# Scatter Plots

Scatter plots show how much one variable is affected by another. The relationship between two variables of a scatter plot is called their **correlation** .

Scatter plots usually consist of a large body of data. The closer the data points come when plotted to making a straight line, the higher the correlation between the two variables, or the stronger the relationship.

If the data points make a straight line going from the origin out to high x- and y-values, then the variables are said to have a **positive correlation** . If the line goes from a high-value on the y-axis down to a high-value on the x-axis, the variables have a **negative correlation** .

A perfect positive correlation is given the value of 1. A perfect negative correlation is given the value of -1. If there is absolutely no correlation present the value given is 0. The closer the number is to 1 or -1, the stronger the correlation, or the stronger the relationship between the variables. The closer the number is to 0, the weaker the correlation. So something that seems to kind of correlate in a positive direction might have a value of 0.67, whereas something with an extremely weak negative correlation might have the value -.21.



Perfect Positive Correlation



Perfect Negative Correlation



No Correlation



High Positive Correlation



High Negative Correlation



Low Postive Correlation



Low Negative Correlation