

Homework 12

Due: 2015.1.12 midnight

Problem 1 Prove that if one could list strings accepted by a Turing machine in order according to length but arbitrary order of strings of the same length, then the set must be a recursive set.

Problem 2 Prove that each recursively enumerable set appears infinitely often in a list of all r.e. sets.

Problem 3 In any mathematical theory powerful enough to express Turing machine computations, there is a theorem which is true but cannot be proved.