DS 413/613 CLASSWORK/LAB Vectors

Instructions: Email your work that details r code and output using an Rmarkdown File and a Word File.

library(tidyverse)

**V <- c("Bears", "Lions", "Dolphins", "Eagles", "Bengals")**

1) Why is the vector shown above an atomic vector? (Explain using two

or three sentences)

2) Use and show R code that will extract "Dolphins" from the vector

shown above.

3) Use and show Rcode that will extract "Bears" , "Dolphins" and

"Bengals" from the vector shown above.

4) Use and show two Rcoding methods that will show all objects of

the vector given above except "Bears".

**K <- list( x = 3:7, "never", 43, y = list(10,20,30))**

5) Why is the vector given above called a list? (Explain in two or

three sentences) If the vector is a list, identify the type of each object in

the list.

6) Use and show R code that will give the length of the vector shown

above.

7) Use and show R code that will output the fourth object in the vector

shown above.

8) Use and show R code that will show all objects in the vector (list)

given above.

9) Copy paste and run the tribble given below.

tribble( ~x, ~y, ~w, ~z,

210, 300, 220, 180,

102, 100, 119, 187,

176, 175, 188, 173,

87, 95, 91, 94,

202, 210, 234, 218,

110, 122, 131, 128,

) -> dt

dt

9a) Use and show a map function to find the mean of each column of

the dt data table

9b) Use and show a map function to find the standard deviation of

each column of the dt data table.

9c) Use and show a map function that will calculate the square root

of each value of each column of the data table dt.

9d) Use R code to find the mean, max, 1st Quartile, 2nd Quartile,

Median, and Mean for each column of the dt data table. (Hint: You do

not have to use a map function)

10)

x <- list(26, 32, 45, 50, 65, 77, 82)

y <- list(30, 43, 50, 58, 62, 71, 88)

For the lists given above, show and use R code (a map function) to iteratively find:

a) sums across the two vectors. (Use two methods)

b) the calculation of the square of the x value minus the square root of the y value.

c) the ratio of the common log of the x value to the natural log of the y value.