Exercises for FLL, Fall 2014, sheet 3

Return Wed Sep 24, in class

Exercise 1. Design an ε-NFA that accepts the language denoted by (((ε+*a*)*bb*)*)*a**. Represent your automaton by a transition diagram.

Exercise 2. Let $\Sigma = \{0,1\}$. Prove or disprove the following two claims (L_i are language variables):

(a) $(L_1 + L_2)^* =_\Sigma (L_1^* L_2^*)^*$

(b) $(L_1 + L_2)^* L_3^* =_\Sigma L_1 L_3^* + L_2 L_3^*$