

**STAT 110**  
**EXAM 2 REVIEW**

**GENERAL SUGGESTIONS:**

1. Study the examples from your notes and the practice exam.
2. Study the homework problems and the practice problems.
3. You can fill ONE SIDE of an 8 ½ x 11 sheet of paper with formulas/ideas. This will be turned in with the exam.

**CHAPTER 3**

- Interpret numerical summaries for two categorical variables:
  - Contingency Tables
- Interpret graphical summaries for two categorical variables:
  - Mosaic Plots
- Calculate and interpret Risk, Relative Risk, and Odds Ratios
- Understand why researchers and journalists should report more than just a relative risk (i.e., understand the importance of also reporting absolute risks)
- Identify both the predictor and response variables in a study.
- Understand the difference between Observational Studies vs. Designed Experiments and how the study design influences the conclusions we are able to make.
- Carry out inferential procedures (hypothesis tests and confidence intervals) for a difference in two proportions:
  - Fisher's exact test from JMP output
  - Understand how to compute expected counts for a chi-square test
  - Understand how to compute the chi-square test statistic
  - Find the p-value and carry out the chi-square test from JMP output
  - Know how to interpret the p-value
  - Calculate AND INTERPRET a confidence interval for a difference in two proportions
  - Carry out hypothesis tests for a difference in several proportions (the Chi-square Test of Independence) when given JMP output