**Test 4 Review Sheet – Math 2620**

This is a review for Test 4 which covers sections 7.6-7.11, 8.1-8.4, 8.6, 9.1-9.13 of the text and anything we have discussed in class.

**Overview**

The test will have 30-40 Multiple Choice questions and possibly a few True/False. You will need your calculator. No formula sheet is provided.

**Review**

1. Chapter 7
2. Know how to write down hypotheses about p.
3. What is a p-value?
4. What are type 1 and 2 errors? Identify the consequences of each in a problem.
5. Do HT on u with a small sample. Know conditions for use.
6. Do HT on p. Know conditions for use.
7. How can a CI be used to evaluate a HT?
8. Chapter 8
9. Write hypotheses to compare two populations
10. Use CI to evaluate a HT with two samples.
11. Pattern of signs on CI
12. Large Sample CI/HT, assumptions
13. ~~Small Sample CI/HT, assumptions~~
14. Dependent Samples - when to use, why we prefer, what makes it better when appropriate, total variability
15. Dependent Samples CI/HT.
16. Chapter 9
17. What is the idea behind regression? What are we trying to do?
18. Correlation - Define, Identify
19. Steps in regression
20. Scatter plot - interpret
21. Multiple Regression - define
22. What is the model in regression (i.e. what are we trying to estimate in mathematical terms)
23. Define terms: independent variable, explanatory variable, predictor, dependent variable, response, estimated slope, estimated y-intercept
24. Correlation coefficient - Define, identify/compute from regression output.
25. Coefficient of determination - Define, use to interpret regression line, identify/compute from correlation coefficient
26. How to determine if regression line is significant in words. What is appropriate hypothesis?
27. Decision for HT on slope - What exactly does the hypothesis mean?
28. Use regression line for estimation/prediction
29. Confidence Interval, Prediction Interval - define
30. Outliers, Influential Observations - How do we determine? What do they mean?