Name _____ Date _____

Function to Model a Linear Relationship - Step-by-Step Lesson

a) Write an equation that models the linear relationship in the table below.

x	y
2	7
4	8
6	9

Explanation:

Given this table of values for a line, just pick a set of x values and substitute them into the equation and evaluate to get the y values.

Let's find the slope first.

$y = mx + b$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{8-7}{4-2} = \frac{1}{2}$$

We have everything, but the y-intercept (b).

Plug in the values of x, y and m to calculate value of b. You could use any point. I chose to use the first point (2,7). Just solve for b.

$$7 = \frac{1}{2} \times 2 + b$$

$$7 - 1 = b$$

$$b = 6$$

$$y = \frac{1}{2}x + 6$$