1a)

Fecho-ε(0) = {0,2}
Fecho-ε(1) = {1}
Fecho-ε(2) = {2}
Fecho-ε(3) = {3}
Fecho-ε(4) = {4}

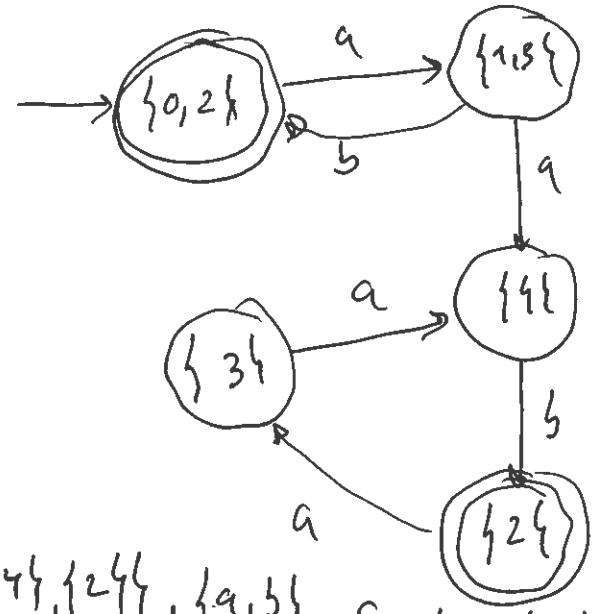
TAB. DE TRANSIÇÕES:

	ε	a	b
→ 0	{2}	{1}	∅
1	∅	∅	{4}
* 2	∅	{3}	∅
3	∅	{4}	∅
4	∅	∅	{2}

b) DFA:

	a	b
→ * {0,2}	{1,3}	∅
{1,3}	{4}	{0,2}
{4}	∅	{2}
* {2}	{3}	∅
{3}	{4}	∅
∅	∅	∅

DFA (OMITINDO TRANS. PARA ∅)

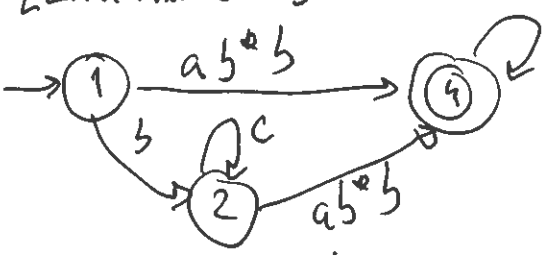


DFA $A = (\{\{0,2\},\{1,3\},\{3\},\{4\},\{2\}\},\{a,b\},\delta,\{\{0,2\},\{2\}\})$

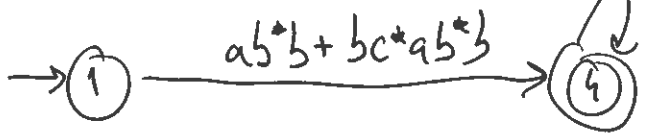
$\delta(\{0,2\},a) = \{\{1,3\}\}$, $\delta(\{1,3\},b) = \{\{0,2\}\}$, $\delta(\{1,3\},a) = \{\{4\}\}$

$\delta(\{4\},b) = \{\{2\}\}$, $\delta(\{2\},a) = \{\{3\}\}$, $\delta(\{3\},a) = \{\}$

c) ELIMINANDO 3:



ELIMINANDO 2:



$= (\varepsilon + bc^*)ab^*b(b+ab^*b)^*$

EXPR. REG: $(ab^*b + bc^*ab^*b)(b+ab^*b)^*$