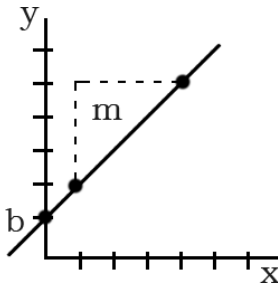


m^2 = math minute
Episode 2: Linear Functions



Output = Rate of Change * Input + Initial Value

$$y = mx + b$$

m = Rate of Change
 b = Initial Value (y-intercept)

If we leave our house and drive at a rate of 60 mph, how far will we be from our house if we drive for 2 hours?

Write down what we know!

m = Rate of Change (mph) = 60
 b = Initial Value (initial distance) = 0
 x = Input (time) = 2

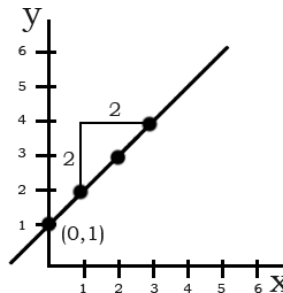
Equation

$$y = mx + b$$

$$y = 60 * 2 + 0$$

$$y = 120$$

x	$y=f(x)$
0	1
1	2
2	3
3	4



$$b = 2/2 = 1$$

$$m = 1$$

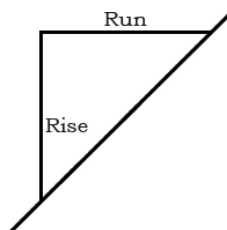
$$y = mx + b$$

$$y = 1x + 1$$

Therefore, the equation for the line above is:

$$y = x + 1$$

MORE ABOUT THE RATE OF CHANGE (m)



$$m = \frac{\text{Rise}}{\text{Run}} = \frac{\text{Change in } y}{\text{Change in } x}$$