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

Graph: $y = x$

Start with an empty Table of Values

$y = x$

x	y
-2	
-1	
0	
1	
2	

$y = x$

x	y	Ordered Pairs
-2	-2	$(-2, -2)$
-1	-1	$(-1, -1)$
0	0	$(0,0)$
1	1	$(1,1)$
2	2	$(2,2)$
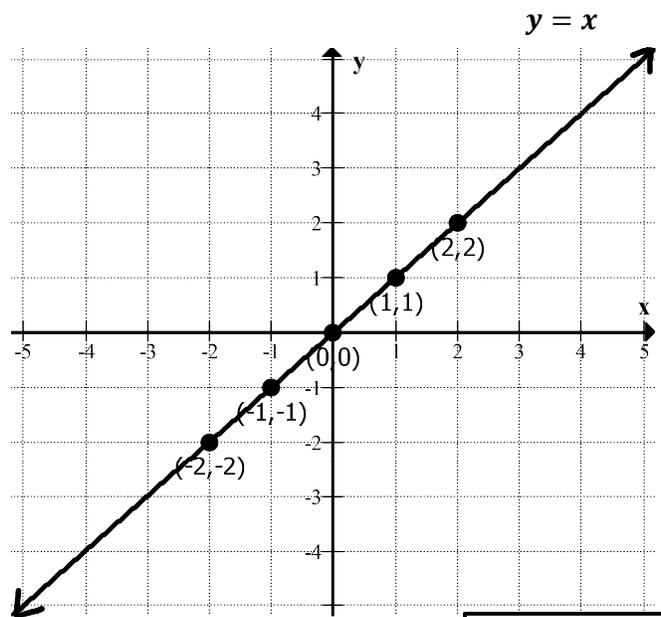
Choose Logical x Values

$y = x$
$y = (-2)$
$\boxed{(-2, -2)}$

$y = x$
$y = (-1)$
$\boxed{(-1, -1)}$

$y = x$
$y = (0)$
$\boxed{(0,0)}$

$y = x$
$y = (1)$
$\boxed{(1,1)}$

$y = x$
$y = (2)$
$\boxed{(2,2)}$

Write the Formula $\boxed{\text{(Substitute with Brackets)}}$
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	Ordered Pairs
-2	-1	$(-2, -1)$
-1	0	$(-1,0)$
0	1	$(0,1)$
1	2	$(1,2)$
2	3	$(2,3)$
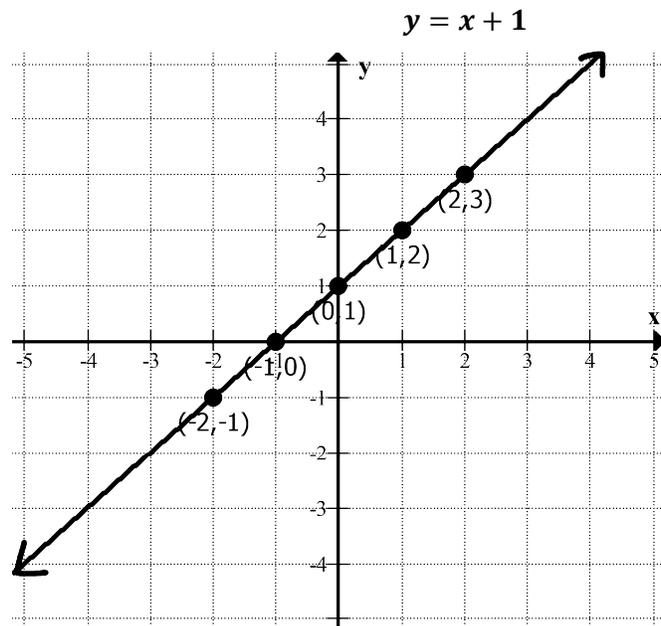
OR   Do it in your head!

$y = x + 1$
$y = (-2) + 1$
$y = -1$
$\boxed{(-2, -1)}$

$y = x + 1$
$y = (-1) + 1$
$y = 0$
$\boxed{(-1,0)}$

$y = x + 1$
$y = (0) + 1$
$y = 1$
$\boxed{(0,1)}$

$y = x + 1$
$y = (1) + 1$
$y = 2$
$\boxed{(1,2)}$

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: $y = 2x$

$y = 2x$

$y = 2x$	
x	y
-2	-4
-1	-2
0	0
1	2
2	4

Ordered Pairs

$(-2, -4)$

$(-1, -2)$

$(0,0)$

$(1,2)$

$(2,4)$

$(2,4)$
$(1,2)$
$(0,0)$
$(-1,-2)$
$(-2,-4)$

$y = 2x$	$y = 2x$	$y = 2x$	$y = 2x$
$y = 2(-2)$	$y = 2(-1)$	$y = 2(0)$	$y = 2(1)$
$y = -4$	$y = -2$	$y = 0$	$y = 2$

