October 17, 2012
Wednesday

* Exam 2
  October 25, 2012 Thursday
  EERC 103
  6^{00}_{pm} - 7^{30}_{pm}

Section 2.3 regular sets & expressions
3.1 CFG
3.2 Examples
3.4 verifying grammars (induction proofs on certain properties)
3.5 leftmost derivation and ambiguity
4.1 elimination of λ-rules
4.2 elimination of ~~chain~~ rules

Homework: 5, 6, 7

Please let me know if you have a conflict. Specify the times you are available.

HW 6 2b

$S \to SS \mid BaBaBaB \mid B \mid \lambda$

$S \Rightarrow SS \Rightarrow SiSS \Rightarrow SSSS$

~~for~~ if $w \in L$ then $ww \in L$

this adds one more S

It is not a pattern for repeating strings.

HW 6 4 $S \to aAb \quad A \to aA \mid bA \mid \lambda$

basis: shortest string $S \Rightarrow aAb \Rightarrow ab$ ✓

IH: if a string is generated using n steps of derivation it has "ab" as a substring.

IS: prove that strings generated using n+1 steps of derivation have "ab" as a substring.

2 steps

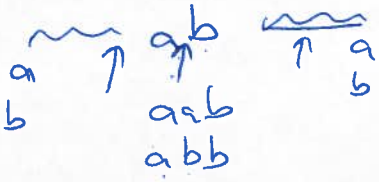
$S \Rightarrow aAb \Rightarrow ab$ ($A \to \lambda$)

3 steps: $S \Rightarrow aAb \Rightarrow aaAb \Rightarrow aab$

4 steps: $S \Rightarrow aAb \Rightarrow abAb \Rightarrow abb$

n

n+1



HW Q5

$S \to aaS \mid aaaS \mid \lambda$

$a \notin L(G)$

$S \Rightarrow \lambda$

$S \Rightarrow aaS \Rightarrow aaaaS \Rightarrow aaaaaaS \Rightarrow \dots$

2 3 4 5 6 7 8 ...

$S \Rightarrow aaaS \Rightarrow aaaaaaS \Rightarrow$

3 6 9 ...

$S \to \lambda \mid aaS \mid$

$S \to AA \mid A$

$S \to aaA \mid \lambda$

$A \to aA \mid \lambda$