DUE: November 14th, 2018 at 11:59 PM

QMM 1001 - Statistics for Data Analytics Lab 7 /13

Create and submit an R script which, when run, will print the answers to the following questions. Your R script must include a title with your name and student number and comments for each question number and letter.

1. **(6 marks)** Suppose the amount of time spent studying for a statistics test is normally distributed. If the average amount of time spent studying is 7 hours with a standard deviation of 2.5 hours, calculate the following probabilities:
    a. The probability that a student spends between 3 and 7.5 hours studying.
    b. The probability that a student studies for less than 2 hours.
    c. The probability that a student studies for more than 6 hours.

2. **(4 marks)** Suppose that scores on a standardized test are normally distributed with a mean score of 500 and a standard deviation of 75.
    a. Determine the 85th percentile for the test scores.
    b. Suppose that 73% of the data lie above the score *x*. Determine *x*.

3. **(3 marks)** Suppose a dataset is normally distributed with mean 0 and standard deviation of 3. Suppose that the middle 42% of the data lies between the scores –*y* and *y*. Determine *y*.

Save your R Script as: Last Name, First Name LAB 7

Upload your R Script to the "R Assignment – Lab 7" drop box on Moodle before November 14th at 11:59 PM.