

CS 314 Spring 2004 Grading Scheme for HW #1

The homework was worth a total of 10 points. Only parts 1a and 3 were graded.

1a. Answer:  $((\epsilon | 0)1^*)^*$  denotes the language of all bit-strings, including  $\epsilon$ .

5 pts for correct answer (e.g. all bit strings )

4 pts if it is not made clear that  $\epsilon$  is in language (e.g. all binary numbers)

2-3 pts for basically describing the RE

1-2 pts if wrong but good effort

3. Answer: 11001, 1001, and 0011 are in the language defined by  $(0 | 1)^* 0 (0 | 1) (0 | 1)$  and the following table shows which parts of the RE "generates" which parts of the string

	$(0   1)^*$	0	$(0   1)$	$(0   1)$
11001	11	0	0	1
1001	1	0	0	1
0011	0	0	1	1

+2 for correctly identifying all three "good" strings

+1 for correctly identifying 1 or 2 or the "good" strings

-1 for incorrectly identifying the string 101 or 10

+1 for each string whose "generation" is shown correctly