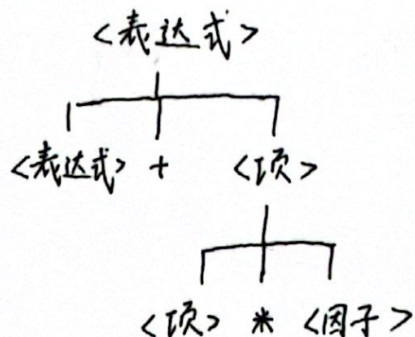


223/3407 王飞阳

编译第三次作业

练习2-3:

7. 由题, 可画出语法树:



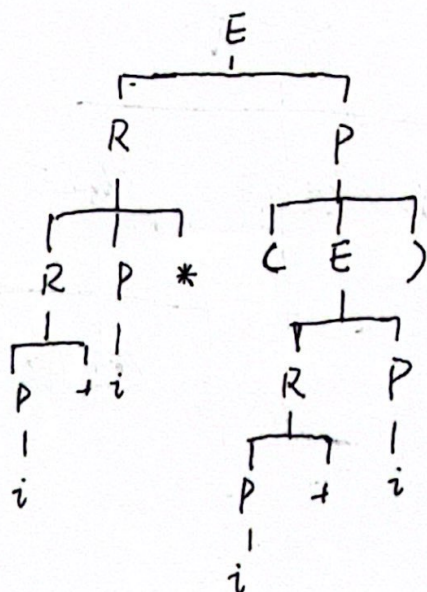
∴ 短语: $\langle \text{项} \rangle * \langle \text{因子} \rangle$, $\langle \text{表达式} \rangle + \langle \text{项} \rangle * \langle \text{因子} \rangle$

简单短语: $\langle \text{项} \rangle * \langle \text{因子} \rangle$

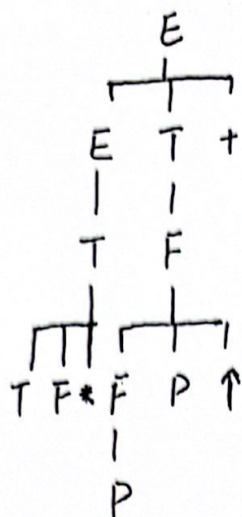
练习2-4:

1. $E \Rightarrow RP \Rightarrow R(E) \Rightarrow R(RP) \Rightarrow R(Ri) \Rightarrow R(P+i)$
 $\Rightarrow R(i+i) \Rightarrow RP*(i+i) \Rightarrow Ri*(i+i) \Rightarrow P+i*(i+i)$
 $\Rightarrow i+i*(i+i)$ 得证

(2)



5. 语法树为:



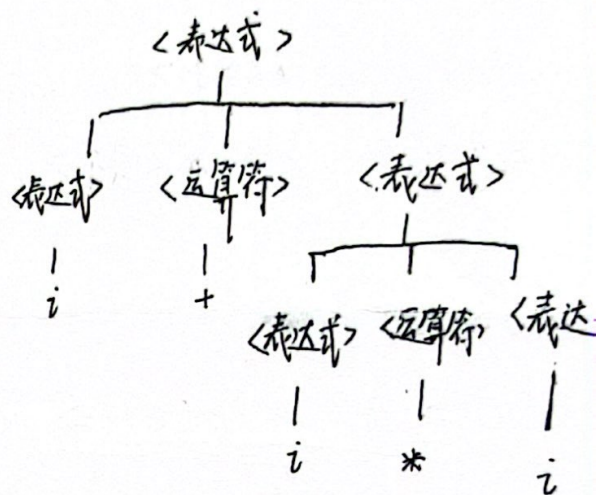
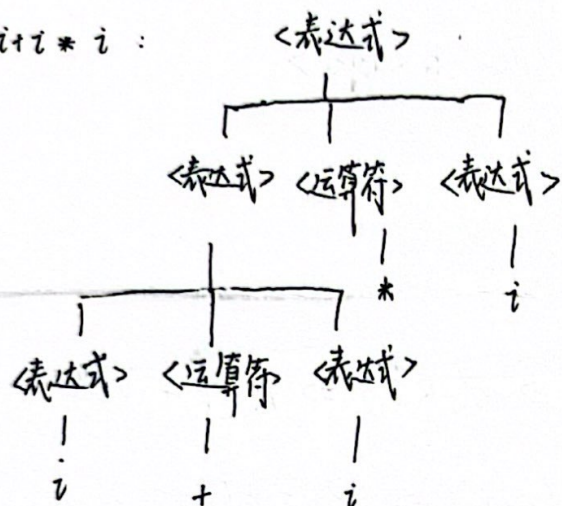
∴ 短语: $P, PP↑, TF*$,

