Exercises for Comp & Comp, Spring 2014, Sheet 8

Please return Thursday April 11, in class.

Problem 1. Show that there exists a decidable language over {0, 1} which is not in NP. Hint: one way to show this is by diagonalization.

Problem 2. The *Kleene star* of a language L is $L^* = \{x_1 ... x_n \mid n \geq 0, x_i \in L\}$. Show that (a) **NP** and (b) **P** are closed under the Kleene star.