Seja $h = \{w \mid w$ possui uma quantidade ímpar de $a\}$ e $\Sigma = \{a\}$

Fazer a Regex que reconheça esta linguagem.

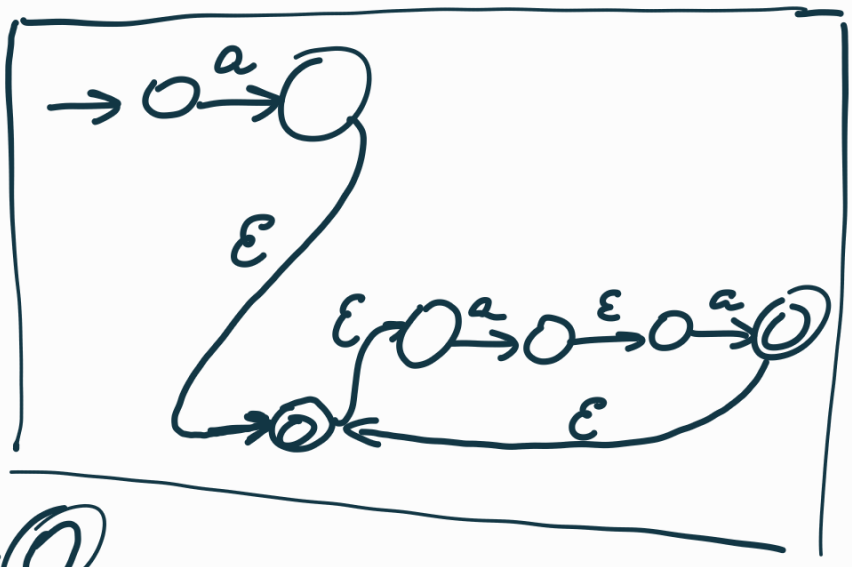
$a(aa)^*$ $\quad (aa)^*a$

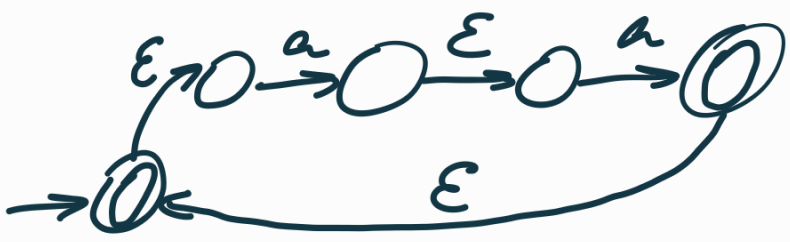
R_1 R_2

$R_1 =$

$R_2 = R_3^*$

$R_3 = a \circ a$





Dada h, crie o autômato que a representa

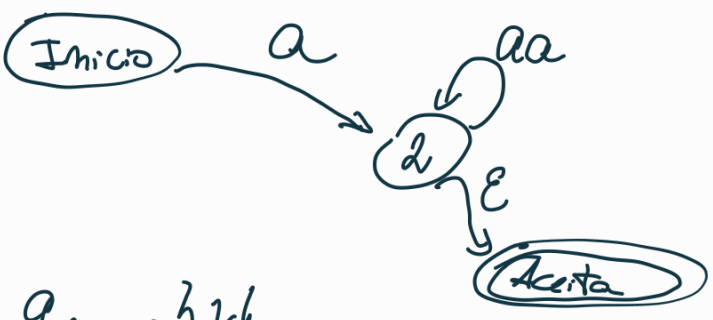
$R_1 = \delta(q_i, q_{rem})$

$R_2 = \delta(q_{rem}, q_{rem})$

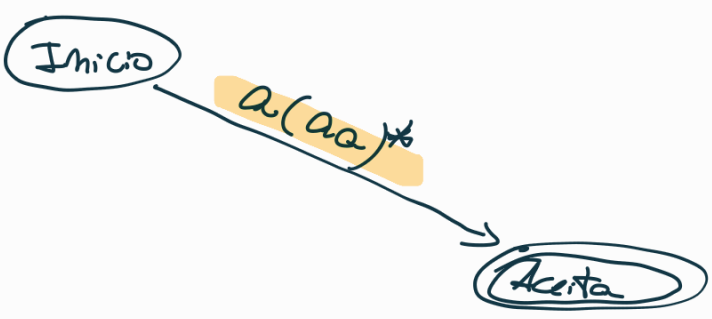
$R_3 = \delta(q_{rem}, q_j)$

$R_4 = \delta(q_i, q_j)$

$q_{rem} = \{1\}$



$q_{rem} = \{2\}$



q_i , q_j
Início, 2 ✓
Início, Ac ✓
2, 2 ✓
2, Ac ✓

$\delta'(2, Ac) = R_1 R_2^* R_3 \mid R_4$

$R_1 = a$

$R_2 = \emptyset$

$R_3 = \emptyset$

$R_4 = \varepsilon$

Início, Ac

$\delta'(\text{Início}, Ac) = R_1 R_2^* R_3 \mid R_4$

