

## Topics for the Second CS 334 test

### PDA

Deterministic

Non-deterministic

You should be able to give a definition in terms of a tuple.

### CFG

Relationship to FSA

Relationship to PDA

Derivations

Parse Trees

Ambiguity

You should be able to give a definition in terms of a tuple.

### Symbols

$\rightarrow$ ,  $\Rightarrow$ ,  $\vdash$ , either of the last two symbols with \* above it.

### Conversions

From PDA to CFG

From CFG to PDA

From FSA to RLG

From RLG to FSA

From CFG to Chomsky Normal Form

Simplification of CFG's by elimination of useless symbols

### Pumping Lemma(s)

Proof that a language is not CF

### Closure Properties of CF languages

List of these in Chapter 7 with proofs

### Decision Properties of CF languages

Several in Chapter 7

Algorithms exist for determining the answer to some questions about CF languages.

### Parsing Applications

LL(k) parsers