

## Lab 1: Vectors and using Quarto in RStudio

The following worksheet is due within 24 hours after the end of the lab session. You will submit your lab report in crowdmark.

0. Open a new Quarto file. Label the title "Stat 123 Lab 1" and type in your name as the author and select output as a Word document. If this is the first time you create a new Quarto file, RStudio may prompt you to install some packages (R addons). Click yes and let RStudio does its thing.
  - (a) Delete all sample code in the new Quarto file.
  - (b) For each question, insert a new chunk and label the question number.
1.
  - (a) Create a vector called *countries* which contains the names of 5 countries that you have visited or would like to visit some day.
  - (b) Print out the elements of the vector.
  - (c) Print out the 4th element of the vector.
2.
  - (a) Create a vector called *nums* which contains the numbers 20, 21, 22,..., 200, 201 (consecutive integers)
  - (b) Use the *length()* function to find the number of elments in the vector.
  - (c) Use the *sum()* function to add up all of the values in *nums*.
  - (d) Use the *mean()* function to find the average of all of the values in *nums*.
3.
  - (a) Create a vector called *sleep* which contains how many hours of sleep you get on each day of the week (starting with Monday). Then display the vector *sleep*.
  - (b) Create a vector called *days* which contains the names of the days of the week (starting with Monday).
  - (c) Use the *names()* function to set the names of the *sleep* vector to the values of the *days* vector. Now display the vector *sleep* again. Note the difference between this and the one displayed in part a.
  - (d) Show two different ways to print out the number of hours of sleep you get on Saturday.
4. Once you make sure all the code works in the Quarto file, render it to a Word file. Then open the file and print it as a PDF file. The name of the file should be **Stat123\_Lab01\_YourName.pdf**. Double check that the file is readable before submitting. Then submit the pdf file to the appropriate Brightspace folder. File submitted in a different format or cannot be read will receive a grade of **0**. If you can't open the word document from your computer, submit the word file and let me know.

Note: You can save the Quarto file directly to a pdf file, but the computer needs to have the Latex software installed. This method is not recommended (and not supported in this course) unless you know what you are doing. It also has trouble rendering files occasionally.