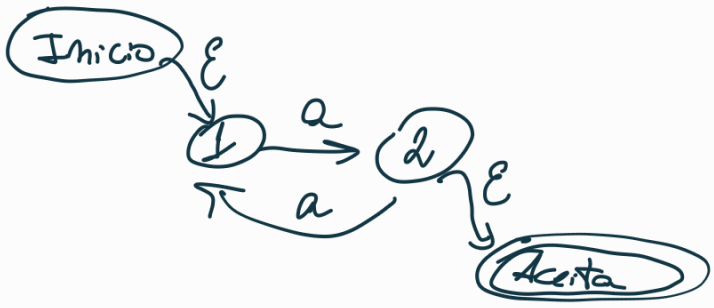
$R_1 = a$

$R_2 = (aa)^* \quad a \circ (aa)^* \circ \varepsilon \mid \emptyset$

$R_3 = \varepsilon$

$R_4 = \emptyset$

CBD



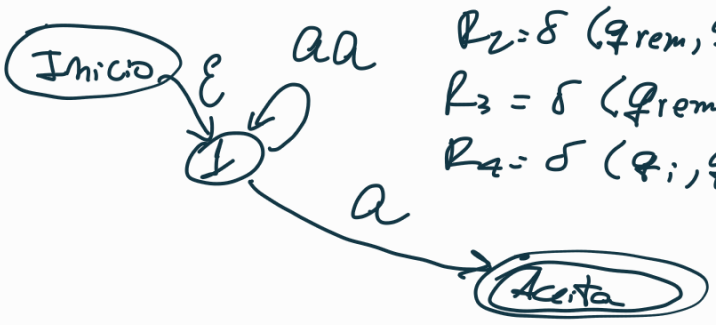
$q_{rem} = \{1, 2\}$

$R_1 = \delta(q_i, q_{rem})$

$R_2 = \delta(q_{rem}, q_{rem})$

$R_3 = \delta(q_{rem}, q_j)$

$R_4 = \delta(q_i, q_i)$



$q_{rem} = \{1\}$

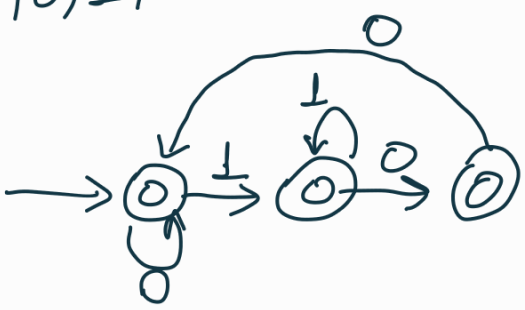
Início, 1 ✓
Início, Ac ✓
1, 1 ✓
1, Ac

$\delta'(1, Ac)$	
$R_1 : a$	
$R_2 : \emptyset$	$a \circ \emptyset^* \circ \varepsilon \mid \emptyset$
$R_3 : \varepsilon$	a
$R_4 : \emptyset$	

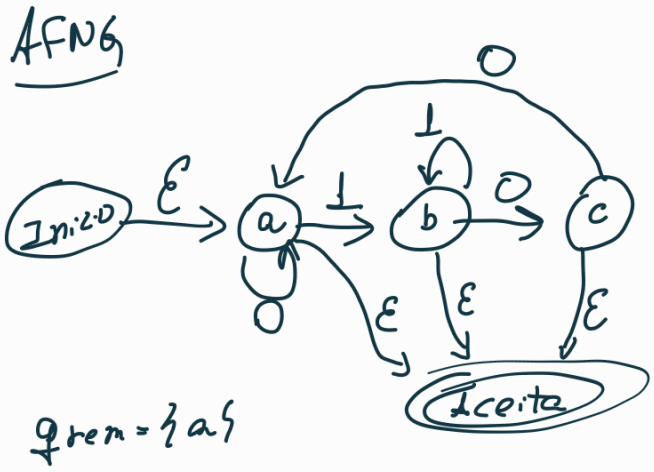
Início, Ac	
$\delta'(\text{Início}, Ac)$	
$R_1 : \varepsilon$	
$R_2 : (aa)$	$\varepsilon \circ (aa)^* \circ a \mid \emptyset$
$R_3 : a$	$(aa)^* a$
$R_4 : \emptyset$	

