## Math 121 - Midterm 3 Suggested Study Problems

Here are problems that are similar to the ones you might see on the exam. Be sure to also review old homework and quiz questions too. The exam will have both multiple choice and short answer questions.

Inference About One Proportion Cht. 20# 15, 17, 21, 23

Inference About Two Proportions Cht. 21# 9, 11, 13, 15

Choosing Right Inference Procedure Cht. 22# 1, 3, 11, 13, 15, 19, 24, 25, 26, 27

The formulas for the different types of inference will be on the formula sheet, but you will need to know when to use each formula.

Scatterplots and Correlation Cht. 4# 15, 17, 19, 21

Least squares regression Cht. 5 # 19, 23, 25 You should memorize the meaning of  $r^2$ .

## Logarithmic Scales & Benford's Law

- 1. Make sure you know how to recognize a logarithmic scale when you see one.
- 2. You should know how to use a logarithmic scale to multiply and divide.
- 3. What are the advantages and disadvantages of a using a logarithmic scale?
- 4. Know roughly what Benford's Law says and when it applies.
- 5. What is an order of magnitude?

## Two-way tables Cht. 6# 8, 9, 10, 11

Know the difference between conditional and marginal distributions.

## Simpson's paradox Cht. 6# 17

Be sure you can identify Simpson's paradox when you see it.