PROBLEM SET 4
CS 373: THEORY OF COMPUTATION

Assigned: September 21, 2010   Due on: September 28, 2010 at 10am

Instructions: This homework has two parts. The first part has practice problems from the textbook many of whose solutions can be found in the textbook itself; you **must not** turn in solutions for these. The second part has 3 problems that can be solved in groups of size at most 3. Please strictly follow the homework guidelines given on the class website; submitions not following these guidelines will not be graded.

Recommended Reading: Lectures 8 and 9 and pages 45 to 47, 58 to 62, and 77 to 82 of class textbook.

Practice Problems

Solve problems 1.29, 1.30, 1.40(a), 1.44, and 1.50.

Homework Problems

Problem 1. [Category: Proof] Solve problem 1.49(b) using the pumping lemma.

Problem 2. [Category: Comprehension+Proof] Solve problem 1.54

Problem 3. [Category: Design] Solve problem 1.41. You need not prove the correctness of your construction.