MET CS 555 Assignment 2

Please submit a “report” in word which contains your results (graphs, answers to the questions). Copy and paste your code to the end of your report.

IQ scores of 59 seventh graders in a Midwest school district were measured. Data are recorded below. Save the data to a format that can be read into R. Read the data in for analysis. Use R to calculate the quantities and generate the visual summaries requested below.

(1) Summarize the data by gender using the appropriate numeric summaries. Use an appropriately labelled table to show the results. Also include a graphical presentation that shows the distribution of scores of males versus females. Describe the shape of each distribution and comment on the similarity (or lack there of) between the distributions in each population.

(2) Do the mean scores for girls differ from 105? Formally test at the 0.05 level using the 5 steps outlined in the module.

(3) Calculate a 90% confidence interval for the mean score for girls. Interpret the confidence interval.

(4) Formally test whether or not girls have higher scores than boys at the 0.05 level using the 5 steps outlined in the module.

(5) Are the assumptions of the test used in (4) met? How do you know?

IQ Scores for girls:

122 108 112 97 110 99

122 122 111 113 116 138

128 140 119 111 82 120

115 111 106 104 120 120 101

IQ Scores for boys:

111 107 100 107 115 111

97 112 104 118 113 124 127

136 88 85 124 93 98 127 119

97 102 110 110 110 107 105

83 110 105 90 114 106