

## Week 3 Assignment - Exercises

The answers to the following questions should be placed in a single R script. Place your R script in a public repository on github and submitting a link to the script here. Label your answers using comments so that they can be clearly and quickly found within the script.

***Week 3 assignment is due end of day on Tuesday September 16<sup>th</sup>. Solutions to all assignment exercises will be posted on Wednesday September 17<sup>th</sup>.***

1. Use R to determine how many numbers from 1 to 1000 are not divisible by any of 3,7, and 11.
2. Write a function that takes a vector as input and returns the number of missing values in the vector.
3. Write a function that takes a data frame as input and returns a named vector with the number of missing values in each column of the data frame. (The names of the entries should be the corresponding column names of the data frame.) You may use the function from the previous question as part of your solution.
4. Write a function that takes a numeric vector as input and uses it to determine the minimum, the maximum, the mean, the median, the first quartile, the third quartile, the standard deviation of the vector, and the number of missing values. Do not use any built-in functions to do this. Return a named list with the eight desired values in an order you deem best. (You may, if you like, use the function you wrote for question 2.)