$TF* PP↑+$

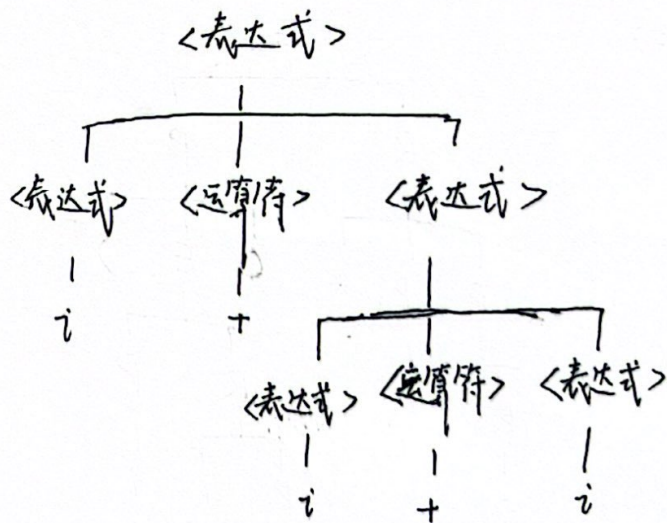
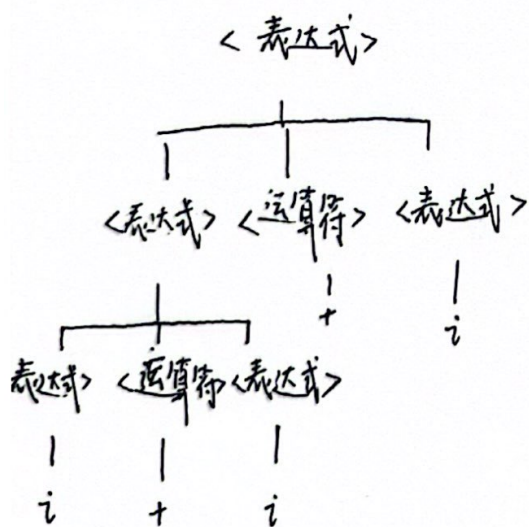
简单短语: $P, TF*$

句柄: $TF*$

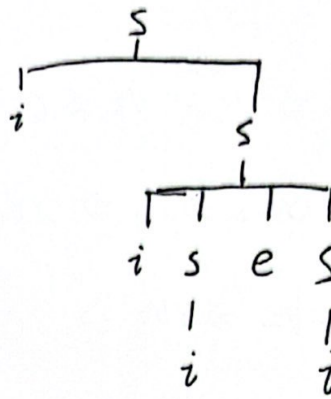
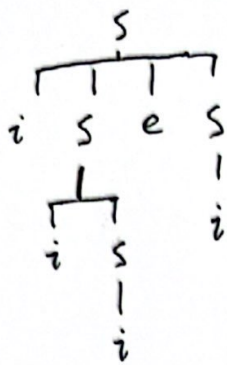
6. $i+i*i$:



$i+i+i$:



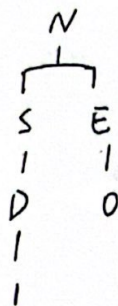
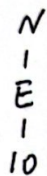
8. 对于 $iiiei$



有2种不同语法树, 因此文法是二义性文法

9.

(1) 对于句子 10



有2种不同语法树,
因此有二义性

此文法描述的是有前导零的无符号整数

(2)

$G'[N]:$

$N ::= SE | E$

$S ::= SD | D$

$E ::= 0 | 2 | 4 | 6 | 8$

$D ::= E | 1 | 3 | 5 | 7 | 9$



练习 2-5.

2.

$$\textcircled{1} \langle \text{目标} \rangle \Rightarrow V_1 \Rightarrow V_2 \Rightarrow V_3 \Rightarrow C$$

$$\textcircled{2} \langle \text{目标} \rangle \Rightarrow V_1 \Rightarrow V_2 \Rightarrow V_3 \Rightarrow \rangle V_1 * \Rightarrow \rangle V_2 * \Rightarrow \rangle V_3 * \Rightarrow \rangle C *$$

$$\textcircled{3} \langle \text{目标} \rangle \Rightarrow V_1 \Rightarrow V_2 \Rightarrow iV_3 \Rightarrow iC$$

$$\textcircled{4} \langle \text{目标} \rangle \Rightarrow V_1 \Rightarrow V_2 \Rightarrow V_2 + V_3 \Rightarrow V_2 + C \Rightarrow V_3 + C \Rightarrow C + C$$

$\textcircled{5}$ $(+C)i$ 不是该文法句子

$\textcircled{6}$ $(+)(i+iC)$ 不是该文法句子

