

Lesson 3-10 $\rightarrow y = mx + b$ from Tables
Without the Y-Intercept

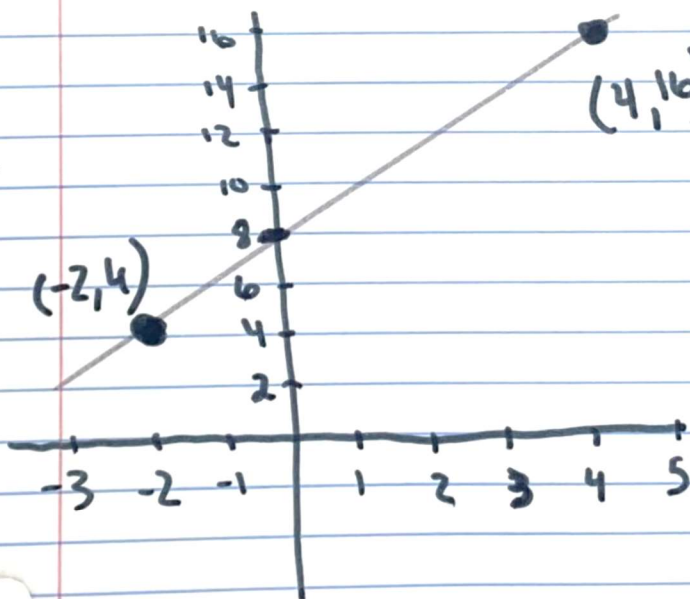
There are 2 ways to do this

① Walk the slope, or ② algebraically

x	y
-2	4
4	16

+6 +12

$$\text{slope} = \frac{\text{change in } y}{\text{change in } x} = \frac{12}{6} = 2$$



we walk the slope
by saying

up 2 from 4 is 6

so line includes
 $(-1, 6)$

up 2 from 6 is 8

so line includes
 $(0, 8)$

$$y = 2x + 8$$

x	y
-2	4
4	16

+6

+12

$$\text{slope} = \frac{\text{change in } y}{\text{change in } x} = \frac{12}{6} = 2$$

$$y = mx + b$$

$$y = 2x + b$$

we can solve for "b" by using $\begin{pmatrix} 4, 16 \\ x, y \end{pmatrix}$

$$16 = 2(4) + b$$

$$16 = 8 + b$$

$$\begin{matrix} -8 & -8 \end{matrix}$$

$$8 = b$$

$$y = 2x + 8$$