The Pearson product-moment correlation coefficient is an estimate of the true linear correlation between two populations. It is "a measure of the strength or closeness of the (linear) relationship between 2 random variables". It ranges between -1 and +1, with "±1" implying an exact correlation for these extremes and if 0 implying the samples are independent. You can go further and test for the independence of these 2 populations, X & Y, once r has been calculated. If the true correlation coefficient (r) = 0 then the test statistic (t) is given by:

$$r \sqrt{(n-2)} / \sqrt{(1 - r^2)} \text{ at } (n-2) \text{ degrees of freedom.}$$

A correlation coefficient must be interpreted with caution. It does not imply causation (and indeed other factors may be the major contributors to the correlation, which may disappear when the original factors are compared again after adjustment for these other factors, called "partial correlation"). Also, significant values of r may result when there is a single outlying value of (x,y). It is therefore recommended that you plot your data (eg using the scatterplot option), to visualize the scatter of the data and facilitate interpretation. The Scatterplot option will allow you to calculate this coefficient also saving you this step.

See the Statistics topic for instructions on selecting this test.