

Exercises for FLL, Fall 2017, sheet 4

Return Thursday October 26, in class

Exercise 1. Let L be a regular language specified by a regexp E . Sketch a procedure for deciding whether $L = \Sigma^k$ for some $k > 0$.

Exercise 2. Give a CFG for all words over the terminal alphabet $T = \{a, b, +, *, (,), \epsilon, \emptyset\}$ that are regular expressions over $\Sigma = \{a, b\}$.

Exercise 3. Describe a generic method by which a CFG for the language $L(E)$ of any regular expression E can be constructed from E . *Hint:* use induction on the structure of E .