①

a) $S \to (S)S \mid [T]S \mid \varepsilon$

$T \to [T]S \mid \varepsilon$

b) $S \to [T]S \mid \varepsilon$

$T \to (S)S \mid \varepsilon$

c) $S \to T \mid R \mid \varepsilon$

$T \to [S]R \mid \varepsilon$

$R \to (S)T \mid \varepsilon$

$T \to [\,S\,]R \mid \varepsilon$

$R \to (\,S\,)T \mid \varepsilon$

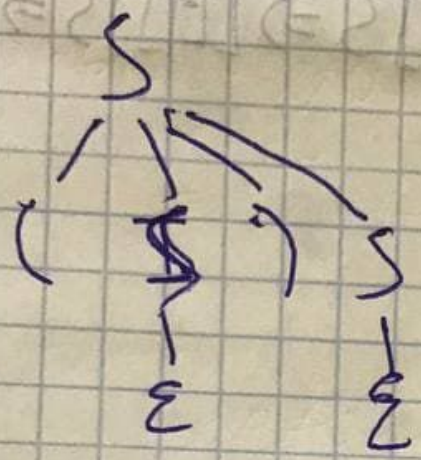
$S \to T \mid R$

$T \to [S]$

$R \to (S)$

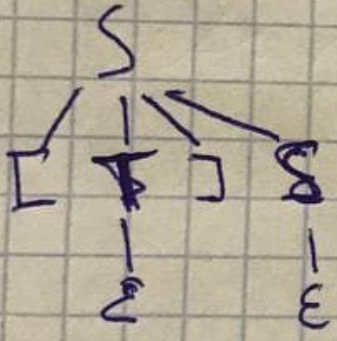
② Синтаксический разбор

а) ()



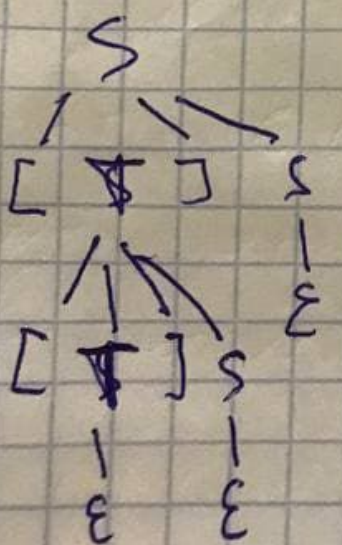
$S \Rightarrow (S)S \Rightarrow ()S \Rightarrow$

[ ]



$S \Rightarrow [T]S \overset{2}{\Rightarrow} [\,]$

[[]]



$S \Rightarrow [T]S \overset{3}{\Rightarrow} [[\,]]$

Не пример

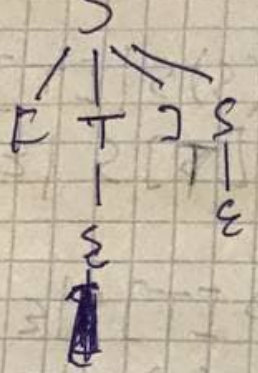
[()],)(

Не принадлежит

[()] ,)(

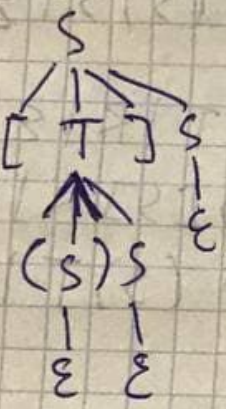
б)

б) [ ]



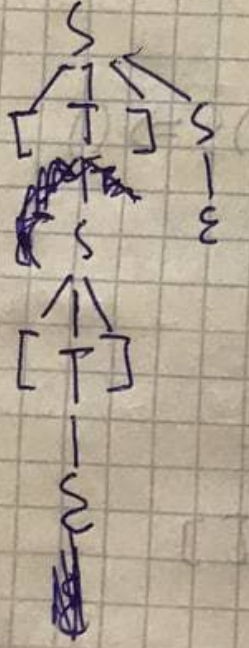
$S \Rightarrow [T]S \Rightarrow [ ]$

[()]



$S \Rightarrow [T]S \Rightarrow [(S)]S \Rightarrow [()]$

[[]]

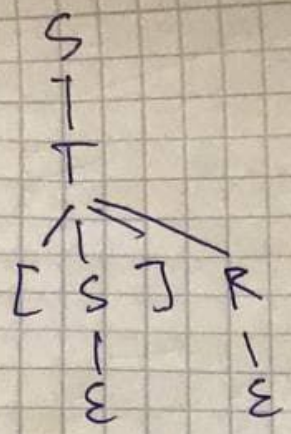


$S \Rightarrow [T]S \Rightarrow [S]S \Rightarrow [[T]]S \Rightarrow [[]]$

Не принадлежит

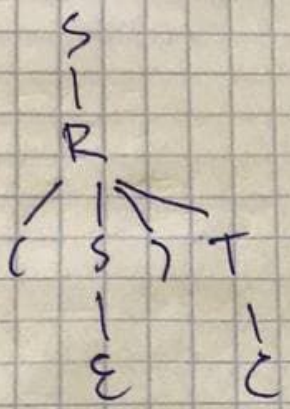
(), [(())]

6) [ ]



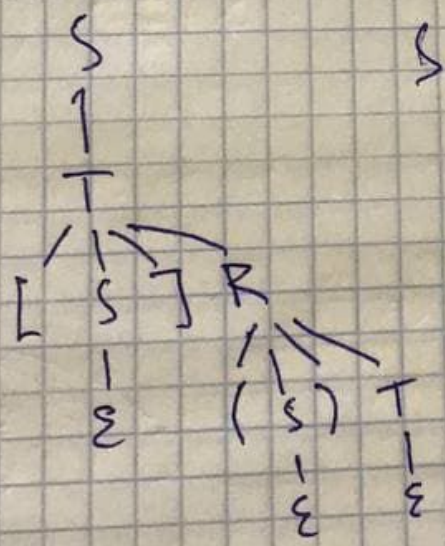
$S \Rightarrow T \Rightarrow [S]R \overset{3}{\Rightarrow} []$

( )



$S \Rightarrow R \Rightarrow (S)T \overset{2}{\Rightarrow} ()$

[ ] ( )



$S \Rightarrow T \Rightarrow [S]R \overset{2}{\Rightarrow} []()T \overset{2}{\Rightarrow} []()$

Ще приклади

[ ] [[ ]]

( ) ( )