

Exam 2

Due: 8 April 2008

Your Name:

UVa Email Id:

Honor Policy. For this exam, you must **work alone**. You may consult the single (two-sided) page of notes you brought, but may not look at any other materials or aid or accept aid from other students.

Directions. Answer all four questions, including all sub-parts. You may use the backs of pages for your scratch work, but we will only grade answers that are written in the answer boxes, or that are found following clearly marked arrows from these boxes. The box for each answer is designed to be big enough to easily fit a full credit, correct answer. If you feel like you need more space to write your answer, then either your answer is incorrect, inelegant, or you are providing more detail than needed for full credit.

Question	Target	Score
1	5-10-10	
2	10-15	
3	5-5-10	
4	10-10-10	
Total	100	

Problem 1: Short Answers. (25) For each question, provide a correct, clear, precise, and concise answer from the perspective of a theoretical computer scientist.

a. [5] What is a *language*?

b. [10] Explain the essence of the *Church-Turing Thesis* in a way that would be understandable to a typical fifth grader.

c. [10] What does it mean for a language to **not** be *Turing-recognizable*?

