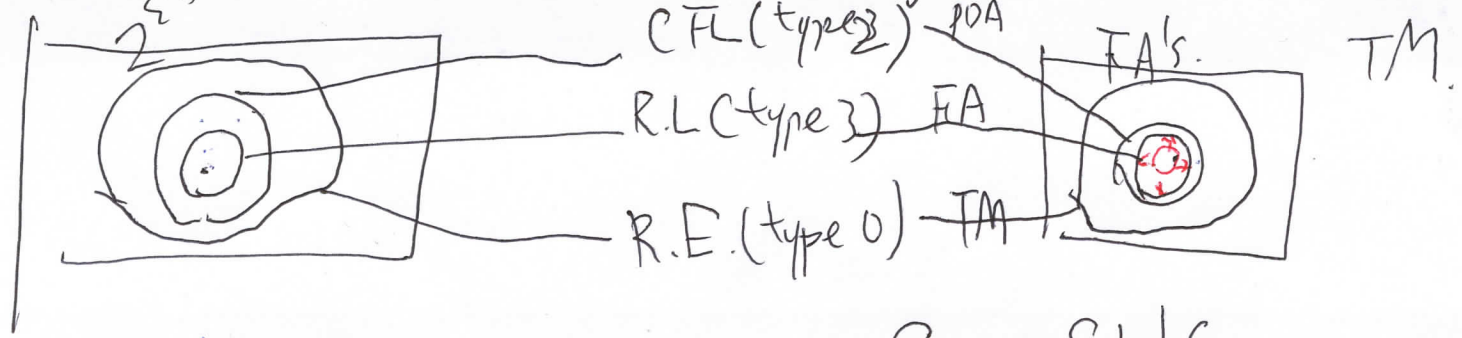


7.11 (1) (2) (3) Pumping Lemma for CFL



$L_2 = \{a^n b^n \mid n \geq 0\}$

$S \rightarrow aSb \mid \epsilon$

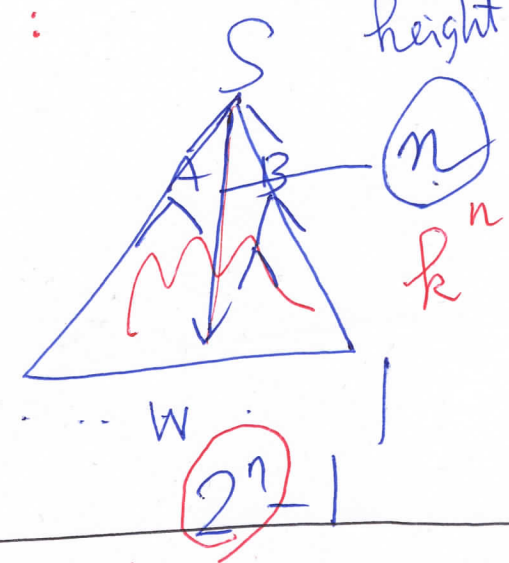
$L_3 = \{a^n b^n c^n \mid n \geq 0\}$

? $S \rightarrow aSbc$

embedding
다양한 height!

Pumping Lemma - CNF $A \rightarrow BC$ or a
except $S \rightarrow \epsilon$

Thm 7.17 \rightarrow CNF 이라
이러한 ϵ 이보라.



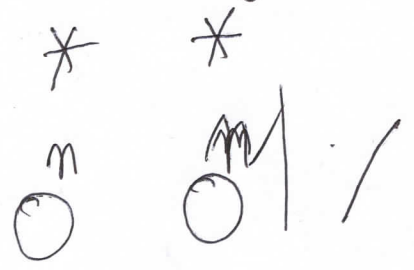
Thm 7.18

~~$Z = uvx$~~
 $Z = uvwxyz$

$|vwx| \leq n$

$vx \neq \epsilon$

$u v^i w x^i y \in L$



VS

~~$wyz = \alpha y z$~~

$|xy| \leq n$

$y \neq \epsilon$

$\alpha y^k z \in L$

*