Assignment #3

(Course: CS 401)

The deadline is December 6, 2012, in class. No late assignments will be accepted.

Special note: Any answer that is not sufficiently clear even after a reasonably careful reading will not be considered a correct answer, and only what is written in the answer will be used to verify accuracy. No hand waiving, vague descriptions or sufficiently ambiguous statements that can be interpreted in multiple ways will be considered as a correct answer, nor will the student be allowed to add any explanations to his/her answer after it has been submitted.

Problem 1 (50 points):

Consider a reduction of an NP-complete problem to a polynomial-time problem. What will be the consequence, if any, if

- the reduction takes polynomial time?

- the reduction takes exponential time?