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.