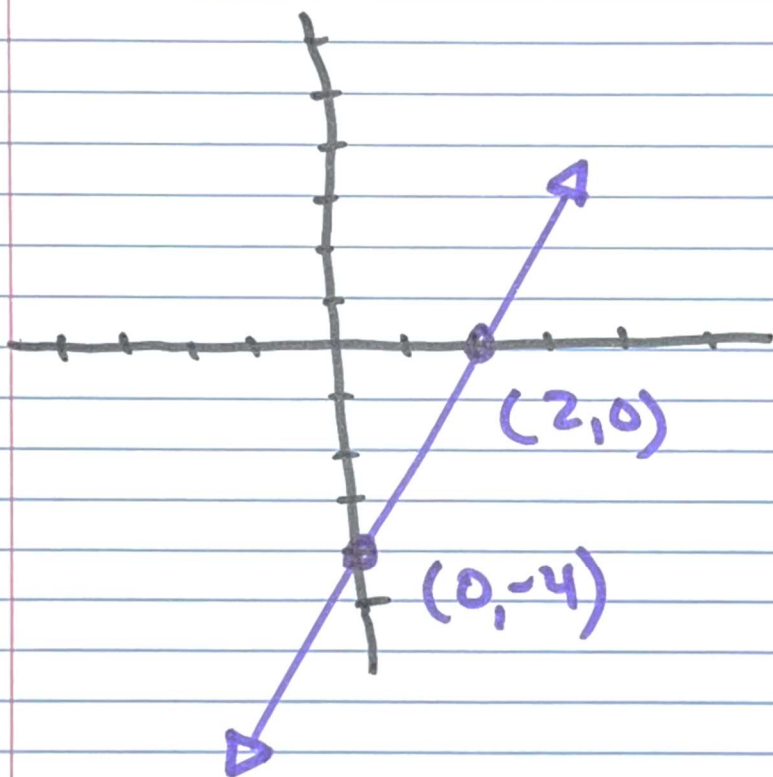


## WIN 1-11 $\rightarrow$ Multiple Solutions to Linear Equations

Laser beam lines are often given in  $y = mx + b$

but are sometimes given in standard form  $ax + by = c$



$$y = 2x - 4$$

same line!

$$2x - y = 4$$

So many solutions to laser beam lines!

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

$$y = 2x - 4$$

$$(0, -4)$$

$$-4 = 2(0) - 4$$

$$(1, -2)$$

$$-2 = 2(1) - 4$$

$$(2, 0)$$

$$0 = 2(2) - 4$$

$$(3, 2)$$

$$2 = 2(3) - 4$$

$$2x - y = 4$$

$$(0, -4)$$

$$2(0) - (-4) = 4$$

$$(1, -2)$$

$$2(1) - (-2) = 4$$

$$(2, 0)$$

$$2(2) - 0 = 4$$

$$(3, 2)$$

$$2(3) - 2 = 4$$