Section 1.3: Regular Expressions


Definitions

Define each of the following concepts:

(a) Regular language
(b) Regular expression
(c) Inductive definition
(d) Generalized nondeterministic finite automaton, GNFA

Results

Prove or disprove:

A language is regular iff it is described by a regular expression.

Algorithms

Convert a regular expression into an equivalent finite automaton.

Convert a finite automaton into an equivalent regular expression.

Exercises

We will attempt to solve each of the following exercises as a community project in class today. Finish these solutions as homework exercises, write them up carefully and clearly, and hand them in at the beginning of the next class.

*Exercises for Section 1.3, page 86: 13, 14, 15, 16*