

Mathematics 2345 : Discrete Mathematics

Topics for Exam 2

Fall 2011

The exam may be comprehensive. The following list of topics may help you in your preparation for the test.

- Everything covered in Exam 1 (Logic, Proof techniques, Sets)

Emphasis on the following, however:

- Functions
- Sequences and Summations
- Growth of Functions (O , Ω , Θ – know definitions and meanings; how to apply; how to prove)
- Integers and Division (esp. primality, (pairwise) relatively prime, gcd, lcm, modular arithmetic, congruencies)
- Integers and Algorithms (esp. Euclidean, converting numbers between bases)
- Linear Combinations (Sec. 3.7)
- Induction Proofs — weak (and strong if we get it covered by Monday), with steps labeled, using required wording, and giving reasons for parts of inductive step