A list of useful R commands

help()	give help regarding a command, e.g. `help(hist)`
c()	concatenate objects, e.g. `x = c(3,5,8,9)` or `y = c("Jack","Queen","King")`
1:19	create a sequence of integers from 1 to 19
seq()	create a sequence of integers from 2 to 11 by increment 3 with `seq(2,11,by=3)`
rep()	repeat n times the value x, e.g. `rep(2,5)` gives 2 2 2 2 2
(…)	give arguments to a function, e.g. `sum(x)`, or `help(hist)`
[…]	select elements from a list, e.g. `x[2]` gives 5, `x[c(2,4)]` gives 5 9 for x as above
matrix()	fill in (by row) the values from y in a matrix of 4 rows and 3 columns by giving `m = matrix(y,4,3,byrow=T)`
m[,3]	gives the 3rd column of the matrix m
m[2,]	gives the 2nd row of the matrix m
= or <-	assign something to a variable, e.g. `x = c("a","b","b","e")`
==	ask whether two things are equal, e.g. `x = c(3,5,6,3)` and then `x == 3` gives True False False True Then `y[x == 3]` gives those entries of y where x equals 3, i.e. the 1st and 4th entry of y
<	ask whether x is smaller than y, e.g. `x < 6` in the example above gives True True False True
>	ask whether x is larger than y
sum()	get the sum of the values in x by `sum(x)`
mean()	get the mean of the values in x by `mean(x)`
median()	get the median of the values in x by `median(x)`
summary()	6 number summary (min, max, Q1, Q3, median, mean)
round()	round values in x to 3 decimal places by `round(x,3)`
sort()	sort the values in x by giving `sort(x)`
unique()	get the non-duplicate values from a list, e.g. `x = c(3,5,7,2,3,5,9,3)` and then `unique(x)` gives 3 5 7 2 9
hist()	create a histogram of the values in x by `hist(x)`
stem()	create a stem and leaf plot of the values in x by `stem(x)`
boxplot()	create a boxplot of the values in x by `boxplot(x)`
plot()	scatterplot of x vs. y by `plot(x,y)`; for more parameters see `help(plot.default)`
lm()	Fit a least squares regression of y (response) on x (predictor) by `fit = lm(y~x)`
fit$coef	gives the least squares coefficients from the fit above, i.e. intercept and slope
fit$fitted	gives the fitted values for the regression fitted above
fit$residuals	gives the residuals for the regression fitted above
lines()	add a (regression) line to a plot by `lines(x,fit$fitted)`
points()	add additional points (different plotting character) to a plot by `points(x,y2,pch=5)`
scan()	read data for one variable from a text file, e.g. `y = scan("ping.dat")` Don't forget to change to the appropriate directory first (File – Change Dir)
read.table()	read spreadsheet data (i.e. more than one variable) from a text file
write()	write the values of a variable y in a file data.txt by `write(y,file="data.txt")`
log()	natural logarithm (i.e. base e)
log10()	logarithm to base 10
pnorm()	find area under curve of a Normal(10,3^2) distribution to the left of 8, i.e. P(X <= 8), by `pnorm(8,mean=10,sd=3)`
qnorm()	find value x such that area under Normal(10,3^2) curve and to the left of x equals 0.25 by `qnorm(0.25,mean=10,sd=3)`
sample()	take a simple random sample of size n from the population x by `sample(x,n)`