

Problem Set 10 — Due Thursday, March 14, 2002

Problem 1. Let $INFINITE = \{\langle M \rangle : M \text{ is a TM and } L(M) \text{ is infinite}\}$. Let $REGULAR = \{\langle M \rangle : M \text{ is a TM and } L(M) \text{ is context free}\}$. Show that $INFINITE \leq_m REGULAR$.

Problem 2. Suppose you are given a polynomial time algorithm which, on input of a Boolean formula ϕ , decides if ϕ is satisfiable. Describe an efficient procedure which finds a satisfying assignment for ϕ .

Problem 3. *p. 272, problem 7.19.*

Problem 4. *Page 274, Problem 7.26.*