AVERAGES

The average of a set of numbers is a very important statistic. The average is typical of the set of numbers and gives information about them. For example: if a class' average score in a test is 6 out of 10, then we can say that the class performed well basically. There are many kinds of averages.

The Mean

The mean, also called the arithmetic mean, is the most common average in Statistics.

If there are n numbers in a set, then

$$mean = \frac{sum\ of\ numbers\ in\ the\ set}{n}$$

The Median

When the set of numbers is in order of size, the median is the middle number. For example, the median of the following numbers: 17, 34, 13, 22, 27, 44, 8, 31, 13, is 22.

That is, when arranged in order of increasing size: 8, 13, 13, 17, 22, 27, 31, 34, 44, the middle number is 22.

If there are two numbers in the middle, then the median is the mean of those two numbers.

For example, the median of the following numbers: 8.3, 9.4, 10.5, 11.3, 12.9, 13.8, is the mean of 10.5 and 11.3.

$$median = \frac{10.5 + 11.3}{2} = \frac{21.8}{2} = \mathbf{10.9}$$

The Mode

In many examples of statistical data, some numbers appear more than once. The mode is the number that appears most often. For example, the mode of the following numbers: 8, 13, 13, 17, 22, 27, 31, 34, 44, is 13 as it appears more times.