**General**

builtins() # List all built-in functions

options() # Set options to control how R computes & displays results

?NA # Help page on handling of missing data values

abs(x) # The absolute value of "x"

append() # Add elements to a vector

c(x) # A generic function which combines its arguments

cat(x) # Prints the arguments

cbind() # Combine vectors by row/column (cf. "paste" in Unix)

diff(x) # Returns suitably lagged and iterated differences

gl() # Generate factors with the pattern of their levels

grep() # Pattern matching

identical() # Test if 2 objects are \*exactly\* equal

jitter() # Add a small amount of noise to a numeric vector

julian() # Return Julian date

length(x) # Return no. of elements in vector x

ls() # List objects in current environment

mat.or.vec() # Create a matrix or vector

paste(x) # Concatenate vectors after converting to character

range(x) # Returns the minimum and maximum of x

rep(1,5) # Repeat the number 1 five times

rev(x) # List the elements of "x" in reverse order

seq(1,10,0.4) # Generate a sequence (1 -> 10, spaced by 0.4)

sequence() # Create a vector of sequences

sign(x) # Returns the signs of the elements of x

sort(x) # Sort the vector x

order(x) # list sorted element numbers of x

tolower(),toupper() # Convert string to lower/upper case letters

unique(x) # Remove duplicate entries from vector

system("cmd") # Execute "cmd" in operating system (outside of R)

vector() # Produces a vector of given length and mode

formatC(x) # Format x using 'C' style formatting specifications

floor(x), ceiling(x), round(x), signif(x), trunc(x) # rounding functions

Sys.getenv(x) # Get the value of the environment variable "x"

Sys.putenv(x) # Set the value of the environment variable "x"

Sys.time() # Return system time

Sys.Date() # Return system date

getwd() # Return working directory

setwd() # Set working directory

?files # Help on low-level interface to file system

list.files() # List files in a give directory

file.info() # Get information about files

# Built-in constants:

pi,letters,LETTERS # Pi, lower & uppercase letters, e.g. letters[7] = "g"

month.abb,month.name # Abbreviated & full names for months

**Maths**

log(x),logb(),log10(),log2(),exp(),expm1(),log1p(),sqrt() # Fairly obvious

cos(),sin(),tan(),acos(),asin(),atan(),atan2() # Usual stuff

cosh(),sinh(),tanh(),acosh(),asinh(),atanh() # Hyperbolic functions

union(),intersect(),setdiff(),setequal() # Set operations

+,-,\*,/,^,%%,%/% # Arithmetic operators

<,>,<=,>=,==,!= # Comparison operators

eigen() # Computes eigenvalues and eigenvectors

deriv() # Symbolic and algorithmic derivatives of simple expressions

integrate() # Adaptive quadrature over a finite or infinite interval.

sqrt(),sum()

?Control # Help on control flow statements (e.g. if, for, while)

?Extract # Help on operators acting to extract or replace subsets of vectors

?Logic # Help on logical operators

?Mod # Help on functions which support complex arithmetic in R

?Paren # Help on parentheses

?regex # Help on regular expressions used in R

?Syntax # Help on R syntax and giving the precedence of operators

?Special # Help on special functions related to beta and gamma functions

**Graphical**

help(package=graphics) # List all graphics functions

plot() # Generic function for plotting of R objects

par() # Set or query graphical parameters

curve(5\*x^3,add=T) # Plot an equation as a curve

points(x,y) # Add another set of points to an existing graph

arrows() # Draw arrows [see errorbar script]

abline() # Adds a straight line to an existing graph

lines() # Join specified points with line segments

segments() # Draw line segments between pairs of points

hist(x) # Plot a histogram of x

pairs() # Plot matrix of scatter plots

matplot() # Plot columns of matrices

?device # Help page on available graphical devices

postscript() # Plot to postscript file

pdf() # Plot to pdf file

png() # Plot to PNG file

jpeg() # Plot to JPEG file

X11() # Plot to X window

persp() # Draws perspective plot

contour() # Contour plot

image() # Plot an image

**Fitting / regression / optimisation**

lm # Fit liner model

glm # Fit generalised linear model

nls # non-linear (weighted) least-squares fitting

lqs # "library(MASS)" resistant regression

optim # general-purpose optimisation

optimize # 1-dimensional optimisation

constrOptim # Constrained optimisation

nlm # Non-linear minimisation

nlminb # More robust (non-)constrained non-linear minimisation

**Statistical**

help(package=stats) # List all stats functions

?Chisquare # Help on chi-squared distribution functions

?Poisson # Help on Poisson distribution functions

help(package=survival) # Survival analysis

cor.test() # Perform correlation test

cumsum(); cumprod(); cummin(); cummax() # Cumuluative functions for vectors

density(x) # Compute kernel density estimates

ks.test() # Performs one or two sample Kolmogorov-Smirnov tests

loess(), lowess() # Scatter plot smoothing

mad() # Calculate median absolute deviation

mean(x), weighted.mean(x), median(x), min(x), max(x), quantile(x)

rnorm(), runif() # Generate random data with Gaussian/uniform distribution

splinefun() # Perform spline interpolation

smooth.spline() # Fits a cubic smoothing spline

sd() # Calculate standard deviation

summary(x) # Returns a summary of x: mean, min, max etc.

t.test() # Student's t-test

var() # Calculate variance

sample() # Random samples & permutations

ecdf() # Empirical Cumulative Distribution Function

qqplot() # quantile-quantile plot