

CSE 725 - Problem Set 2

Due lecture on February 23rd

Problem numbers are from the second edition of Sipser's book. If unsure about which problem to solve, ask. Collaboration is permitted; looking for solutions from external sources (books, the web, material from previous years, etc.) is prohibited.

1. 5.23
2. 5.25 (Hint: 5.24)
3. 5.29
4. Prove that the following language is undecidable:

$$A = \{\langle M \rangle : M \text{ is a TM that runs in polynomial time}\}.$$

5. 7.13