CSCI 1323 (Discrete Structures), Spring 2001

Review for Exam 2

Note: The HTML version of this document may contain hyperlinks. In this version, hyperlinks are represented by showing both the link text, formatted like this, and the full URL as a footnote.

1 Format of the exam

The exam will be in class April 5. You will have 75 minutes. You may use your textbook, any notes or papers you care to bring, and a calculator (though you should not need one); you may not use other books, a computer, or each other's papers.

The questions will be similar in form to those in the homework assignments and Exam 1.

2 Topics to review

You are responsible for all material covered in class or in the assigned reading. The focus will be on material covered since Exam 1, but some questions may draw on previous material as well. (See Homeworks and other assignments[1] for a list of assigned reading.) You should review in particular the following topics. This list is *not necessarily exhaustive*, but should give you an idea of what topics I consider most significant.

- Recursion and recurrence relations.
  - Recursive definitions of sequences, sets, operations, and algorithms.
  - Defining and solving recurrence relations.
- Analysis of algorithms.
  - Defining and solving recurrence relations to estimate the number of basic operations performed by a recursive algorithm.
- Sets.
  - Definitions.
  - Operations on sets.
  - Basic set identities.
- Counting.
  - Multiplication and addition principles.
  - Principle of inclusion and exclusion.
  - Pigeonhole principle.
  - Permutations and combinations.
  - Permutations and combinations with repetitions.

[1] `http://www.cs.trinity.edu/~bmassing/CS1323_2001spring/assignments.html`