CSCI 1323 (Discrete Structures), Spring 2002
Homework 1

Assigned: January 17, 2002.

Due: January 29, 2002, at the start of class.

Credit: 20 points.

1 Problems

Do the following problems. You do not need to turn in answers for the ones marked "Not to turn in". Some such problems will be those for which the textbook provides an answer in the back of the book, so you can check your work; we may also do some of these problems in class.

1. (Not to turn in) Do problem 5 on p. 16 of the textbook.
2. (Not to turn in) Do problem 7 on p. 16 of the textbook.
3. (4 points) Using letters for the component statements, translate the following statements into symbolic notation:
   (a) Either it is raining or it is not raining.
   (b) If it is raining and the convertible's top is down, the seats will get wet.
   (c) Joe will graduate this year if and only if he passes all his courses this semester.
   (d) Either Jane will pass all her courses and graduate or she will start her own company.
4. (Not to turn in) Do problem 11, parts (a) and (b), on p. 17 of the textbook.
5. (Not to turn in) Do problem 15, part (c), on p. 18 of the textbook.
6. (4 points) Verify distributive property 3a on p. 10 of the textbook *by constructing truth tables.*
7. (Not to turn in) Do problem 20, part (a), on p. 19 of the textbook.
8. (Not to turn in) Do problem 22, part (a), on p. 19 of the textbook.
9. (Not to turn in) Do problem 27 on p. 20 of the textbook. First translate the English sentences into symbolic notation.
10. (Not to turn in) Do problem 1 on p. 30 of the textbook.
11. (Not to turn in) Do problem 4 or problem 6 on p. 30 of the textbook.
12. (Not to turn in) Do problem 12 on p. 30 or problem 18 on p. 31 of the textbook.
13. (Not to turn in) Do problem 22 on p. 31 of the textbook.
14. (6 points) Do problem 23 on p. 31 of the textbook.
15. (Not to turn in) Do problem 33 on p. 32 of the textbook.
16. (6 points) Do problem 31 on p. 32 of the textbook.