

CS381 Homework Assignment Number 11 due Friday, Nov. 11, 2005

Please write your name and net id on the upper right corner of each page.

1. Prove that the halting problem for Turing machine is undecidable.
2. State Rice's theorem and write out a clear proof.
3. Construct a set that is not r.e. and whose complement is not r.e.
4. Which of the follow classes of languages are closed under complement? Which are not closed under complement? Justify each answer.  
Finite sets, regular sets, context-free languages, recursive sets, r.e. sets