

Homework 3 – Due Wednesday, February 6, 2008 before the lecture

Please refer to the general information handout for the full homework policy and options.

Page limit You can submit **at most** 1 page per problem, even if the problem has multiple parts. If you submit a longer solution for some problem, only the first page will be graded. This homework contains 3 mandatory and 1 optional problem, worth 10 points each.

Reminder Collaboration is permitted, but you must write the solutions *by yourself without assistance*, and be ready to explain them orally to the instructor if asked. You must also identify your collaborators. Getting solutions from outside sources such as the Web or students not enrolled in the class is strictly forbidden.

Exercises Please practice on solved exercises and problems in Chapter 2. The material they cover may appear on exams.

Problems

1. (**Context-free and regular languages**) Book, 2.20
2. (**CFL**) Book, 2.22
3. (**Grammars and non-context-free languages**) (a) Book, 2.9 (b) Book, 2.31
- 4* (**Optional, no collaboration is allowed, please hand in your solution on a separate sheet of paper**) Book, 2.23.