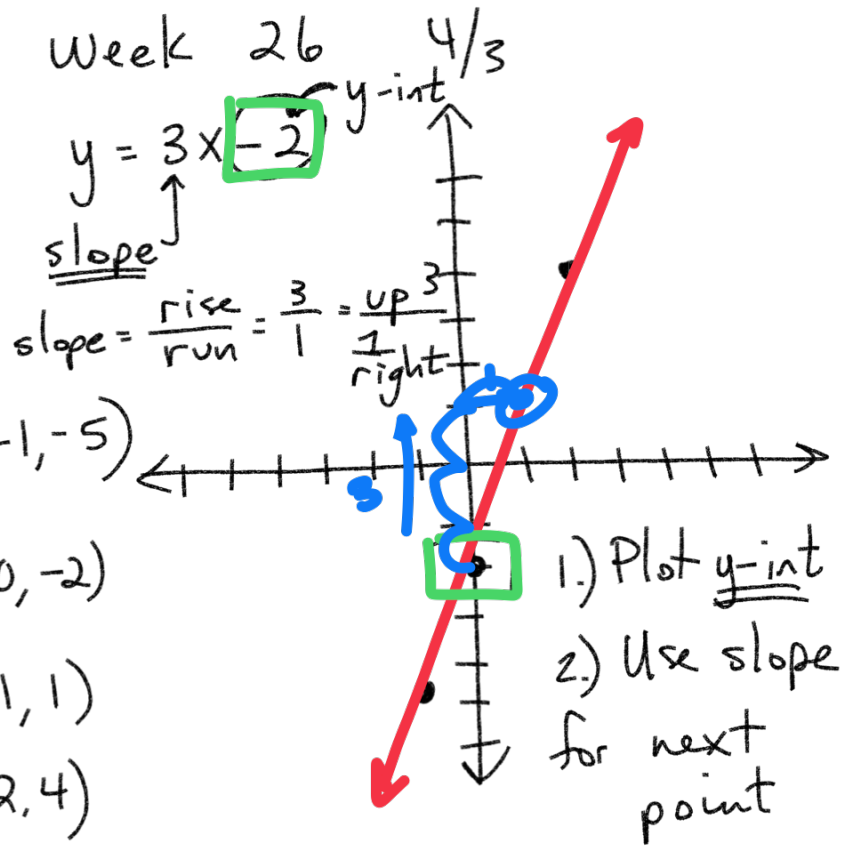


W-A1 Algebra 1

Week 26 $\frac{4}{3}$

$$y = 3x - 2$$

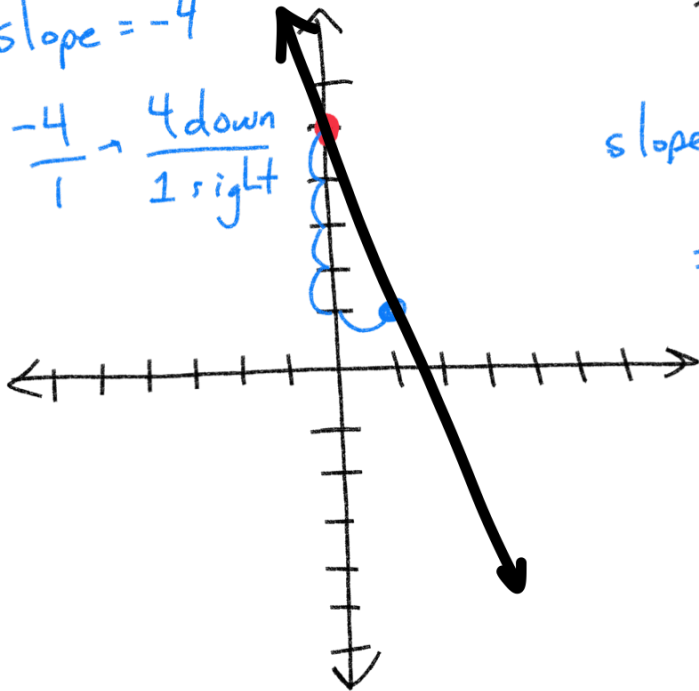
input x	$3x - 2$	output y
-1	$3(-1) - 2$ $-3 - 2$	-5
0	$3(0) - 2$	-2
1	$3(1) - 2$	1
2	$3(2) - 2$ $6 - 2$	4



