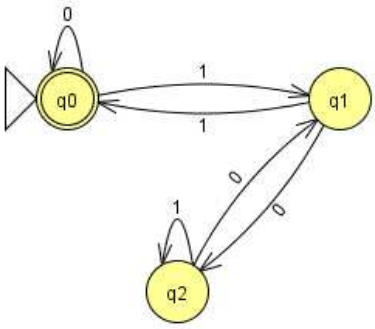
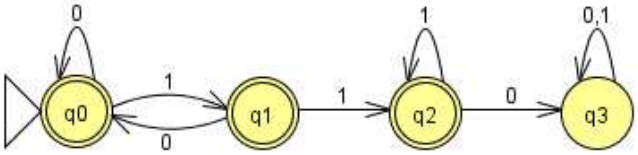
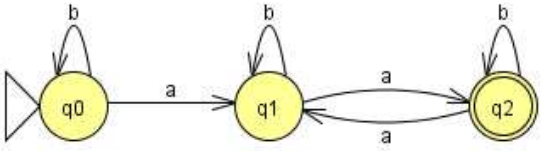
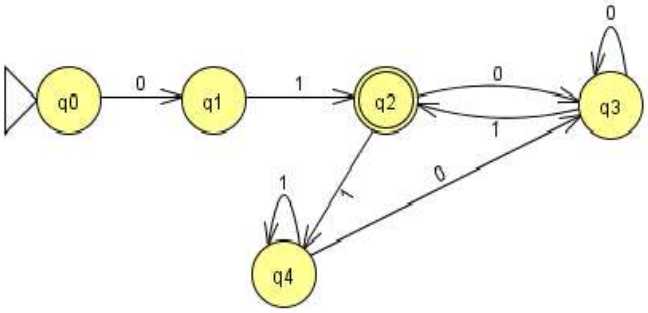
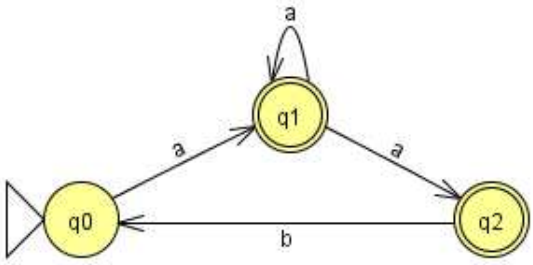
TEORIA DA COMPUTAÇÃO I

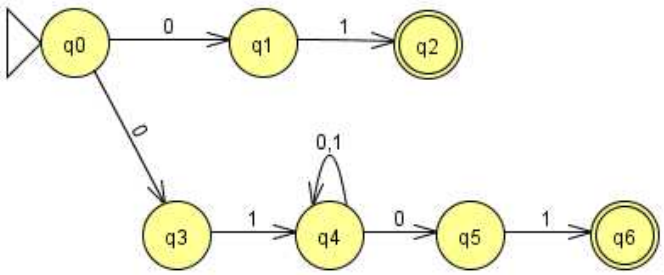
Profa. Edith Ranzini

GABARITO

EXEMPLOS – Autômatos Finitos para Expressão Regular

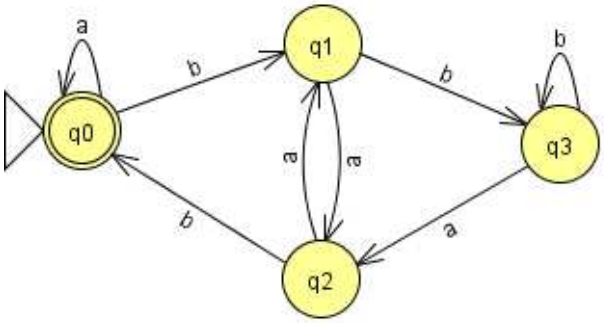
Autômato Finito	Expressão Regular
Exemplo 1 	ε [0 + 1 (01* 0)* 1]* ↑ 1ª vez voltar
Exemplo 2 	ε [0 + 10]* + 0*1 [00*1]* + 0*1 [00*1]*1 1* q0 q1 q2
Exemplo 3 	b*ab*a (b + ab*a)* 1ª vez voltar
Exemplo 4 	01[11*00*1 + 00*1]* = 01[1*00*1]*
Exemplo 5 	a (a + aba)* + aa*a (baa*a)* q1 q2

Exemplo 6



$$\underbrace{01}_{q2} + \underbrace{01\ (0+1)^*\ 01}_{q6}$$

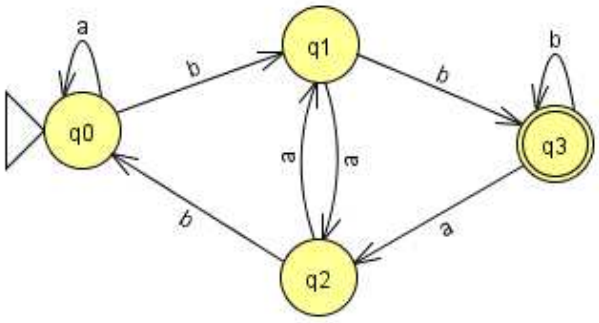
Exemplo 7



Expressão Regular (preciso conferir)

$$\varepsilon\ [\ a + \underbrace{b(\ aa\ + bb^*aa)^*}_{q1}\ \underbrace{a}_{q2}\ \underbrace{b}_{q0}\ +\ \underbrace{ba\ (aa + abb^*a)^*}_{q2}\ \underbrace{b}_{q0}\ \underbrace{+\ bbb^*a\ (aa + abb^*a)^*}_{q2}\ \underbrace{b}_{q0}\ ]^*$$

Exemplo 8



Expressão Regular (preciso conferir)

$$\underbrace{a^*b\ [a\ (aa)^*\ b\ a^*\ b\ ]\ b}_{1ª\ vez\ (q3)}\ \{\ b + \underbrace{a\ (aa + ba^*ba)^*\ ab}_{voltar\ (q2)}\ \}^*$$