MTH 103/L
2nd Laboratory Exam

General Direction: Use **R Studio** to complete the EXAM and make sure to name the output the same way as your lab activities.

1) Use **R Studio** and provide the result using the DESCRIPTIVE STATISTICS. (***15pts***)

The data show the number of licensed nuclear reactors in the United States for a recent 15-year period. Find the mean, median, and mode.

104	104	104	104	104
107	109	109	109	110
109	111	112	111	109

For the following questions:

Answer each item using **R Studio** and provide the **null and alternative hypotheses, alpha level, mean, standard deviation, decision, interpretation, and conclusion.** (***25pts each***)

2) A sample of non-English majors at a selected college was used in a study to see if the student retained more from reading a 19th-century novel or by watching it in DVD form. Each student was assigned one novel to read and a different one to watch, and then they were given a 20-point written quiz on each novel. The test results are shown below. At $\alpha = 0.05$, can it be concluded that the book scores are higher than the DVD scores?

Book	90	80	90	75	80	90	84
DVD	85	72	80	80	70	75	80

3) A tax collector wishes to see if the mean values of the tax-exempt properties are different for two cities. The values of the tax-exempt properties for the two samples are shown. The data are given in millions of dollars. A $\alpha = 0.05$, is there enough evidence to support the tax collector's claim that the means are different?

City A				**City B**			
113	22	14	8	82	11	5	15
25	23	23	30	295	50	12	9
44	11	19	7	12	68	81	2
31	19	5	2	20	16	4	5