

Math 453, Section X, Spring 2008  
HW Assignment 2, due Monday, 2/4/2008

**Name (print please):**

- **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 Monday, 2/4; 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:** Open House Hours are Wednesdays, 5 pm – 6 pm (longer, if needed), in 141 Altgeld. The Open House is an informal office hour for students in my classes. It is intended as the main point of contact, and the place to go, for questions about the homework, or other questions about the course.
- **Write-up:** Solutions, rather than answers, are expected for all problems. Your solutions should be properly written up, using correct mathematical notation and terminology, and in *complete sentences*. Use English words instead of logical symbols like  $\therefore$ ,  $\therefore$ ,  $\forall$ ,  $\exists$ , etc., that you may have used in high school and lower level classes. In professional writing the use of such symbols is disdained and considered sophomoric, and you won't find these symbols in any of the examples and proofs in Strayer's text, or other number theory texts at that level.

## HW 2 Problems

All problems are from Chapter 1 or Strayer, Sections 1.4–1.5. **Only turn in those problems marked by an asterisk.** The non-asterisk problems are for the most part of the warmup type, or easy computational problems, with answers in the back of the book. Problems of this sort aren't suitable as graded hw problems, but you should be prepared for such problems to come up in exams, so make sure you do not neglect these problems.

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|---|--------------|
| 1. * 54(a)  | 9. 55        |
| 2. * 56   | 10. 59(a)(c) |
| 3. * 64   | 11. 60(a)(c) |
| 4. * 69 (Hint: consider first the case when $n$ is a prime power) | 12. 61(a)    |
| 5. * 75 (See Exercise 14 from HW 1)                               | 13. 65(a)(c) |
| 6. * 76(a)(b)(c) (Hint in book)                                   |              |
| 7. * 78   |              |
| 8. * 84 (Hint in book)  |              |