

CS 381 Assignment 4 due Friday, Sept. 22, 2006

Please write your name and net id on all pages turned in. We need net id to record your grade. If you turn in each problem on a separate sheet we will grade your problems in parallel and get your assignment back to you by the following Wednesday. If you turn in homework not on separate sheets we will circulate your homework and grade the problems in serial and thus it will likely be delayed somewhat in getting back to you.

1. Describe the set $\{0^n 10^{2n} 1 \mid n \geq 1\} * \{\epsilon + 0^* 1\} \cap 01 \{0^n 10^{n+1} 1 \mid n \geq 1\} * \{\epsilon + 0^* 1\}$? What is the string with six blocks of zeros? Use 0^2 to denote the string 00 and 0^3 to denote the string 000, etc.
2. 4.2.1
3. 4.2.2 by using h , h^{-1} , and intersection with regular sets
4. 4.2.6
5. 4.2.7 by machine construction