

## Lista de Exercícios de Máquina de Turing Reconhedora

$$L_1 = \{a^n b^n / n \geq 0\}$$

$$L_2 = \{a^n b^m c^n / n \geq 0\}$$

$$L_3 = \{a^n b^{2n} / n \geq 0\}$$

$$L_4 = \{a^{2n} b^n / n \geq 0\}$$

$$L_5 = \{a^n b^m c^m d^n / n \geq 0 \text{ e } m \geq 0\}$$

$$L_6 = \{w \in \{a,b\}^* / |w|_a = |w|_b\}$$

$$L_7 = \{a^n b^{3m} c^m d^{2n} / n \geq 0 \text{ e } m \geq 0\}$$

$$L_8 = \{a^i b^j c^k / i = j + k, \text{ e } j \geq 0 \text{ e } k \geq 0\}$$

$$L_9 = \{a^i b^j c^k / k = i + j, i \geq 0, j \geq 0\}$$

$$L_{10} = \{a^i b^j c^k / j = i + k, j \geq 0, k \geq 0\}$$

$$L_{11} = \{a^n b^n c^m d^m / n \geq 0, m > 0\}$$

$$L_{12} = \{a^n b^{2n+1} / n > 0\}$$

$$L_{13} = \{a^n b^{2n+2} / n > 0\}$$

$$L_{14} = \{a^n b^{n/2} / n > 0 \text{ e } n \text{ é par}\}$$

$$L_{15} = \{a^n b^{n/3} / n > 0 \text{ e } n \text{ é múltiplo de } 3\}$$

$$L_{16} = \{a^n b^n c^n / n \geq 0\}$$

$$L_{17} = \{a^n b^{2n} c^{3n} / n \geq 0\}$$

$$L_{18} = \{w \in \{a,b,c\}^* / |w|_a = |w|_b = |w|_c\}$$

$$L_{19} = \{w \in \{a,b\}^* / |w|_a = 2 * |w|_b\}$$

$$L_{20} = \{w \in \{a,b\}^* / w \text{ é palíndromo}\}$$

$$L_{21} = \{ww^r / w \in \{a,b\}^* \text{ e } w^r \in \{a,b\}^* \text{ e } w^r \text{ é palíndromo de } w\}$$

$$L_{22} = \{a^i b^j c^k / k = \max(i,j) \text{ e } i \geq 0 \text{ e } j \geq 0\}$$

$$L_{23} = \{a^1 b^2 a^3 b^4 \dots a^{n-1} b^n / n > 0 \text{ e } n \text{ é par}\}$$