

MA/CSSE 474 Homework #10 54 points.

2.1 means Exercise 1 from Chapter 2.

Key:

(No symbol) Not required to be turned in. Just be sure that you can do it.

(t-7) To be turned in and graded, worth 7 points.

1. 11.1
2. 11.2
3. 11.3
4. (t-3) 11.4
5. (t-6) 11.6b
6. (t-6) 11.6c (previous student surveys indicate that this is the hardest problem)
7. (t-6) 11.6d
8. 11.6e
9. (t-6) Show the details of the definition of a CFG that generates $\{a^i b^j c^k : i, j, k \geq 0 \text{ and } (i + j = k)\}$
10. (t-6) 11.6h
11. (t-6) 11.6i
12. (t-6) 11.6k
13. (t-9) 11.8b
14. 11.9 (if you are interested in language design or plan to take the compilers course someday, consider doing this one)

Previous questions on Piazza

Question about defining a CFG in the homework

When a question asks for "the details of the definition of a context-free grammar" or to "show a context-free grammar", are we supposed to write the whole $G = (V, \Sigma, R, S)$, or can we only write the set of rules?

the instructors' answer,

where instructors collectively construct a single answer

The set of rules is sufficient. Be sure to have the start symbol be the left side of the first rule that you write.