Warm-up

1) Graph $y=-x-2$ for domain $-2,-1,0,1,2$.

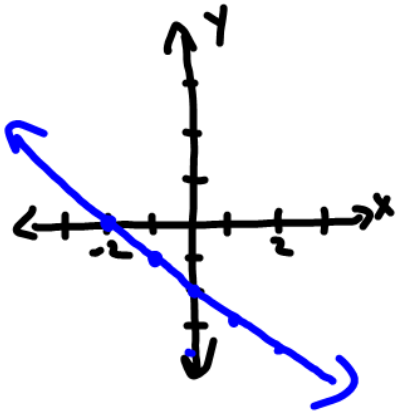
x	y
-2	0
-1	-1
0	-2
1	-3
2	-4

$y=-(-2)-2=2-2=0$

$-(-1)-2=1-2=-1$

$-(0)-2=-2$

$-(1)-2=-1-2=-3$



2) Solve $3x+4y=16$ for y.

$3x+4y=16-3x$

$-3x$

$\frac{4y}{4}=\frac{16-3x}{4}$

$y=\frac{16-3y}{4}$

OR

$y=4-\frac{3}{4}y$

4.2 Graph Linear Equations

* Dealing with x & y

Graph $-2x+y=-3$ ← Is in Standard Form

(x & y together, # on other side)

$Ax+By=C$

1st - Solve for y

$-2x+y=-3$

$+2x \quad +2x$

$y=-3+2x$ or $y=2x-3$

2nd - Make a table, pick #'s for x

(Input) (Output)

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

$y=2x-3$

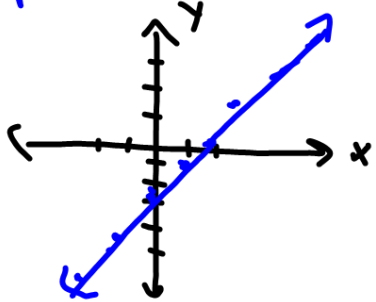
$2(-1)-3$

$-2-3$

$2(1)-3$

$2-3$

3rd - Plot points & Connect



Solution or Not?

Which point works? Plug them in!

$$x + 2y = 5$$

1) $(-2, 3)$

$-2 + 2(3) = 5$

$-2 + 6 = 5$

$4 \neq 5$

Nope!

2) $\left(4, \frac{1}{2}\right)$

$4 + 2\left(\frac{1}{2}\right) = 5$

$4 + 1 = 5$

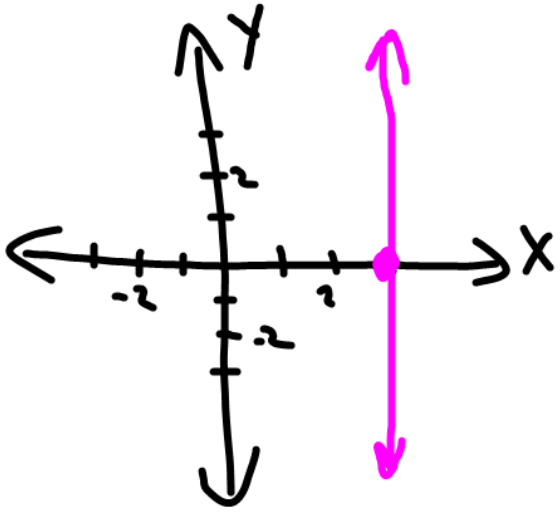
$5 = 5$!

Yes!

Graphing "Special" lines

$X = 3$

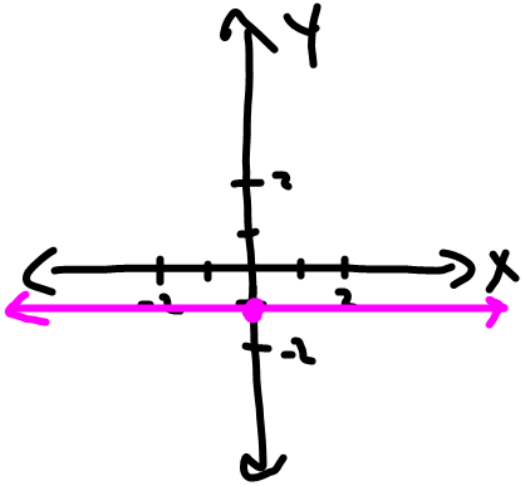
*It only crosses the x-axis



Vertical Line @ 3

$Y = -1$

*Crosses y-axis only



Horizontal Line @ -1