1.) $y = -4x + 5$

slope = -4

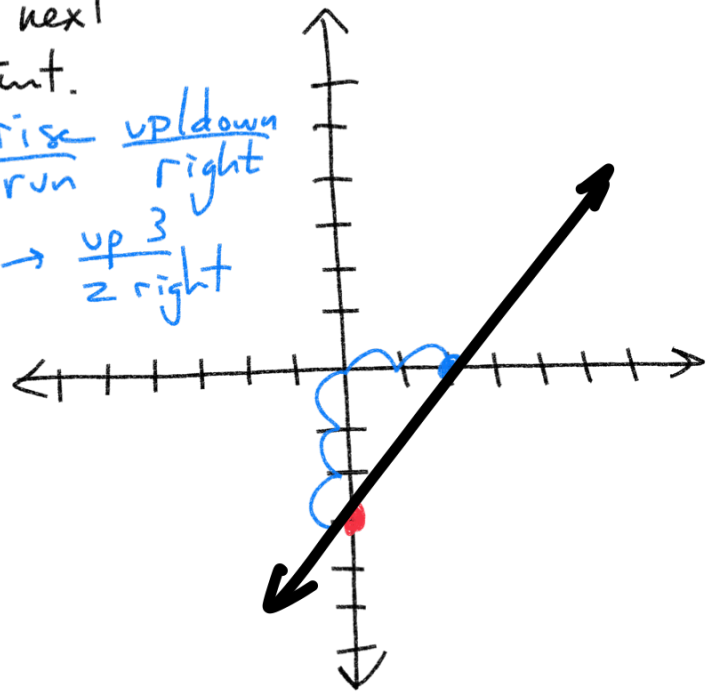
$\frac{-4}{1} \rightarrow \frac{4 \text{ down}}{1 \text{ right}}$



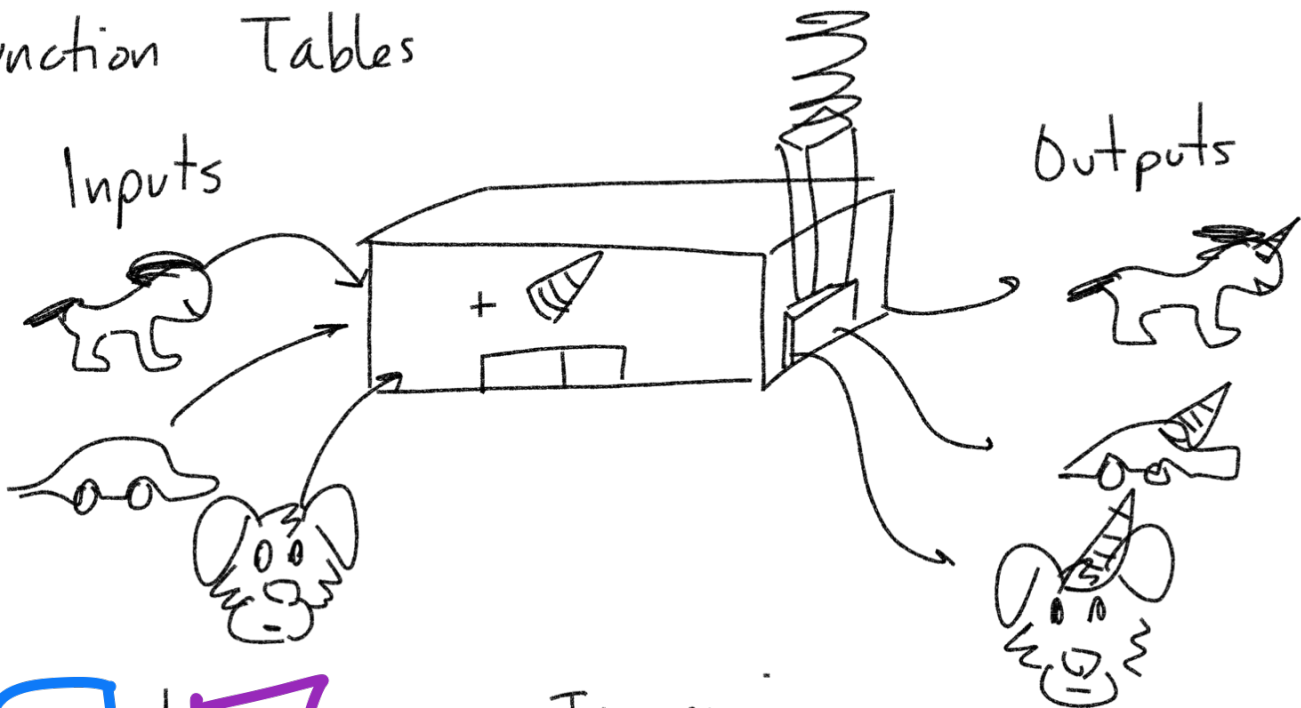
- 1.) Plot y-int
2.) Use slope for next point.

