

CSE 321 Discrete Structures

March 10th and 12th, 2010

Lecture 25-26: Final Review

The Final

- Time: Monday, March 15, 2010, 2:30-4:20
- Room: EEB045

- Closed book
- No computers no calculators

How to Prepare

In order of priority:

1. Read material
2. Practice more exercise from the book
3. Review homework solutions
4. Review midterm solutions
5. Sections on Thursday, lecture on Friday
6. Office hour Wednesday 4:30-5:30

Five Problems on the Final

1. Propositional Logic, Predicate Calculus
2. Induction, sums, recurrences
3. Integers and modular arithmetic
4. Counting
5. Probability theory
6. Relations

1. Propositional Logic Predicate Calculus

- Rosen, 1.1-1.7
- Lectures 1 – 5
- Handouts on Natural Deduction and Nested Quantifiers

2. Induction, sums, recurrences

- Rosen 4.1, 4.2, 4.3, 4.4, 4.5, 7.1, 7.2
- Lectures 6 – 11
- Handout on sums

- Remember the basic sums and recurrences !
 - $\sum_k k$; $\sum_k k^2$; $\sum_k x^k$;
 - $f_n = 3f_{n-1} + f_{n-2}$

3. Integers and Modular Arithmetic

- Rosen 3.4, 3.5, 3.6, 3.7
- Lectures 12 – 16

- Note: GCD in lecture notes differs from GCD in book

4. Counting

- Rosen 5.1, 5.2, 5.3, 5.4
- Lectures 17 – 18

- Note: practice basic sums with combinations
- Quiz: compute $\sum_{k=1, n} C(n, k) * C(n, k-1)$

5. Probability Theory

- Rosen 6.1, 6.2, 6.3, 6.4
- Lectures 19 – 22

- Bayes theorem, Shannon's expansion

6. Relations

- Rosen 8.1, 8.3, 8.4, 8.5, 8.6
- Lectures 23 – 24

- Finish homework **before** tomorrows section so you can ask questions !