

## STA201: Elements of Statistics & Probability

### R-Language Bonus Assignment

Use built-in R functions to solve the following problems-

Marks-3.0

Q1. Create the following vector-

90, 178, 547, 453, 189, 377, 264, 333, 289, 391, 320, 300, 210, 310, 121, 154, 248, 292, 368, 423

(i) Find mean, median, standard deviation of the above values (from question 1)

(ii) Find square root of all values

(iii) Sort the values

(iv) Find the length of the vector

(v) Find summation and product of all values

Q2. Create the following data frame-

Number of Rooms	kwh
12	9
9	7
14	10
6	5
10	8

(i) Find Pearson's correlation coefficient between two variables (Number of rooms & KWH)

(ii) Estimate the regression coefficients of a regression of KWH on Number of rooms.

(iii) Plot a scatter diagram of KWH against Number of rooms

**Submission Guideline:** Submit the code and output, as well as the cover page, as in the previous submission. If you submit, this will be counted as a fixed/bonus three marks (i.e., average marks of assignments, 30 will be converted to 12; so, 12+3=15). Take help from R- tutorials shared with you.