Computational Complexity - Scrimmage II

K. Subramani
LDCSEE,
West Virginia University,
Morgantown, WV
{ksmani@csee.wvu.edu}

1 Problems

1. Prove that an infinite set is decidable if and only if it can be enumerated in increasing order by a one-to-one computable function.

2. Prove: \( L_u \leq_m K \).

3. Show that there must exist a program \( e \) such that \( W_e = \{e^2\} \).

4. Given a collection \( C \) of c.e. sets. Is \( C \) regular?

5. Prove \( A \leq_m B \Rightarrow A \leq_T B \).