slope = $\frac{\text{rise}}{\text{run}} = \frac{\text{up/down}}{\text{right}}$
 $\frac{3}{2} \rightarrow \frac{\text{up } 3}{\text{right } 2}$

2.) $y = \frac{3}{2}x - 3$



Function Tables



X	+	8	=	y
-3	+	8	=	5
-1	+	8	=	7
4	+	8	=	12

$x + 8 = y$

Increasing
 \oplus $*$

Decreasing
 \ominus \div

$$y = x + 8$$

$$f(x) = x + 8$$

↑ "function with respect to x"

x	*	-3	=	y
-4	*	-3	=	12
-1	*	-3	=	3
5	*	-3	=	-15

$$x * -3 = y$$

$$-3x = y$$

1.)

X	y
-8	-11
-4	-7
3	0

$$X - 3 = y$$

$$f(x) = x - 3$$

2.)

X	y
-24	8
-9	3
12	-4

$$X \div -3 = y$$

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

proportional to

$$\uparrow y \propto x \uparrow$$

Direct Variation

$$y = kx$$

↳ constant of variation

$$C = \$1.73D$$

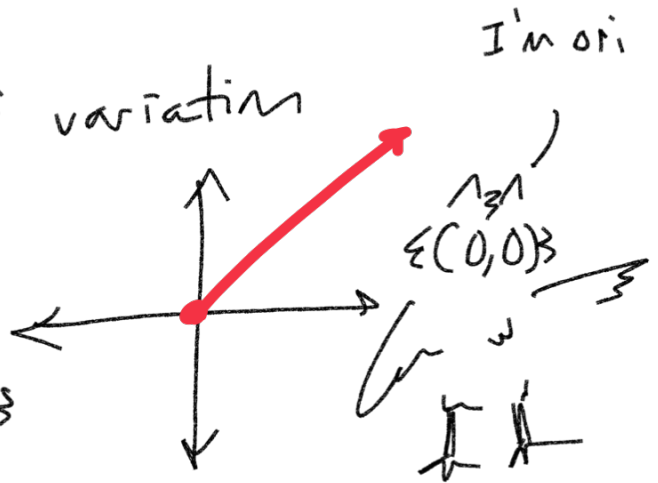
↳ constant of variation

$$\uparrow C \propto D \uparrow$$

Rules for Direct Variation.

- 1.) $y = kx$
- 2.) linear

- 3.) Goes through origin $(0,0)$



X	y	$k = \frac{y}{x}$
4	8	$\frac{8}{4} = 2$ ✓
7	14	$\frac{14}{7} = 2$ ✓
10	20	$\frac{20}{10} = 2$ ✓

Is this direct variation?

$y = \frac{kx}{x}$

$k = \frac{y}{x}$ } actually a slope

$k = 2$

yaw!

$y = kx$

$y = 2x$

X	y	$k = \frac{y}{x}$
-3	-2	$\frac{-2}{-3} = \frac{2}{3}$
3	2	$\frac{2}{3}$
9	6	$\frac{6}{9} \div 3 = \frac{2}{3}$

Is this direct variation?

If so, what is the equation?

yaw!

$y = kx$

$y = \frac{2}{3}x$