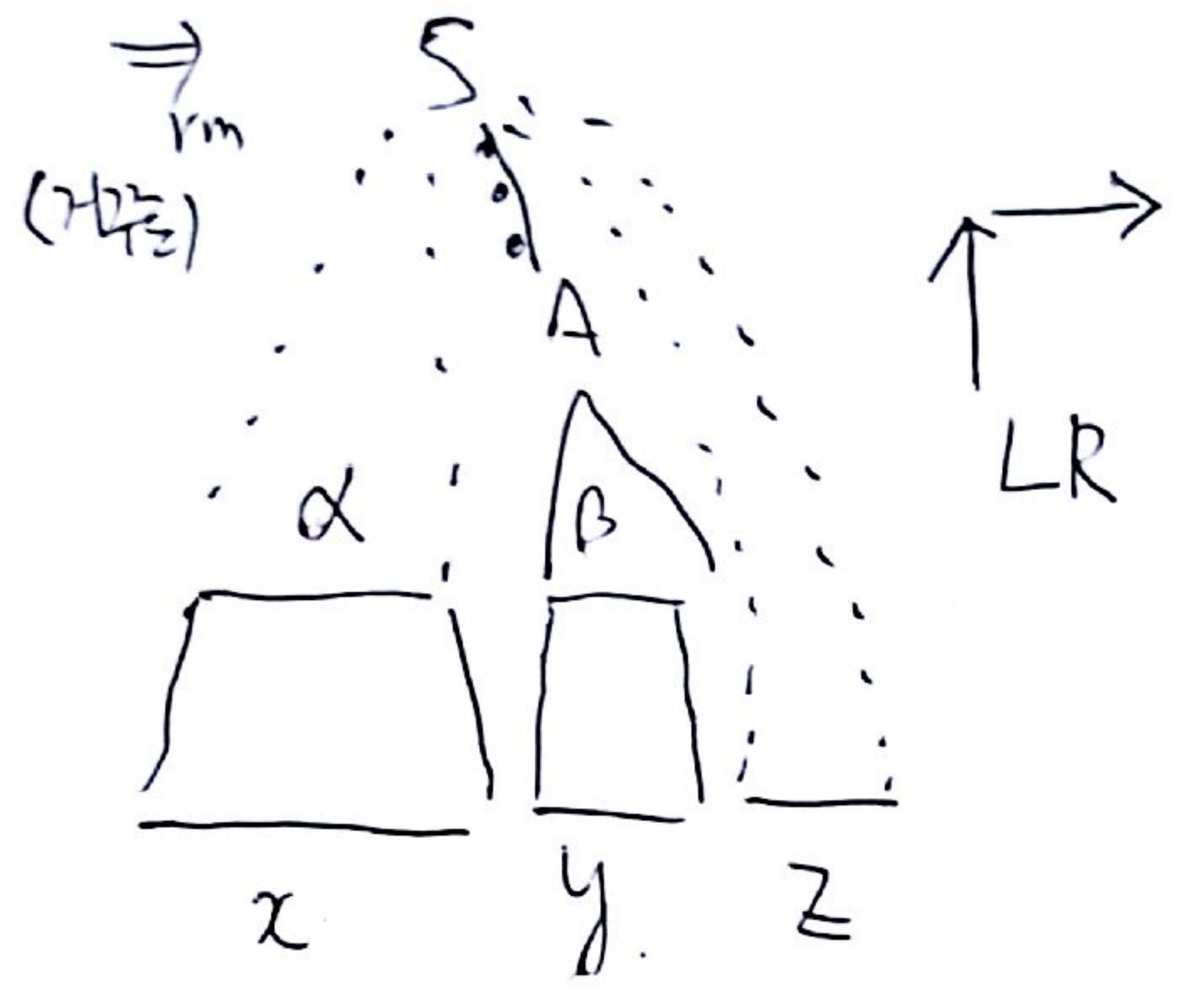
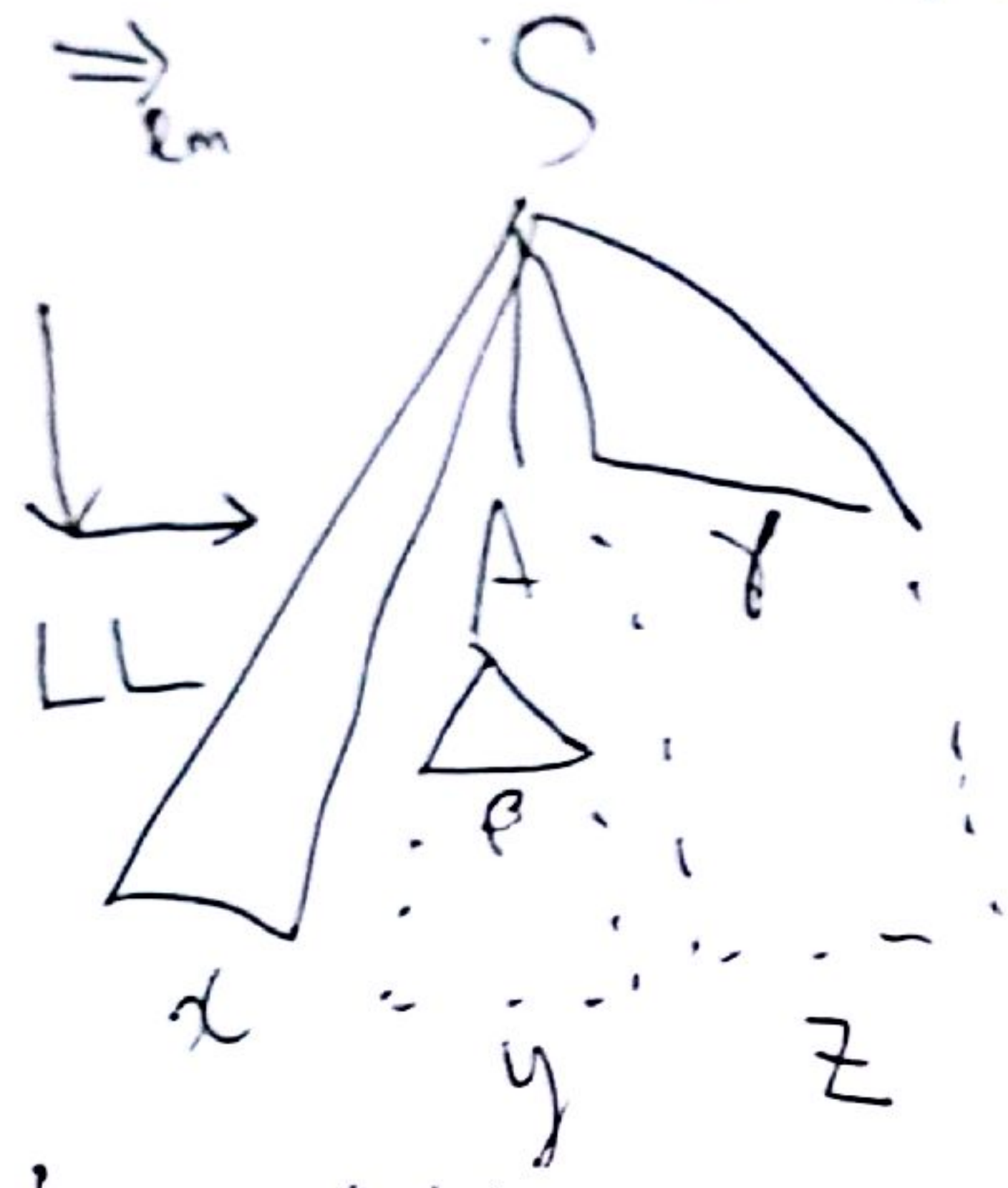
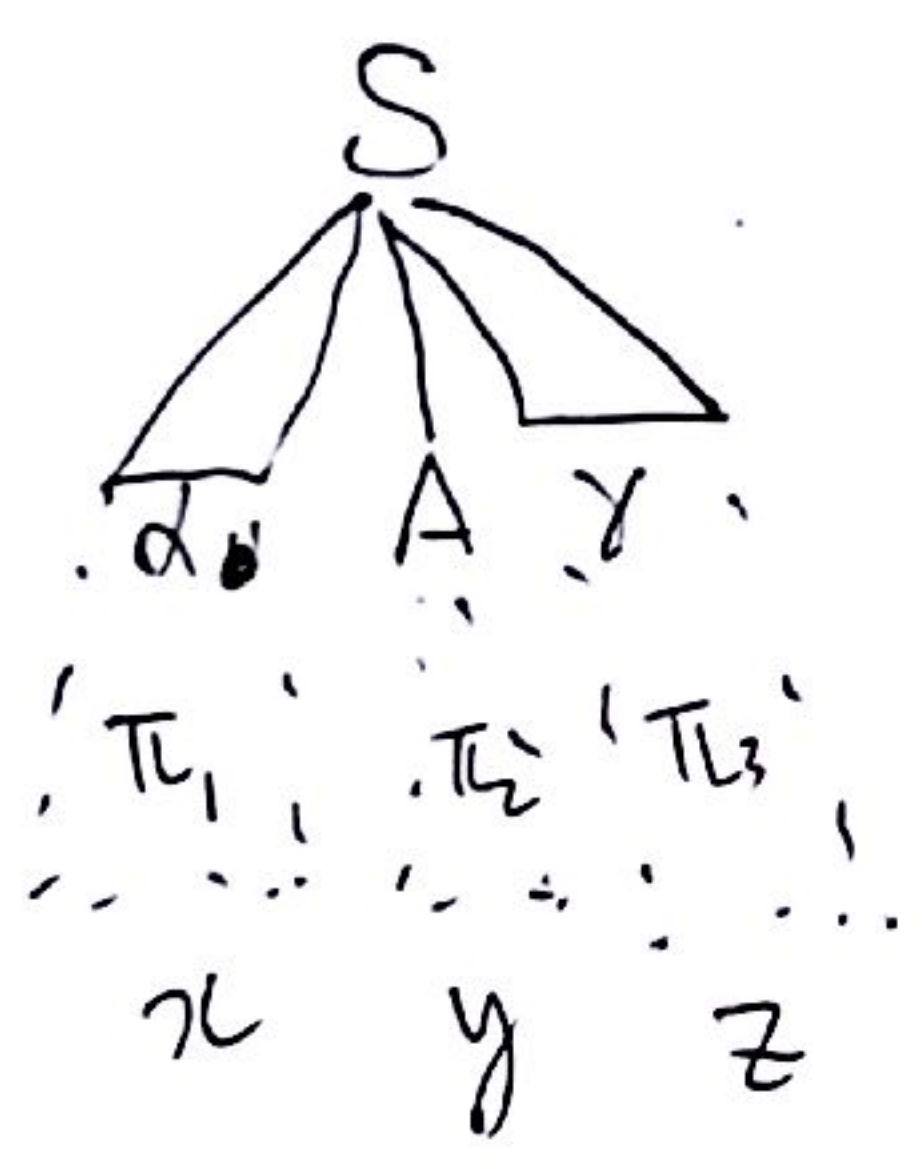


4/9 (木) CFL - useful & nullable



Lemma 4.6(Ext)



$X \in N \cup \Sigma$  is useful

if  $S \xRightarrow{*} \alpha \otimes \beta \xRightarrow{*} w, w \in \Sigma^*$   
 ① accessible  
 ② terminates

$A \in N$  is nullable, if  $A \xRightarrow{*} \epsilon \iff$  terminate

accessible  $\rightarrow ? \xRightarrow{*}$

Dijkstra PL. for machine for math. (for human)

OOP: class vs object. 같은 것은 같은 거 (class) 다른 것은 다른 거 (object)

if  $x > y \rightarrow m := x$   
 else if  $0 < x < y \rightarrow m := y$   
 fi

$(m \geq x \wedge (m \geq y)) \vee (m = x) \vee (m = y)$