## Lista de Exercícios de Autômato com Pilha

$$\begin{split} L_1 &= \{a^nb^n \, / \, n \geq 0\} \\ L_2 &= \{a^nb^mc^n \, / \, n \geq 0\} \\ L_3 &= \{a^nb^{2n} \, / \, n \geq 0\} \\ L_4 &= \{a^{2n}b^n \, / \, n \geq 0\} \\ L_5 &= \{a^nb^mc^md^n \, / \, n \geq 0 \text{ e } m \geq 0\} \\ L_6 &= \{w \in \{a,b\}^* \, / \, |w|_a = |w|_b\} \\ L_7 &= \{a^nb^{3m}c^md^{2n} \, / \, n \geq 0 \text{ e } m \geq 0\} \\ L_8 &= \{a^ib^jc^k \, / \, i = j + k, \, e \, j \geq 0 \text{ e } k \geq 0\} \\ L_9 &= \{a^ib^jc^k \, / \, k = i + j, \, i \geq 0, \, j \geq 0\} \\ L_{10} &= \{a^ib^jc^k \, / \, j = i + k, \, j \geq 0, \, k \geq 0\} \\ L_{11} &= \{a^nb^nc^md^m \, / \, n \geq 0, \, m > 0\} \\ L_{12} &= \{a^nb^{2n+1} \, / \, n > 0\} \\ L_{13} &= \{a^nb^{2n+2} \, / \, n > 0\} \\ L_{14} &= \{a^nb^{n/2} \, / \, n > 0 \text{ e } n \text{ é } m \text{últiplo de } 3\} \\ L_{15} &= \{a^nb^{n/3} \, / \, n > 0 \text{ e } n \text{ é } m \text{últiplo de } 3\} \end{split}$$