

Name (please print):

Math 213, Spring 2006
HW Assignment 4

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 Friday; 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:** For the remainder of the semester, the “Open House” will (usually) be Thursdays, 5 - 6 pm, in 147 Altgeld. Feel free to stop by with questions about the homework or anything else relating to this course!

Problems

- **Section 4.1:** 8, 14, 16, 22, 26, 28, 32, 36, 37
- **Section 4.2:** 2, 6, 10, 14

About these problems. For the combinatorial problems in Section 4.1, the solutions can be brief, but should show how you arrived at the answer; e.g., use a notation such as

$$\underbrace{26^2}_{2 \text{ letters}} \cdot \underbrace{10^3}_{3 \text{ digits}}$$

The pigeon hole problems (Section 4.2) require a properly written up proof. In particular, you should clearly say (i) how you define the “pigeon holes”, (ii) how you define the “pigeons”, and (iii) how having two “pigeons” (as defined in (ii)) in the same “pigeon hole” (as defined in (i)) leads to the desired conclusion.

Use the examples worked in class or those in the book as models for your own solutions.