

Math 121 - Midterm 2 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.

Experiments Cht. 9# 9.19, 9.21, 9.25

Concepts to review: (i) Explanatory vs. response variables, (ii) Lurking variables, (iii) Randomized experiments test causation (by controlling lurking variables).

Basic Probability Cht. 12# 12.23, 12.25, 12.27, 12.31

Concepts to review: (i) Sample space.

Sampling Distributions Cht. 15# 15.17, 15.19, 15.21, 15.23

Concepts to review: (i) Expected value, (ii) Law of large numbers, (iii) Central limit theorem, (iv) Sampling distribution of \bar{x} (shape, center, and spread).

Probability Rules Cht. 13# 13.17, 13.19, 13.21, 13.23, 13.25

Concepts to review: (i) Venn diagrams & tree diagrams, (ii) Conditional probability.

Binomial Distribution Cht. 14# 14.13, 14.15

Concepts to review: (i) Normal approximation to binomial distribution.

Confidence Intervals Cht. 16# 16.11, 16.13, 16.15, 16.17

Concepts to review: (i) Margin of error, (ii) Meaning of a confidence interval.

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.