Introduction to R/RStudio

Lab Exercise 2: Extended Introduction to R

1.   a) Create the following matrix and call it 'mat'

3	5	7	4	3
2	5	8	6	5
7	3	5	3	4

b) Change the column names to "one", "two", "three", "four" and "five" and the row names to "Alice", "Bill" and "Sue"

c) Calculate the mean for Bill across all columns

d) Add the row means to the matrix as the sixth column and label that column "RowMeans"

2.   a) Create the following dataset and call it 'newdat' (Commsize = community size)

Sex	Commsize	Altruism
Male	Small	3
Male	Large	6
Male	Small	8
Male	Large	4
Female	Large	5
Female	Large	8
Female	Small	3
Female	Small	2

b) Save the dataset to your hard drive, flash drive, etc. as a .csv file (call it myfile.csv)

c) Open the dataset again in R and call it 'dat1'

d) Calculate the mean Altruism score for Males from a Large community

e) Calculate the median Altruism score for Females

f) Check if "Commsize" is a factor

g) Create a histogram of all Altruism scores

h) Check if there is a difference in the variances of the altruism scores across males and females

i) Change the first altruism case to a '9' and save the dataset as dat2

3. Write a function for calculating the square of a number (x^2).