

Computer Science 202a
Homework #7, due in class Wednesday, November 15, 2006

Please include the total time you have spent on (1) reading and (2) doing the problems for this assignment. This will help me calibrate the workload; including this information will be worth a *bonus* of 2 points on this problem set. Each problem is worth 10 points; partial credit will be given if the grader can easily understand enough of your answer to award it.

1. Sequences to generating functions. Text 7.4, problem 6(a) through 6(e), page 496.
2. Generating functions to sequences. Text 7.4, problem 8(a) through 8(e), page 496.
3. Solving recurrences using generating functions. Text 7.4, problem 34, page 498.
4. Coin flip probabilities. Text 7.5, problem 24, page 505.
5. Squarefree integers. Text 7.6, problem 6, page 513.
6. Derangement recurrence. Text 7.6, problem 18, page 513.
7. Thanks a million. Text Supplementary Exercises for Chapter 7, problem 30, page 516.
8. Reflexive relations. Text 8.1, problem 48, page 529.
9. A property of selection. Text 8.2, problem 20, page 536.
10. A non-property of projection. Text 8.2, problem 26, page 537.