$(-2, -4)$ $(-1, -2)$ $(0,0)$ $(1,2)$
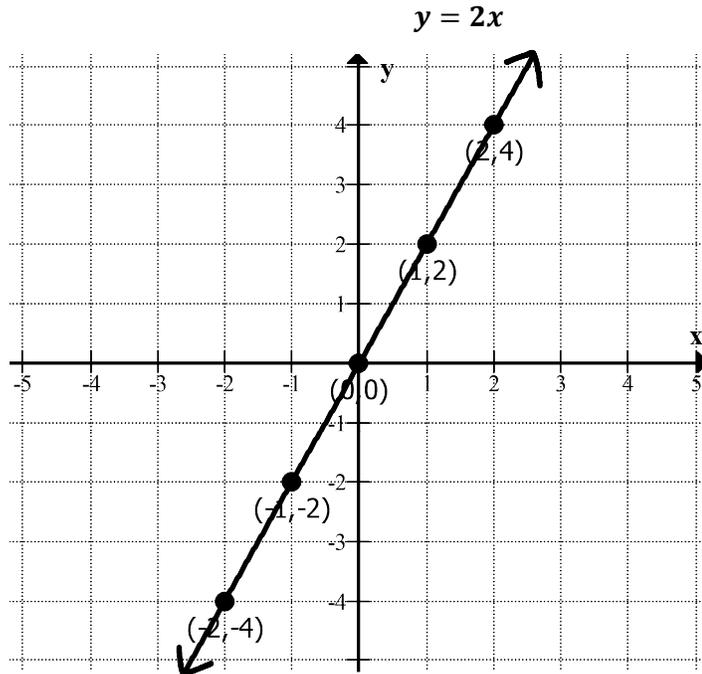
Notice: the graph of $y = 2x$ is twice as steep as the graph of $y = x$.

Graph: $y = 2x + 1$

$y = 2x + 1$

$y = 2x + 1$	
x	y
-2	-3
-1	-1
0	1
1	3
2	5

Ordered Pairs

$(-2, -3)$

$(-1, -1)$

$(0,1)$

$(1,3)$

$(2,5)$

$(2,5)$
$(1,3)$
$(0,1)$
$(-1,-1)$
$(-2,-3)$
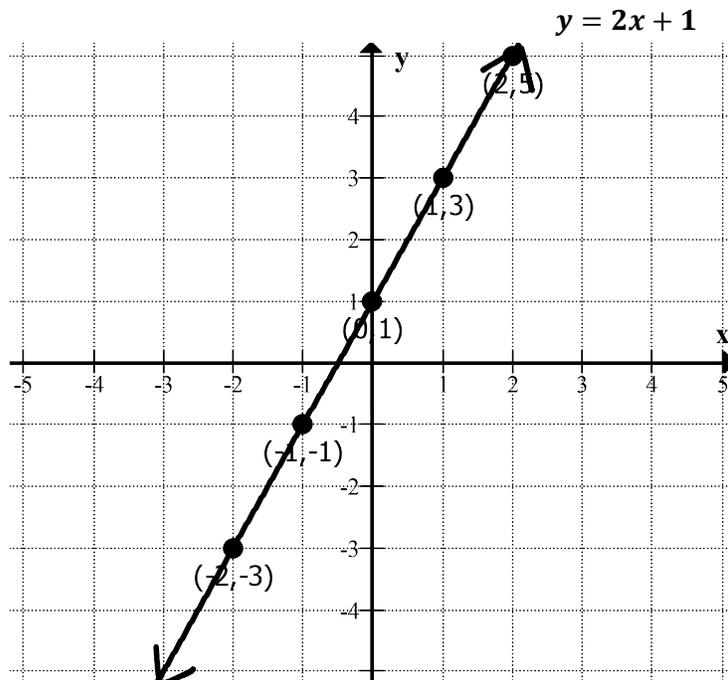
$y = 2x + 1$	$y = 2x + 1$	$y = 2x + 1$
$y = 2(-2) + 1$	$y = 2(-1) + 1$	$y = 2(0) + 1$
$y = -4 + 1$	$y = -2 + 1$	$y = 0 + 1$
$y = -3$	$y = -1$	$y = 1$

$(-2, -3)$ $(-1, -1)$ $(0,1)$

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