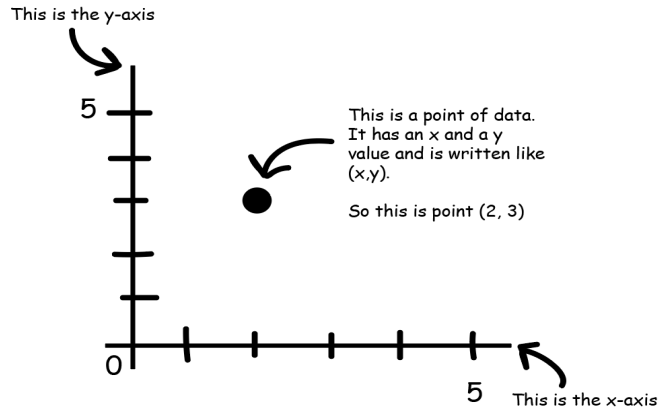
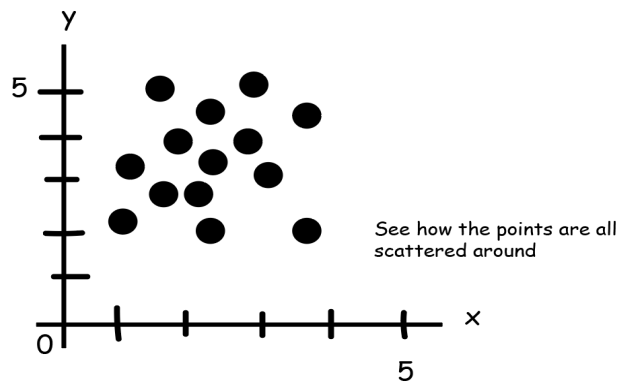


# Pre-Lecture Lesson

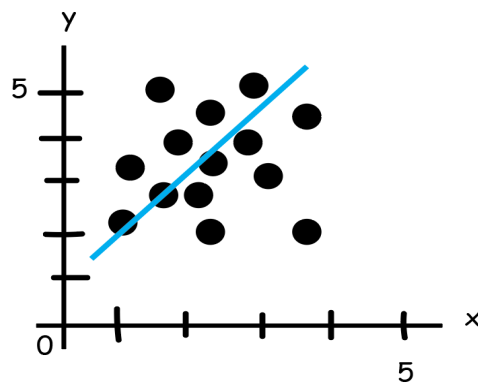
To get you ready for the talk we're going to review a few concepts, starting with a graph:



And this is a scatterplot graph:



A line of best fit is a line that is the closest to the most points it can be on the graph. It might go through some points but not others.



This is the equation for a line:

$$y = mx + c$$

Where:

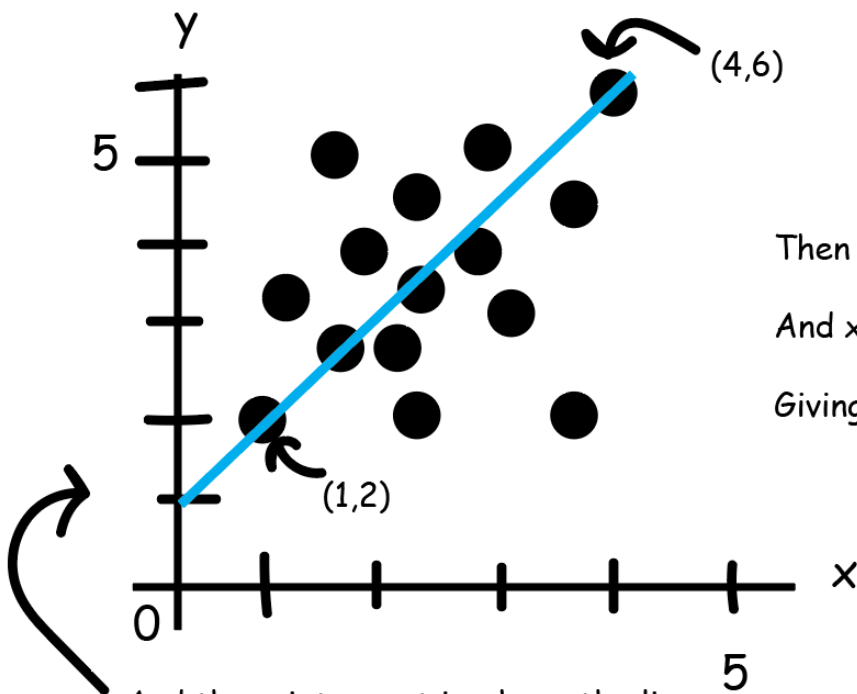
- y is the thing you are looking for (the output)
- x is the thing you are using (the input)
- m is the slope (see below)
- c is the y-intercept (where the line meets the y-axis)

Slope formula:

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

And here's how you find it...

First you pick two points on the line.  
We'll use (4,6) and (1,2)



Then  $y_2 - y_1$  is  $6 - 2 = 4$

And  $x_2 - x_1$  is  $4 - 1 = 3$

Giving slope  $(m) = 4/3 = 1.3$

And the y-intercept is where the line meets the y-axis.

Here it's at  $y = 1$ .

And that's all you need to know!