Announcements

- Final Exam: Tuesday 4/27 10:00-11:50 AM in this room
- Extra office hours - see webpage
- Homework 11 - contact the TA

Rules of the game...

- You will have 1 hour and 50 minutes to complete the exam
- This is a closed exam
  - No books
  - No notes
  - No calculators
  - No “cheat sheets”
- You are expected to memorize basic formulas
  - Product & sum rules
  - r-Permutations, r-Combinations
  - Probability, conditional probability
  - etc.
- You will be given the formula for Bayes’ rule and also the Binomial Theorem
Exam Format

- Terminology questions
- Short computations and answers
- Proofs

The exam will sample topics from Chapters 3, 4, 5, 6 and 8 of the Rosen book

Chapter 3: Integers, Division, Primes

Chapter 4: Induction and recursion

Chapter 5: Counting

Chapter 6: Discrete Probability

Chapter 8: Relations
Important topics: Chapter 3

Chapter 3: Number Theory
- The Integers and Division (div, mod, |, ...)
- Primes, GCD, ...

Important topics: Chapter 4

Chapter 4: Induction and Recursion
- Mathematical induction
- Strong induction
- Recursive definitions
Important topics: Chapter 5

Chapter 5: Counting
- Product and Sum rules
- The pigeonhole principle
- Permutations and combinations
- Binomial Coefficients

Important topics: Chapter 6

Chapter 6: Discrete probability
- Basics
  - Probability of equally likely events
  - Probability of combinations of events
- Probability theory
  - Determining probability distributions
  - Conditional probability
  - Independence
- Bayes’ theorem
Important topics: Chapter 8

Chapter 8: Relations

- Binary relations
  - Relations on a set
  - Reflexive, symmetric, and transitive
  - Combining relations

- Equivalence relations

Study hard!

- Please look over your lecture notes and homeworks for examples
- Take advantage of office hours if you still have questions!