CS480
Translators
Test Review
Chap. 1 - 4.3 (4.4.1-4.4.3?)
Test 1 Review

- Characteristics common to all translators
- Construct an expression tree
- Polish and Reverse polish notation
- Construct a DFA from a regular expression
- Change a NFA to a DFA w/ subset construction
- Syntax vs. Semantics
- Why would a lexical analyzer peek at a character
- Purpose of Symbol Table(s)
- The purpose of a token vs. a lexeme
- What is the purpose of Lex
- Transforming a Grammar
- Ambiguity and Derivations
Expression Tree Example

- Provide the expression tree, and provide the polish and reverse polish notation.

$$8 / 4 * 6^3 / 12 - 2 * 9 + 8$$
Example Question for DFAs

• Suppose comments are defined by a two character sequence, a slash followed by a star, as in the C convention of /* whatever */. Comments can contain any text, including the star symbol and slash, just not the two character sequence that ends the comment. So /****/ is a legal comment, but /* */ is not. Write a DFA recognizing legal comments.
Example Question for NFA to DFA

• Using subset construction, create a DFA from this NFA

Figure 3.30: NFA for Exercise 3.6.4