph the point (3,4)

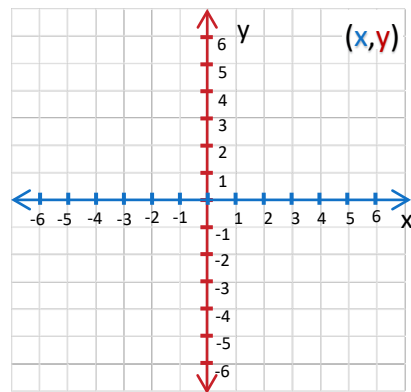
The x-value is 3. Start at the origin (0,0). Move right to the number 3 on the x-axis.

The y-value is 4. Start at (3,0) and move up 4 units on the y-axis.

Label the point with the ordered pair. (3,4)



Plot the points



(x,y)

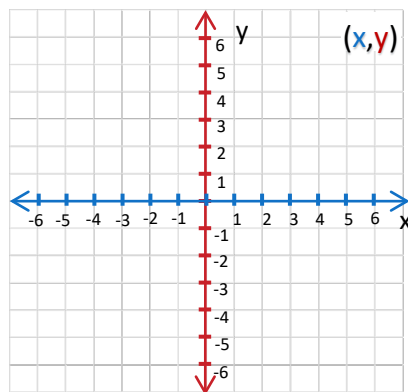
$(-3,6)$

$(2,4)$

$(-4,-2)$

$(6,-3)$

Plot the points



(x,y)

