

Name:

Collaborator(s)¹:

Math 213, Section F1, Prof. Hildebrand, Fall 2010
Graded HW Assignment 7, due Friday, 10/29/2010

Instructions

- **Rules:** Use this sheet as cover sheet and staple it to the assignment. Do the problems in order, and make sure that each problem is clearly labelled. Leave plenty of space for the problems. The assignment is due in class on the above date; late homework, or homework dropped off in mailboxes, will not be accepted. See the Course Information Sheet for the policy on “excused” homework.
- **Write-up:** Solutions, rather than answers, are required. An answer alone will not earn credit. The solutions must be written up in a clear, logical manner, using correct mathematical terminology and notation, and any key steps explained.
- **About these problems:** The problems from 7.2 are exercises in using the characteristic equation method to solve recurrences. In Problem 6 of 7.2 you also have to set up a recurrence; this is similar to the problems from the last assignment. (In the other problems, the recurrence is given.)

The last three problems (from Section 7.4) deal with solving recurrences by generating functions. This is the only application of generating functions we will consider in class. It can be found on p. 493–495 in Section 7.4; you need not be familiar with the other applications covered in the rest of this section.

Problems (from Rosen, 6th Edition)

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|--------------|------------------------|
| 1. 7.2: 4(a) | 8. 7.4: 31(a)(b)(c)(d) |
| 2. 7.2: 4(d) | 9. 7.4: 33 |
| 3. 7.2: 4(e) | 10. 7.4: 35 |
| 4. 7.2: 6 | |
| 5. 7.2: 14 | |
| 6. 7.2: 24 | |
| 7. 7.2: 28 | |

¹If you worked with another student or in a small group on this assignment, list the names of all students involved.