CS 173: Discrete Structures, Fall 2009
Honors Homework 1

This homework contains 4 problems worth a total of 36 points. It is due on Wednesday, September 23rd at 5pm. So that these do not get mixed up with the regular homeworks, please turn in your answers (in hardcopy form) directly to Margaret or put it under the door of her office (3214 Siebel).

Your homework must be formatted using Latex. Make sure to typeset your name and netid at the top. It's not necessary to include the questions. Your answers are sufficient.

The source to this homework has deliberately not been posted. Feel free to use the sample document from Lucas and David as a starting point. Also feel free to use the posted source for other homeworks. If you get stuck, ask any of us for help.

This homework makes several references to specific items from Rosen. These references are to the 6th edition (US and international versions are identical). If you are using another edition (e.g. the 5th), xerox the relevant pages from the copy on reserve in the library, or a classmate, or one of the course staff.

1. [**8 points**] **Tables and summations**

   Reproduce Table 2 p. 157 (first four formulas only), using a latex table. It's not necessary to reproduce the spacing (etc) exactly. Just make sure your equations are mathematically the same. You may need to use the command \displaystyle inside your equations to force Latex to set the summations as shown in Rosen.

2. [**6 points**] **Logic formulas**

   Reproduce the four equations in Table 8, page 25.

3. [**8 points**] **Miscellaneous mathematics**

   Reproduce definition 4 on p. 136. Try to reproduce where the original has italics. In particular, note that in the English text portions, the variable names are set in italic.

4. **[14 points] Siebel center treasure hunt**

   Please answer the following questions about the Siebel center. This requires physically going to various parts of the building.

   (a) Which elevator goes to the penthouse level (above the 4th floor)?

   (b) What's in room 1221?

   (c) What is immediately to the west of Jeff Erickson's office?

   (d) Whose office is immediately to the north of Marianne Winslett's office?

   (e) What object is to the west of the entrance to room 4407?

   (f) Bruce Schatz has a poster on the door of his office. What program is it advertising?

   (g) Whose office is 4312?