

Name (please print):

Math 213, Spring 2006
HW Assignment 7

Instructions

- **Write your name on the cover sheet and staple the sheet to the assignment.** Do the problems in order, and make sure that each problem is clearly labelled.
- **Deadline:** The assignment is due in class on **Wednesday, March 15**; late homework, or homework dropped off in mailboxes, will not be accepted. (You can, of course, turn in the homework early, in my office, any time before the due date).
- **Open House this week:** Two days this week, since I have an exam coming up in my other class: Wednesday and Thursday, 5 - 6 pm, in 147 Altgeld (or an adjacent room in case 147 is taken). Feel free to stop by with questions about the homework or anything else relating to this course!

Problems

For problems asking to find a recurrence you have to clearly explain how you arrived at this recurrence. Simply writing down the recurrence relation will not earn credit.

- Section 5.2: 34 (an easy problem on Bernoulli trials)
- Chapter 5, Supplementary Problems (p. 396), Problem 11 (a fun and rather easy problem on the “odd person out” game; an extension of Problem 29 in 5.2)
- 6.1: 2(d)(e) (This asks to work out the first 5 terms of the given sequence.)
- 6.1: 2(d)(e) **Additional web assignment:** Once you have computed the first 5 terms of those sequences, plug in these terms (and more if necessary to get a unique match) into the “Online Encyclopedia of Integer Sequences” (see the link from the course webpage), and see if the sequence is there. If it is (I strongly suspect it is, at least in case (e)), print out the info you find and attached it to the hw paper.
- 6.1: 8(b)(d)(f) (Solve the given recurrence by iteration)
- 6.1: 14(a)(b)(c) (This requires both setting up, and solving (by iteration) a recurrence.)
- 6.1: 19(a)(b)(c) (This is a familiar looking problem, but the order matters here, which makes it quite different from donut-counting problems, and amenable to be tackled by recurrences. For the problem you only need to come up with an appropriate recurrence relation, though not solve it.)
- 6.1: 24(a)(b)(c) (This is similar to the bit-string counting example (Ex. 6, also worked out in class), and to Problem 23)