Mean

It is calculated by taking the sum of the values and dividing with the number of values in a data series.

mean(x, trim = 0, na.rm = FALSE, ...)

* **x** is the input vector.
* **trim** is used to drop some observations from both end of the sorted vector.
* **na.rm** is used to remove the missing values from the input vector.

x <- c(12,7,3,4.2,18,2,54,-21,8,-5)

result.mean <- mean(x)

print(result.mean)

When trim parameter is supplied, the values in the vector get sorted and then the required numbers of observations are dropped from calculating the mean.

When trim = 0.3, 3 values from each end will be dropped from the calculations to find mean.

In this case the sorted vector is (−21, −5, 2, 3, 4.2, 7, 8, 12, 18, 54) and the values removed from the vector for calculating mean are (−21,−5,2) from left and (12,18,54) from right.

x <- c(12,7,3,4.2,18,2,54,-21,8,-5)

result.mean <- mean(x,trim = 0.3)

print(result.mean)

If there are missing values, then the mean function returns NA.

To drop the missing values from the calculation use na.rm = TRUE. which means remove the NA values.

x <- c(12,7,3,4.2,18,2,54,-21,8,-5,NA)

result.mean <- mean(x)

print(result.mean)

result.mean <- mean(x,na.rm = TRUE)

print(result.mean)

## Median

The middle most value in a data series is called the median. The **median()** function is used in R to calculate this value.

median(x, na.rm = FALSE)

x <- c(12,7,3,4.2,18,2,54,-21,8,-5)

median.result <- median(x)

print(median.result)

## Mode

The mode is the value that has highest number of occurrences in a set of data. Unike mean and median, mode can have both numeric and character data.

R does not have a standard in-built function to calculate mode. So we create a user function to calculate mode of a data set in R. This function takes the vector as input and gives the mode value as output.

Functionname<-function(var1,var2,…)

{

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}

Res<-functioname(val1,val2,…)

Print(res)

getmode <- function(v) {

uniqv <- unique(v)

uniqv[which.max(tabulate(match(v, uniqv)))]

}

v <- c(2,1,2,3,1,2,3,4,1,5,5,3,2,3)

result <- getmode(v)

print(result)

charv <- c("o","it","the","it","it")

result <- getmode(charv)

print(result)