1. The dataset cavendish is contained in the package UsingR

a) Provide the five number summary of all the variables considered. Enter this data as SummaryX, with X being variable name.

b) Create appropriate q2bmatXXXX.Rnw file which contains answers to (a), proceed to create appropriate pdf file. Upload both Rnw and pdf files to dropbox folder that you have shared with me.

Due Date: August 13th, 2019, Problems Due: 1

- 1. Compare the values of the mean, median, and 25% trimmed mean on the built-in rivers data set. How do the numbers compare ?
- 2. Compare the three measures of spread (sd, IQR, mad) for the exec.pay data set in the package UsingR. Can you comment if the values are comparable ? What can you infer about the dataset ?
- 3. For $1 \le i \le 5$, let $X_i \sim \text{Uniform}(\{1, 2, 3, 4, 5, 6\})$. Find the probability distribution of $Y = \sum_{i=1}^{5} X_i$
- 4. (Problem 1.10.17, Santosh S. Venkatesh, Theory of Probability- Explorations and Applications) A particular basketball player historically makes one basket for every two shots she takes. During a game in which she takes very many shots there is a period during which she seems to hit every shot; at some point, say, she makes five shots in a row. This is clearly evidence that she is on a purple patch (has a hot hand) where, temporarily at least, her chances of making a shot are much higher than usual, and so the team tries to funnel the ball to her to milk her run of successes as much as possible. Is this good thinking ?