

Lista de Exercícios 9

1) $S \rightarrow ca$ $S \rightarrow ba$
 $A \rightarrow a$
 $C \rightarrow b$

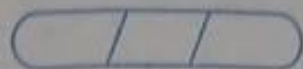
2a) $S \rightarrow ASB \mid AB$
 $A \rightarrow aAS \mid aA \mid a$
 $B \rightarrow SbS \mid Sb \mid bS \mid A \mid bb \mid b$

b) $S \rightarrow ASB \mid AB$
 $A \rightarrow aAS \mid aA \mid a$
 $B \rightarrow SbS \mid Sb \mid bS \mid aAS \mid aA \mid a \mid bb \mid b$

c) Não podem simbolizar inversos.

d) $S \rightarrow ASB \mid AB$ 1. parte
 $A \rightarrow T_1AS \mid T_1A \mid a$ 2. $T_1 \rightarrow a$
 $B \rightarrow ST_2S \mid ST_2 \mid T_2S \mid T_2AS \mid T_2A \mid a \mid bb \mid b$ 3. $T_2 \rightarrow b$

$S \rightarrow AG \mid AB$ Final
 $A \rightarrow T_1G \mid T_1A \mid a$
 $B \rightarrow SG \mid ST_2 \mid T_2S \mid T_2G \mid T_2A \mid a \mid T_2b \mid b$
 $G \rightarrow SB$
 $G \rightarrow AS$
 $G \rightarrow bS$
 $T_1 \rightarrow a$
 $T_2 \rightarrow b$



3a) $S \rightarrow OAO \mid \overline{1B1} \mid BB \mid 00 \mid \overline{11} \mid B$

$A \rightarrow C$

$B \rightarrow S \mid A$

$C \rightarrow S$

b) $S \rightarrow OAO \mid \overline{1B1} \mid BB \mid 00 \mid \overline{11} \mid B$

$A \rightarrow OAO \mid \overline{1B1} \mid BB \mid 00 \mid \overline{11} \mid B$

$B \rightarrow OAO \mid \overline{1B1} \mid BB \mid 00 \mid \overline{11} \mid B$

$C \rightarrow OAO \mid \overline{1B1} \mid BB \mid 00 \mid \overline{11} \mid B$

c) $S \rightarrow OSO \mid \overline{1S1} \mid SS \mid 00 \mid \overline{11}$

d) $S \rightarrow T_1 S T_1 \mid T_2 S T_2 \mid SS \mid \overline{T_1 T_1} \mid T_2 T_2$

$T_2 \rightarrow 1$

$T_1 \rightarrow 0$

$S \rightarrow T_1 C \mid T_2 C \mid SS \mid \overline{T_1 T_1} \mid T_2 T_2$

$T_2 \rightarrow 1$

$T_1 \rightarrow 0$

$C \rightarrow S T_2$

$C \rightarrow S T_1$

5a) $S \rightarrow aAa \mid bBb \mid aabb \mid S \rightarrow aAa \mid bBb \mid aa \mid bb \mid C \rightarrow aAa \mid bBb \mid aa \mid bb$

$A \rightarrow C \mid a$

$A \rightarrow CDE \mid DE \mid a$

$B \rightarrow C \mid b$

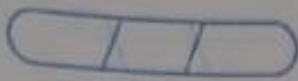
$B \rightarrow CDE \mid DE \mid b$

$C \rightarrow CDE \mid DE$

$C \rightarrow CDE \mid DE$

$D \rightarrow A \mid B \mid ab$

$D \rightarrow CDE \mid DE \mid a \mid b \mid ab$



d) $S \rightarrow T_1 C_1 / T_2 C_2 / C_1 / C_2$

$C_1 \rightarrow T_1 T_1$

$C_2 \rightarrow T_2 T_2$

$T_1 \rightarrow a$

$T_2 \rightarrow b$

4a) $S \rightarrow AAA / AA / A$ b) $S \rightarrow AAA / AA / aA / a$

$A \rightarrow aA / a$

$A \rightarrow aA / a$

c) $S \rightarrow SSR / SR / aS / a$

d) $S \rightarrow CS / C / TS / a$

$C \rightarrow SS$

$T \rightarrow a$

6) $S \rightarrow (S) / SS / () \Rightarrow S \rightarrow T_1 C_1 / SS / T_1 T_2$

$C_1 \rightarrow ST_2$

$T_1 \rightarrow ($

$T_2 \rightarrow)$