Topics for Exam 1

Basic stuff:

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

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 given 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.