Instructions

**CIS 449 Assignment 1:  R Hodgepodge**

**Due:  May 29, 2023 @ 11:59 PM**

In this assignment, you will be asked to work with the particular things we have seen this week in R to answer the following questions.  Each question is of equal weight, totaling 100 points.  The correct answer (as produced in R) is worth 5 points and the method by which it is produced is worth the other 5 points.

As with all assignments (with the exception of the final), this should be submitted as a commented R Script and uploaded to Brightspace by the due date and time.

If you have any questions concerning this assignment, please post them to the discussion board in Week 1 and then e-mail me to alert me that the question is there.  I prefer you to make questions in this way so that everyone gets the benefit of the answer.  This stops me from having to answer the same question numerous times.

Without further adieu:

Q1:  Find where the parentheses should go to make 9\*5-4-3+2 = 0.

Q2:  Find the current working directory and set it to your Downloads folder.

Q3:  Go to [http://www.nfl.com/stats/categorystats?archive=false&conference=null&statisticCategory=PASSING&season=2022&seasonType=REG&experience=&tabSeq=0&qualified=false&Submit=Go](http://www.nfl.com/stats/categorystats?archive=false&conference=null&statisticCategory=PASSING&season=2017&seasonType=REG&experience=&tabSeq=0&qualified=false&Submit=Go) and store the top 10 passing yards (the numbers) as a vector.  Then find the conversion of yards to meters and apply that to the vector so we can show the world that the metric system can be used in the U.S. as well!

Part

Q4:  Create the following three vectors in the most efficient way possible: a) a list of months of the year (starting with January),  b) the numbers from 1 to 360 and c) the months of the year (starting with September) repeated out to the 360th month..

Q5:  There are 128 ounces of milk in a single gallon. You have been asked to break that gallon into 10 equal portions under two different philosophies:  a) you can only give people an integer number of ounces, and b) you have to exhaust the amount of milk in the container.  In the first case, determine the number of ounces each person gets and how much milk is left in the container.  In the second case, determine how many ounces each person gets.

Q6:  Install the *rgdal* package and load the library into your session.

Q7:  Let’s revisit the NFL yardage again.  Calculate the average of that set of QBs and then convert it to meters.

Q8:  Create a 3 x 3 matrix of three classes you took in each of the last three semesters (if you haven’t taken courses in that volume, combine your most recent nine classes).  Enter them by semester.  You then realize that this representation doesn’t sort the classes to your liking.  Transpose the matrix to get them listed out horizontally.

Q9:  Add a third dimension to that table that also incorporates your grade in those courses.

Q10:  Take the vector of months needed in Q4 and check if May < June.  If the result is not to your liking (and it shouldn’t be), correct the list so that it understands the proper ordering of the months while not destroying the order of the list.