CS 481 Homework Fall 2005

Assignment 1 due Friday, Sept. 2

1. Prove that the set of subsets of Σ^* is not countably infinite.

2. Let 0 denote the set {0}, 1 denote the set {1} and 0* denote the set $\{\varepsilon, 0, 00, 000, \cdots\}$. Describe the set of strings denoted by $01\{0^n10^{n+1}1 \mid n \geq 1\}^* \, 0^*1 \cap \{0^n10^{n+1}1 \mid n \geq 1\}^*$

3. 2.2.4 b and c

4. 2.2.5

5. 2.2.11