CSC 341: Automata, Formal Languages, and Complexity Theory

Worksheet #01

Name _____

1 Review

Answer the following questions:

1. In few sentences state the objectives of this class.
2. Name the central areas of the theory of computation. Define each area in one/two sentence(s).
3. Think of a real life problem (A) that can be reduced to another problem (B) which you have already learnt in the some of the previous classes.
4. We have two problems in hand:
   (a) Sort the list of enrolled students in alphabetic order of their names.
   (b) From an undirected graph, find the largest clique.

   Are both of the problems equally difficult? Why/why not?

2 Proof Techniques

Using either construction/contradiction/induction strategy, prove that

Theorem. *Two integers a and b are consecutive if and only if $b = a + 1$*