UC Irvine: Division of Continuing Education

R Programming – Section 1: I&CSCI x425.20
Summer 2018
Homework 1

Date Given: July 9, 2018 Due Date: July 15, 2018

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Download R software from CRAN and install it on your computer.
Download RStudio software and install it on your computer.

1. Create a R script to do the following
   - Create a vector 'x' with values from 100 to 109.
   - Create a vector 'y' with values 34, 28, 45, 67, 89, 93, 24, 49, 11, 7
   - Add vector 'x' and 'y'

2. Assuming that variables a, b, c, d, and f are scalars, write R statements to compute and display the following expressions. Test your statements for the following values.
   a = 1.12, b = 2.34, c = 0.72, d = 0.81, f = 19.83

$$x = 1 + \frac{a}{b} + \frac{c}{f^2}$$ x = 1.4805

$$s = \frac{b - a}{d - c}$$ s = 13.5556

$$r = \frac{1}{\frac{1}{a} + \frac{1}{b} + \frac{1}{c} + \frac{1}{d}}$$ r = 0.2536

$$y = ab\frac{1}{c}\frac{f^2}{2}$$ y = 715.6766

3. Download "HW01-Prob3Data.xlsx" spreadsheet file. This file contains data related to automobiles which has the following 9 fields.
   - Car ID
   - Mpg (miles per gallon)
   - Cylinders
   - Displacement
   - Horse Power
   - Weight
   - Acceleration
   - Origin
   - Age

   Read this spreadsheet data in a variable in R. Make sure that the data is read correctly by R by displaying first few values of the data.