

04.11.20

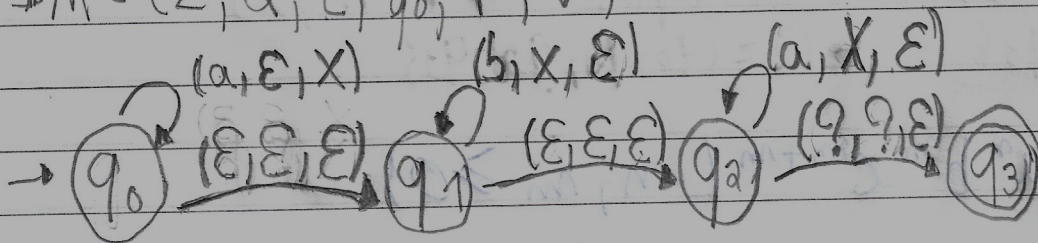
Nome: Dava Augusto Neves Leite RA: 191027383

## Lista de Exercícios 8

### ① Autômatos com Pilha

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

$\Rightarrow M = (\Sigma, Q, d, q_0, F, V)$



$\hookrightarrow \Sigma = \{a, b\}$

$\hookrightarrow q_0 = \{q_0\}$

$\hookrightarrow V = \{X\}$

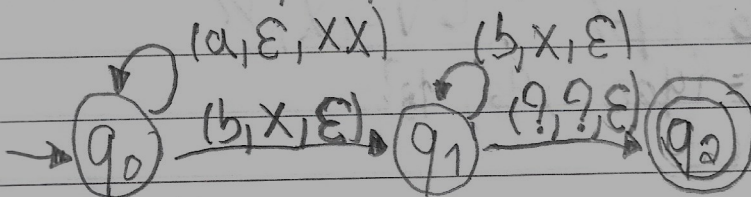
$\hookrightarrow F = \{q_3\}$

$\hookrightarrow Q = \{q_0, q_1, q_2, q_3\}$

~~b)  $L = \{a^n b^{2n}\}$~~

b)  $L = \{a^n b^{2n} \mid n > 0\}$

$\Rightarrow M = (\Sigma, Q, d, q_0, F, V)$



$\hookrightarrow \Sigma = \{a, b\}$

$\hookrightarrow q_0 = \{q_0\}$

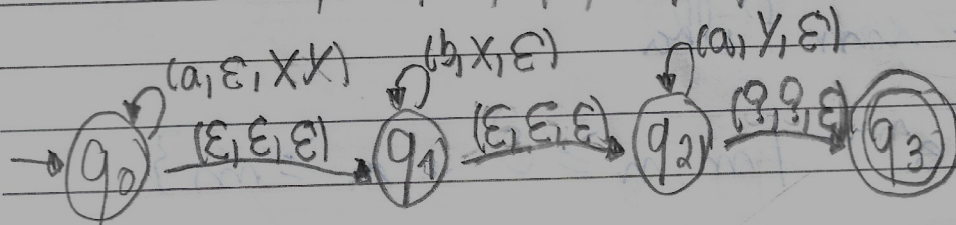
$\hookrightarrow V = \{X\}$

$\hookrightarrow F = \{q_2\}$

$\hookrightarrow Q = \{q_0, q_1, q_2\}$

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

$$\Rightarrow M = (\Sigma, Q, \delta, q_0, F, V)$$

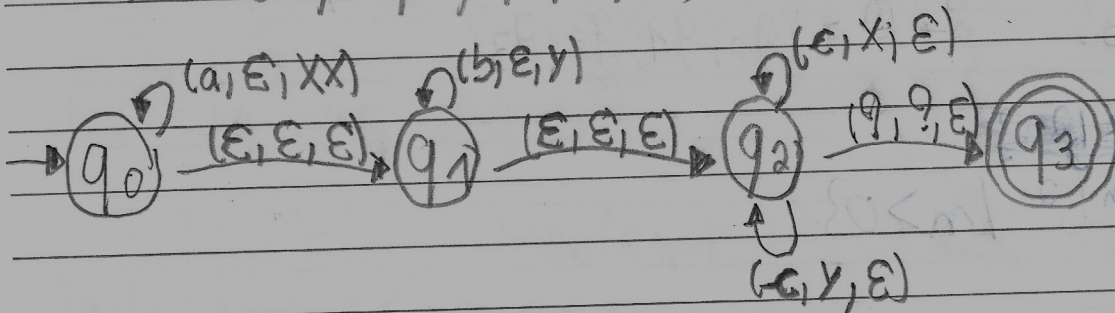


$$\hookrightarrow \Sigma = \{a, b\} \quad \hookrightarrow q_0 = \{q_0\} \quad \hookrightarrow V = \{X, Y\}$$

$$\hookrightarrow F = \{q_3\} \quad \hookrightarrow Q = \{q_0, q_1, q_2, q_3\}$$

$$d) L = \{a^n b^m e^{2n+m} \mid n, m \geq 0\}$$

$$\Rightarrow M = (\Sigma, Q, \delta, q_0, F, V)$$



$$\hookrightarrow \Sigma = \{a, b, e\} \quad \hookrightarrow q_0 = \{q_0\} \quad \hookrightarrow V = \{X, Y\}$$

$$\hookrightarrow F = \{q_3\} \quad \hookrightarrow Q = \{q_0, q_1, q_2, q_3\}$$