

Theory of Computation, CSCI 438, Spring 2022
Essay questions for exam 2, March 11

Answer the following with as many, or as few, words as is needed to thoroughly answer the question. You may use your notes, text or the Internet to answer these questions. You may not discuss these questions with any other students.

1. One of your classmates was finally getting the idea of a pumping lemma for regular languages, when we moved on to a pumping lemma for context free languages. Describe what is similar and what is not similar about these pumping lemmas. Explain this without using the formulas. (10 pts.)

2. A precocious eighth grader has studied context free languages and believes that context free grammars are powerful enough to describe any language. Write an essay convincing this student of the limitations of context free grammars. (10 pts.)