

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.

Basic Inference: Hypothesis Testing 17.23, 17.25, 17.27, 17.29; 18.19, 18.21, 18.23

Concepts to review: (i) The definition of a p-value (**memorize this**): A p-value is the probability of getting a result at least as extreme as what we got, if the null hypothesis is true. (ii) Logic of hypothesis testing (Extreme results = low p-values = reject H_0 = statistically significant = our results probably aren't just a random fluke).

t-Distribution 20.17, 20.19, 20.21, 20.23, 20.25

Concepts to review: (i) Degrees of freedom and how to use t-distribution table.

Two Sample Inference About the Mean 21.19, 21.21, 21.23, 21.25

Concepts to review: (i) Meaning of two-sample confidence intervals. (ii) When to use two sample t-methods vs. one sample matched pairs methods.

Inference About Proportions 22.15, 22.17, 22.21

Concepts to review: (i) Plus-4 confidence intervals.

Two Sample Inference About Proportions 23.9, 23.11

Concepts to review: (i) Meaning of two-sample confidence intervals. (ii) Pooled proportions.

Choosing the Right Inference Procedure 24.41, 24.43, 24.45

Terminology The end of each chapter has a one page chapter summary. Make sure you read this, and are familiar with all of the terms that are mentioned in bold-face.