

CSE 321: Discrete Structures

Assignment #6

November 27, 2001

Due: Friday, December 6

**Reading Assignment:** Read Sections 6.1 – 6.5, 7.1 – 7.3.

**Problems:**

1. Rosen, Section 6.1, problem 4.
2. Rosen, Section 6.1, problem 20.
3. Rosen, Section 6.4, problem 14.
4. Rosen, Section 6.4, problem 16. Only yes/no answers.
5. Rosen, Section 6.5, problem 10.
6. Rosen, Section 6.5, problem 32.
7. **Extra credit:** You are taking an exam with 6 questions. You haven't studied very much, so the probability that you can answer a given question is only  $1/3$ . However, your neighbor, the best student in the class, can answer a given question with probability  $9/10$ . So, you can (should?) do the exam by yourself, or you can try to cheat . . . . For every question on which you try to cheat, there is a probability  $1/6$  that you will be caught. If you are caught, you get zero for the whole exam. However, if you are not caught, you get the answer from your neighbor, which is likely to be better than your own. What strategy will maximise your expected grade for this exam? That is, should you try to cheat? How many times?

**Have a Happy Thanksgiving!**