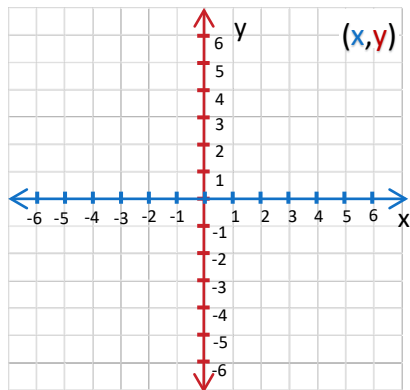
$(5,0)$

$(-1,5)$

$(-4,-5)$

$(5,-1)$

9. Plot the points



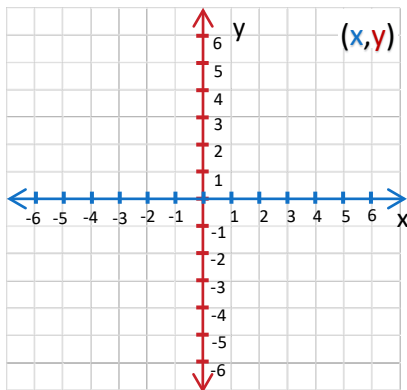
$A(0,5)$

$B(-3,4)$

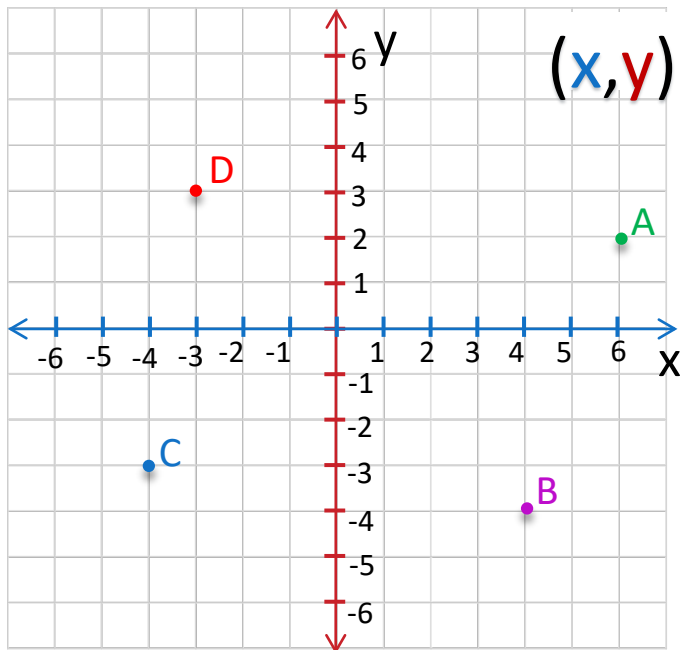
$C(-2,-4)$

$D(3,-5)$

10. Plot the points



II. Naming Points with Ordered Pairs

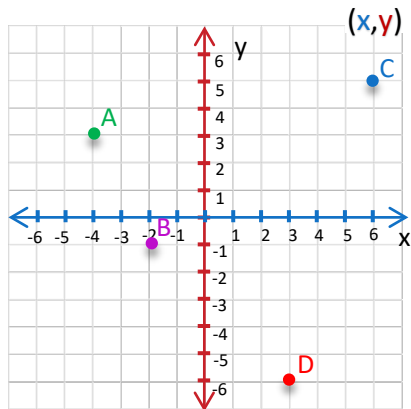


Naming Points: The name is written as an ordered pair.

$(x\text{-value}, y\text{-value})$

When naming the point, first identify the location on the x-axis, then determine how far up or down the point is along the y-axis to determine the second value.

11. Name the points



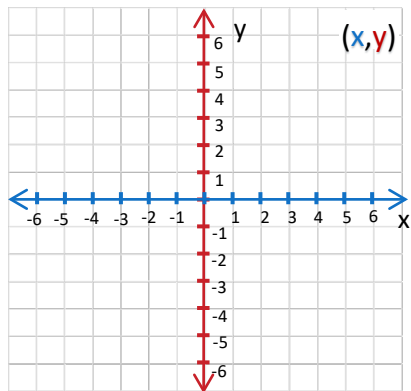
A(,)

B(,)

C(,)

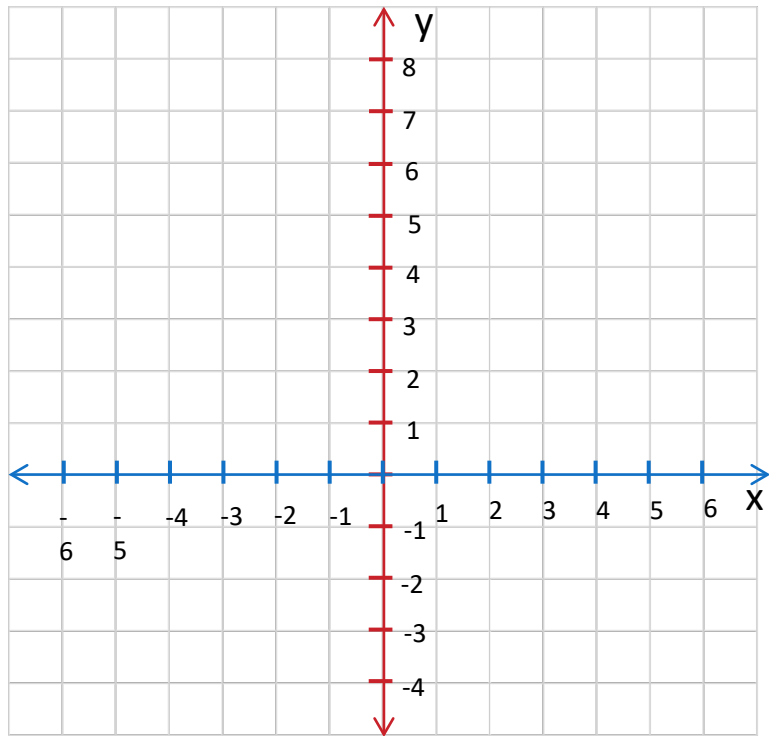
D(,)

12. Plot the points



III. Drawing with Ordered Pairs on a Coordinate Plane

As you plot each point draw a segment connecting it to the previous point



1. $(0,-1)$
2. $(0,8)$
3. $(-4,0)$
4. $(0,0)$
5. $(1,1)$
6. $(1,2)$
7. $(1,5)$
8. $(0,8)$
9. $(3,5)$
10. $(4,3)$
11. $(5,0)$
12. $(0,0)$
13. $(0,-1)$
14. $(-4,-1)$
15. $(-2,-3)$
16. $(3,-3)$
17. $(5,-1)$
18. $(0,-1)$

What was drawn as
a result of plotting
the points?

