

**CS 442/542 Fall 2020 Quiz 3**

**Name:** \_\_\_\_\_

1. Write a regular expression that specifies the language  $\{x \mid x \text{ is a string of 0s and 1s that contains an odd number of 0s}\}$ . The shortest string in the language is 0.

2.. Use the RE to NFA algorithm to create an NFA that accepts the language specified by the regular expression  $(0|1)^*11$ . Follow the algorithm. Do not simplify the NFA.

3. Use the NFA to DFA subset algorithm to build a DFA for the NFA shown on the accompanying page. In the DFA leave the state names as the subsets of states from the NFA.

# NFA for Problem 3

