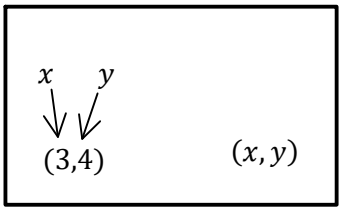
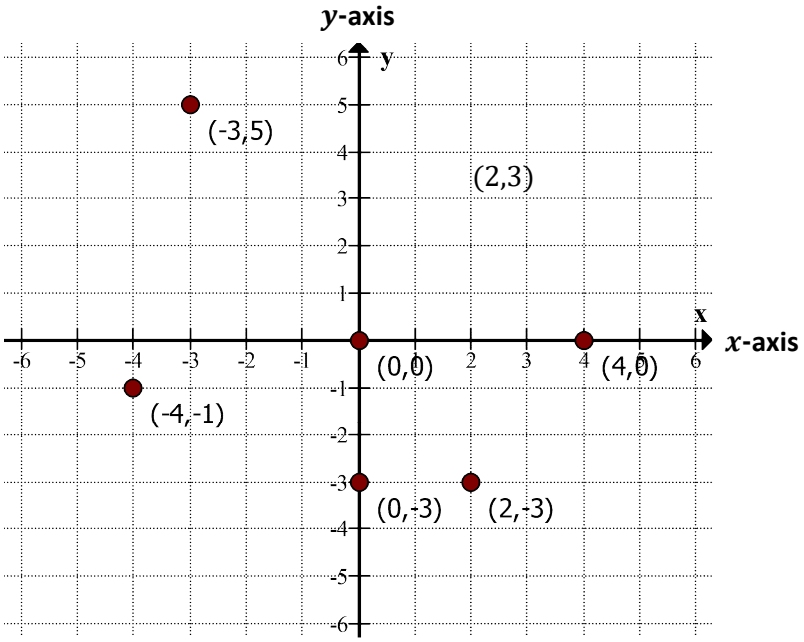
M8 - 9.1 - Plotting Points Graph Notes

(x, y) A point on a graph is given by an "ordered pair"



Plot the following table of values:

x	y	**Ordered Pairs**
2	-3	$(2,-3)$
-4	-1	$(-4,-1)$
-3	5	$(-3,5)$
0	0	$(0,0)$
4	0	$(4,0)$
0	-3	$(0,-3)$



Steps to plot a point:

1. Find the x location on the x-axis. (The number in the left of the brackets.)
2. Go straight up or down to the y value. (The number on the right of the brackets).
3. Draw and label the point.

M9 - 9.2 - Graphing TOV: $y = x, y = x + 1$ Notes

Graph: $y = x$

Start with an empty Table of Values

x	y
-2	
-1	
0	
1	
2	

$y = x$

x	y
-2	-2
-1	-1
0	0
1	1
2	2

Ordered Pairs

$(-2,-2)$

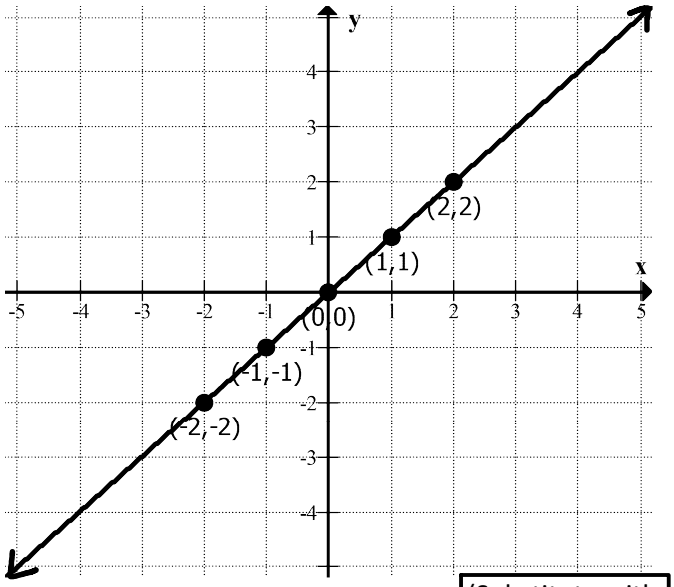
$(-1,-1)$

$(0,0)$

$(1,1)$

$(2,2)$

$y = x$



Choose Logical x Values

$y = x$
$y = (-2)$

$(-2,-2)$

$y = x$
$y = (-1)$

$(-1,-1)$

$y = x$
$y = (0)$

$(0,0)$

$y = x$
$y = (1)$

$(1,1)$

$y = x$
$y = (2)$

$(2,2)$

Write the Formula (Substitute with Brackets)
Substitute (x) values in the Formula
Put the y value into the Table
Write the Point (x, y)
Graph and Label the Points (x, y)
Draw and Label the Line (with Arrow Tips)

Graph: $y = x + 1$

$y = x + 1$

x	y
-2	-1
-1	0
0	1
1	2
2	3

Ordered Pairs

$(-2,-1)$

$(-1,0)$

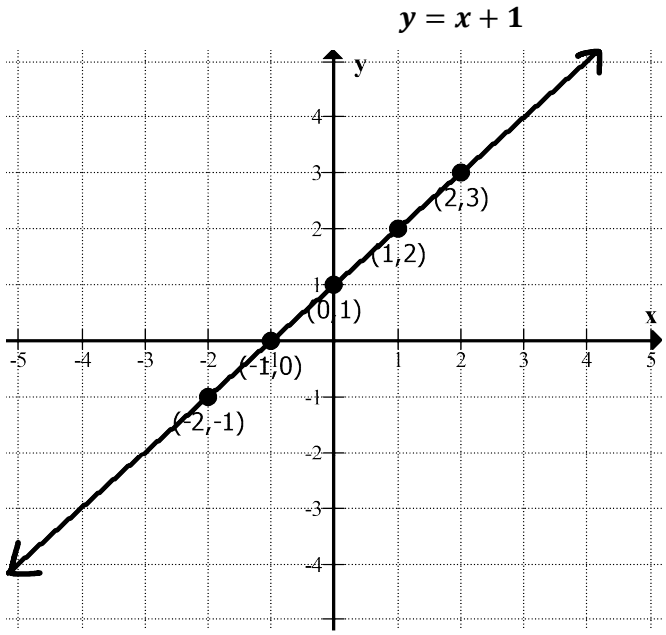
$(0,1)$

$(1,2)$

$(2,3)$

OR Do it in your head!

$y = x + 1$



$y = x + 1$
$y = (-2) + 1$
$y = -1$

$(-2,-1)$

$y = x + 1$
$y = (-1) + 1$
$y = 0$

$(-1,0)$

$y = x + 1$
$y = (0) + 1$
$y = 1$

$(0,1)$

$y = x + 1$
$y = (1) + 1$
$y = 2$

$(1,2)$

Notice: the graph of $y = x + 1$ is the graph of $y = x$, moved up 1. (Or Left One*)

