

Topics for Exam 1

Basic stuff

- DFAs, NFAs, ϵ -NFAs
- Regular Expressions
- Regular Languages

Algorithms

- Converting an NFA to a DFA
- Converting an ϵ -NFA to a DFA
- Converting a regular expression to an ϵ -NFA
- Converting a DFA to a regular expression
- Finding reachable states
- Finding a DFA with minimal number of states equivalent to a DFA
- Finding if 2 DFAs are equivalent

Theorems

- Most of our theorems proved that the constructions work
- The Pumping Lemma is used to show that some languages aren't regular
- Regular languages are closed under union, intersection, complements and reversals

Tests

- To show that a language is regular give a regular expression or DFA for it.
- To show that a language is not regular use the pumping lemma.