

Homework 6

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Due: 12/13/2012

This assignment covers NP-Completeness (chapter 8 in the textbook). See the first assignment for guidelines.

Ungraded problems

1. Problem 8.1 in the textbook (Pg. 505).
2. Problem 8.6 in the textbook (Pg. 507).
3. Problem 8.20 in the textbook (Pg. 515-516).

Graded problems

4. (5 points) Consider the following variant of 3-SAT: Given a 3-CNF formula, decide whether there exists an assignment to the variables of the formula such that every clause contains at least one literal that is true and at least one literal that is false. Show that this problem, *Not-All-Equal-SAT* (*NAE-SAT*), is NP-complete.
5. (5 points) Problem 8.27 in the textbook (Pg. 518-519).
6. (5 points) Problem 8.41 in the textbook (Pg. 528).