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Lista de Exercícios 9

① Projetar GLC

a) $L = \{a^n b^m\}$, tais que $m, n \geq 0$

→ $G = (V, t, P, S)$

→ $t = \{a, b\}$

→ $S = \{S\}$

→ $V = \{S, A, B\}$

→ $P = \{ S \to AB ;$
$A \to aA \mid a \mid \varepsilon ;$
$B \to bB \mid b \mid \varepsilon \}$

b) $L = \{a^n b^m c^z \mid m, n, z > 0\}$

→ $G = (V, t, P, S)$

→ $t = \{a, b, c\}$

→ $S = \{S\}$

→ $V = \{S, A, B, C\}$

→ $P = \{ S \to ABC ;$
$A \to aA \mid a ;$
$B \to bB \mid b ;$
$C \to cC \mid c \}$

c) $L = \{a^n b^{2n}\}$, tal que $n \geq 0$

→ $G = (V, t, P, S)$

→ $t = \{a, b\}$

→ $S = \{S\}$

→ $V = \{S\}$

→ $P = \{ S \to aSbb \mid \varepsilon \}$

d) $L = \{a^3 b^n c^n \mid n \geq 0\}$

→ $G = (V, t, P, S)$

→ $t = \{a, b, c\}$

→ $S = \{S\}$

→ $V = \{S, A\}$

→ $P = \{S \rightarrow aaaA;$
$A \rightarrow bAc \mid \varepsilon\}$

e) $L = \{a^n b^n c^m d^m \mid m, n \geq 0\}$

→ $G = (V, t, P, S)$

→ $t = \{a, b, c, d\}$

→ $S = \{S\}$

→ $V = \{S, A, B\}$

→ $P = \{S \rightarrow AB;$
$A \rightarrow aAb \mid \varepsilon;$
$B \rightarrow cBd \mid \varepsilon\}$

f) $L = \{a^n b c^{2m} \mid m, n \geq 0\}$

→ $G = (V, t, P, S)$

→ $t = \{a, b, c\}$

→ $S = \{S\}$

→ $V = \{S, A, B\}$

→ $P = \{S \rightarrow AbB;$
$A \rightarrow aA \mid \varepsilon;$
$B \rightarrow cBc \mid \varepsilon\}$