The following is a modified shorter list of useful R commands from

http://www.personality-project.org/r/r.commands.html

A short list of the most useful R commands

A summary of the most important commands with minimal examples. See the relevant part of the guide for better examples. For all of these commands, using the help(function) or ? function is the most useful source of information. Unfortunately, knowing what to ask for help about is the hardest problem.

See the R-reference card by Tom Short for a much more complete list. (i.e., https://cran.r-project.org/doc/contrib/Short-refcard.pdf)

Input and display

#read files with labels in first row
read.table(filename,header=TRUE)  #read a tab or space delimited file
read.table(filename,header=TRUE,sep=',')  #read csv files

attach(data)  # By attaching data set "data" it's easier
             # to refer to specific variables

x <- c(1,2,4,8,16)  #create a data vector with specified elements
y <- c(1:10)  #create a data vector with elements 1-10
n <- 10
x1 <- c(rnorm(n))  #create a n item vector of random normal deviates
z <- rbinom(n,size,prob)  #create n samples of size "size" with probability
                         # prob from the binomial
browse.workspace  #a Mac menu command that creates a window with
                  #information about all variables in the workspace

Moving around

ls()  #list the variables in the workspace
rm(x)  #remove x from the workspace
new <- old[n1:n2,n3:n4]  #select the n1 through n2 rows of variables
                         # n3 through n4)

Data manipulation

round(x,n)  #rounds the values of x to n decimal places
ceiling(x)  #vector x of smallest integers > x
floor(x)  #vector x of largest integer < x
Statistics and transformations

max(x, na.rm=TRUE)  #Find the maximum value in the vector x,
#   exclude missing values
min(x, na.rm=TRUE)
mean(x, na.rm=TRUE)
median(x, na.rm=TRUE)
sum(x, na.rm=TRUE)
var(x, na.rm=TRUE)    #produces the variance covariance matrix
sd(x, na.rm=TRUE)     #standard deviation
summary(x, na.rm=TRUE) #Summary descriptive statistics (has other uses)
aggregate(y~Group, mean) # Means for y by group.
# Substitute “mean” by names of other statistics
# such as sd, var, min, max, median
table(x)              #frequency counts of entries, ideally the entries
# are factors(although it works with integers or
#   even reals)
scale(data, scale=FALSE)   #centers around the mean but does not scale
#   by the sd)
cumsum(x, na.rm=TRUE)    #cumulative sum, etc.
cor(x, y, use="pair")   #correlation matrix for pairwise complete data,
#   use="complete" for complete cases
t.test(x, g)
pairwise.t.test(x, g)

Useful additional commands

colSums(x, na.rm = FALSE, dims = 1)
rowSums(x, na.rm = FALSE, dims = 1)
colMeans(x, na.rm = FALSE, dims = 1)
rowMeans(x, na.rm = FALSE, dims = 1)

Graphics

par(mfrow=c(nrow, mcol))    #number of rows and columns to graph
par(ask=TRUE)                #ask for user input before drawing a new graph
boxplot(x, main="title")    #boxplot (box and whiskers)
hist()                       #histogram
text(x, y, "text to plot")    #Add text to plot at point (x, y)
pch = 19                     #Plots bigger dots as points (option for some
#   Graphics.
plot()                       
plot(x, y, xlim=range(-1,1), ylim=range(-1,1), main="title")
Distributions

To generate random samples from a variety of distributions

```r
rnorm(n, mean, sd)
rbinom(n, size, p)
```

dnorm(x, mean=0, sd=1) #normal distribution-- density
pnorm(q, mean=0, sd=1) #p(X<q)
qnorm(p, mean=0, sd=1) # given probabilities what q (quantile is)
rnorm(n, mean=0, sd=1) # random normal variable

Linear Models

```r
reg <- lm(y ~ x) # Simple linear regression model
summary(reg) # Send regression results to console
abline(reg) # If you have a scatter plot of Y by X
# this puts the regression line in plot
```

```r
reg <- lm(y ~ group) # where Group is a factor variable
anova(reg) # prints out ANOVA table
```

```r
reg <- lm(y ~ x1 + x2) # Multiple regression
reg <- lm(y ~ x1 + x2 + x1*x2) # Multiple regression with interaction
```

Help

```r
help( command ) # Replace “command” with what you need # information about, e.g., help(plot)
```

Via google, search : R command
R package name