M9 - 9.2 - Graphing TOV: y=2x, $y = 2x + 1$ Notes

Graph: $y = 2x$

$y = 2x$

x	y
-2	-4
-1	-2
0	0
1	2
2	4

Ordered Pairs

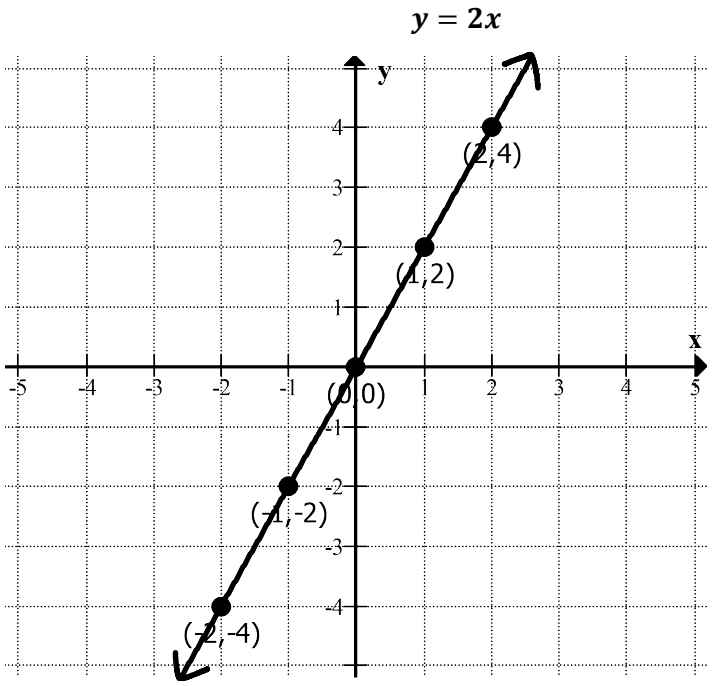
$(-2,-4)$

$(-1,-2)$

(0,0)

(1,2)

(2,4)



$y = 2x$
$y = 2(-2)$
$y = -4$

$(-2,-4)$

$y = 2x$
$y = 2(-1)$
$y = -2$

$(-1,-2)$

$y = 2x$
$y = 2(0)$
$y = 0$

(0,0)

$y = 2x$
$y = 2(1)$
$y = 2$

(1,2)

Notice: the graph of $y = 2x$ is twice as steep as the graph of $y = x$.

Graph: $y = 2x + 1$

$y = 2x + 1$

x	y
-2	-3
-1	-1
0	1
1	3
2	5

Ordered Pairs

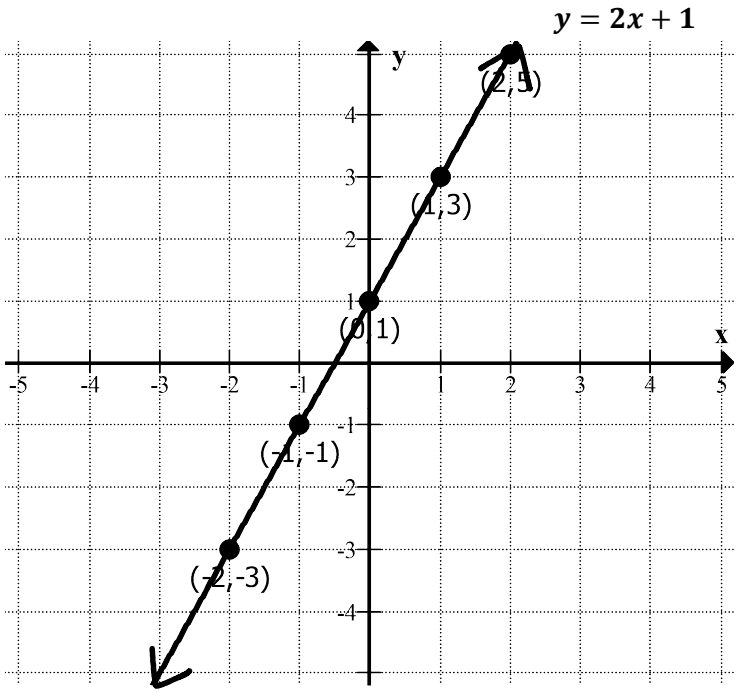
$(-2,-3)$

$(-1,-1)$

(0,1)

(1,3)

(2,5)



$y = 2x + 1$
$y = 2(-2) + 1$
$y = -4 + 1$
$y = -3$

$(-2,-3)$

$y = 2x + 1$
$y = 2(-1) + 1$
$y = -2 + 1$
$y = -1$

$(-1,-1)$

$y = 2x + 1$
$y = 2(0) + 1$
$y = 0 + 1$
$y = 1$

(0,1)

Notice: the graph of $y = 2x + 1$ is the graph of $y = 2x$ up 1.