Statistics is a branch of mathematics that deals with the study of collecting, analyzing, interpreting, presenting, and organizing data in a particular manner to allow for information that would otherwise not be obvious. Initially, statistics were related to the science of the state where it was used in the collection and analysis of facts and data about a country such as its economy, population, etc. Mathematical statistics applies mathematical techniques like linear algebra, differential equations, mathematical analysis, and theories of probability.

There are two methods of analyzing data in mathematical statistics that are used on a large scale:

* Descriptive statistics
* Inferential statistics

The descriptive method of statistics is used to describe the data collected and summarize the data and its properties using the measures of central tendencies and the measures of dispersion.

Inferential statistics is used to draw conclusions from the data. Inferential statistics requires statistical tests performed on samples, and it draws conclusions by identifying the differences between the 2 groups. Tests calculate the p-value that is compared with the probability of chance(α) = 0.05. If the p-value is less than α, then it is concluded that the p-value is statistically significant.

<https://en.wikipedia.org/wiki/Statistics>

<https://www.cuemath.com/data/statistics/>