6.045J/18.400J: Automata, Computability and Complexity	Prof. Ron Rivest

Handout 4: Recitation Problems

21 Wednesday 2002 — *Jonathan Herzog*

Problem 1: **Warm up:** List all strings of length 3 or less that match the regular expression

$$0^* \left(100^*\right)^*$$

Problem 2: Create, by hand, a machine (NFA or DFA) that recognizes the language described by the above regular expression.

Problem 3: Create, using the construction given in class, an NFA that recognizes the language described by the above regular expression.

Problem 4: Find a regular expression that describes the language recognized by the machine: