

R Statistical Functions Cheat Sheet

ANOVA – aov() performs an analysis of variance

Bar Graph – barplot() produces bar plots

Box Plot (Box-and-Whisker Plot) – boxplot() produces box-and-whisker plots

Citing R – citation() indicates how to cite R in publications

Confidence Interval – t.test() gives confidence interval for confidence level you specify

Count Number of Values – length() returns the number of values

F test – var.test() Performs an F test to compare the variances of two samples from normal populations

Histogram – hist() produces histograms

Kurtosis – REQUIRES THE e1071 PACKAGE (click install under packages tab, download e1071, click the box in front of e1071t in packages window) kurtosis() computes the kurtosis, (set type = 2 to use the formula used by SPSS, SAS, and Excel)

Maximum – max() returns the maximum value

Mean – mean() computes the arithmetic mean (or trimmed arithmetic mean if specified)

Median – median() computes the sample median

Minimum – min() returns the minimum value

Mode – REQUIRES THE modeest PACKAGE (click install under packages tab, download modeest, click the box in front of modeest in packages window) mfv() returns the most frequent value(s)

Percentile – quantile() computes percentiles

Quartiles – summary() computes the min, 1Q, 2Q (median), mean, 3Q, and max (quantile() will calculate any percentile)

Range – range() returns the minimum value and the maximum value

Scatter Plot – plot() can be used for generic x-y plotting

Skewness – REQUIRES THE e1071 PACKAGE (click install under packages tab, download e1071, click the box in front of e1071 in packages window) skewness() computes the skewness, (set type = 2 to use the formula used by SPSS, SAS, and Excel)

Standard Deviation – sd() computes the sample standard deviation (to calculate the population standard deviation multiply by $\sqrt{\frac{N-1}{N}}$)

Summing – sum() computes the sum of all the values present in its arguments

t Test – t.test() performs one and two sample t-tests (paired, independent, variances equal, variances not equal all possible with this function)

Variance – var() computes the sample variance (to calculate population variance, multiply by $\frac{N-1}{N}$)

Bootstrapping, q-q plots, Tukey's HSD, Interactions, Two-Way ANOVA, Mixed ANOVA, MANOVA, ANCOVA, Correlation, Multiple Correlation, Partial Correlation, Semipartial Correlation, Linear Regression, Curvilinear Regression (Power, Exponential, Logarithmic, Polynomial), and Multiple Regression also all possible in R, just to name a few. Furthermore, Probability and Modeling functions abound.