

Problem Set 3

Please turn in each problem on a separate page with your name.

1. Book, 5.22 and 5.23 . [T-recog iff $A \leq_m A_{TM}$ and decidable iff $A \leq_m 0^*1^*$]
2. Book, 5.25 . [give an undecidable B , where $B \leq_m B$]
Is it possible that B is a T-recognizable language?
3. Book, 5.26 . [A_{2DFA} and E_{2DFA}]
4. Book, 5.21 . [testing ambiguity is undecidable]
5. Book, 6.1 . [recursion theorem example]
6. Book, 6.11 . [give a model of ϕ_{It}]
- 7.* Book, 4.14 . [testing whether a CFG generates 1^* is decidable] Warning, it is hard.

The location of the 2pm recitation will be changed for the October 6.
It will revert for subsequent meetings.

Midterm exam: Tuesday, October 24, 2006, 11:00am – 12:30pm.

Final exam: Monday, December 18, 2006, 9:00am – 12:00 noon.