$L = \{w \mid w$ não possui $10\}$

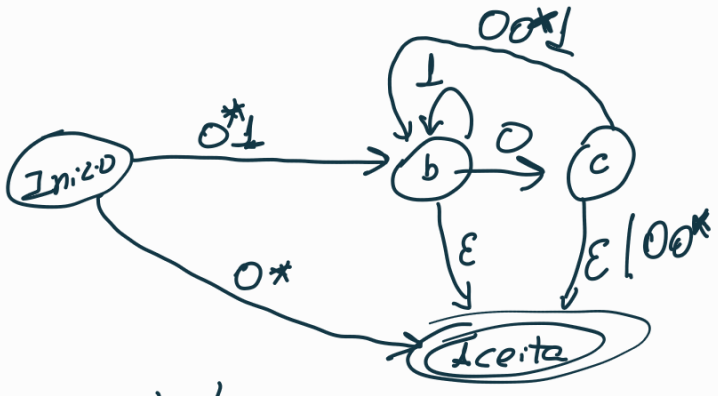
$\Sigma = \{0, 1\}$



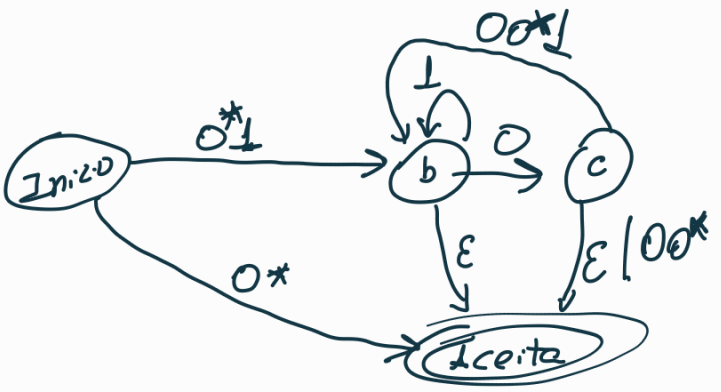
AFNG

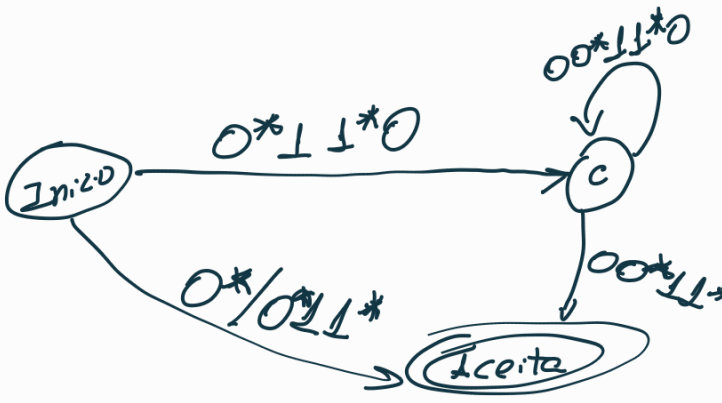


$q_{rem} = \{a\}$



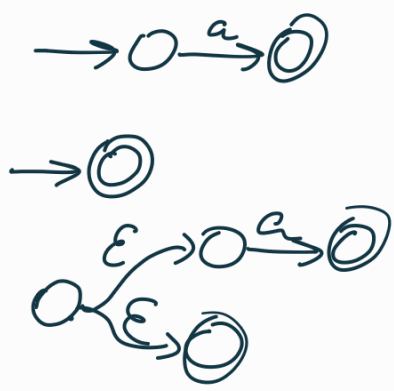
$q_{rem} = \{b\}$





$q_{rem} = \{c\}$

$a \mid \varepsilon$



	$\delta'(c, Ac)$
Início, b ✓	$R_1 = 0$
Início, c ✓	$R_2 = 0$ $\quad 00^* \mid \varepsilon$
Início, Ac ✓	$R_3 = \varepsilon$
b, b ✓	$R_4 = \varepsilon$
b, c ✓	
b, Ac ✓	
c, b ✓	$R_1 = \delta(q_i, q_{rem})$
c, c ✓	$R_2 = \delta(q_{rem}, q_{rem})$
c, Ac ✓	$R_3 = \delta(q_{rem}, q_j)$
	$R_4 = \delta(q_i, q_j)$

Início, c ✓	$R_1 = \delta(q_i, q_{rem})$
Início, Ac ✓	$R_2 = \delta(q_{rem}, q_{rem})$
c, c ✓	$R_3 = \delta(q_{rem}, q_j)$
c, Ac ✓	$R_4 = \delta(q_i, q_j)$
$\delta(c, Ac)$	
$R_1 : 00^*1$	$00^*11^* \mid (\varepsilon \mid 00^*)$
$R_2 : 1$	
$R_3 : \varepsilon$	
$R_4 : \varepsilon \mid 00^*$	

Início, Aceita	
$\delta'(Início, Aceita)$	
$R_1 : 0^*11^*0$	
$R_2 : (00^*11^*0)^*$	
$R_3 : (00^*11^*(\varepsilon \mid 00^*))$	
$R_4 : (0^* \mid 0^*11^*)$	

$$\underbrace{(0^*11^*0)}_{r_0\ r_1\ r_2\ r_3}\ \underbrace{(00^*11^*0)^*}_{r_4\ r_5\ r_6\ r_7\ r_8}\ \underbrace{(00^*11^*}_{R_3'}\ \underbrace{\mid (\varepsilon}_{R_3''}\ \underbrace{\mid 00^*))}_{R_3'''}\ \underbrace{\mid (0^* \mid 0^*11^*)}_{R_4}$$

R_1 R_2 R_3

$R_1 = r_0 \circ r_1 \circ r_2 \circ r_3$

$r_0 =$

$r_2 =$

$r_1 =$

$r_3 =$

$R_2 =$

$r_4 =$

$r_6 =$

$r_5 =$

$r_7 =$

$r_8 =$

$R_3 = R_3' \mid R_3''$

$R_3'' = R_3''' \mid R_3''''$

$R_3''' =$

$R_3'''' =$

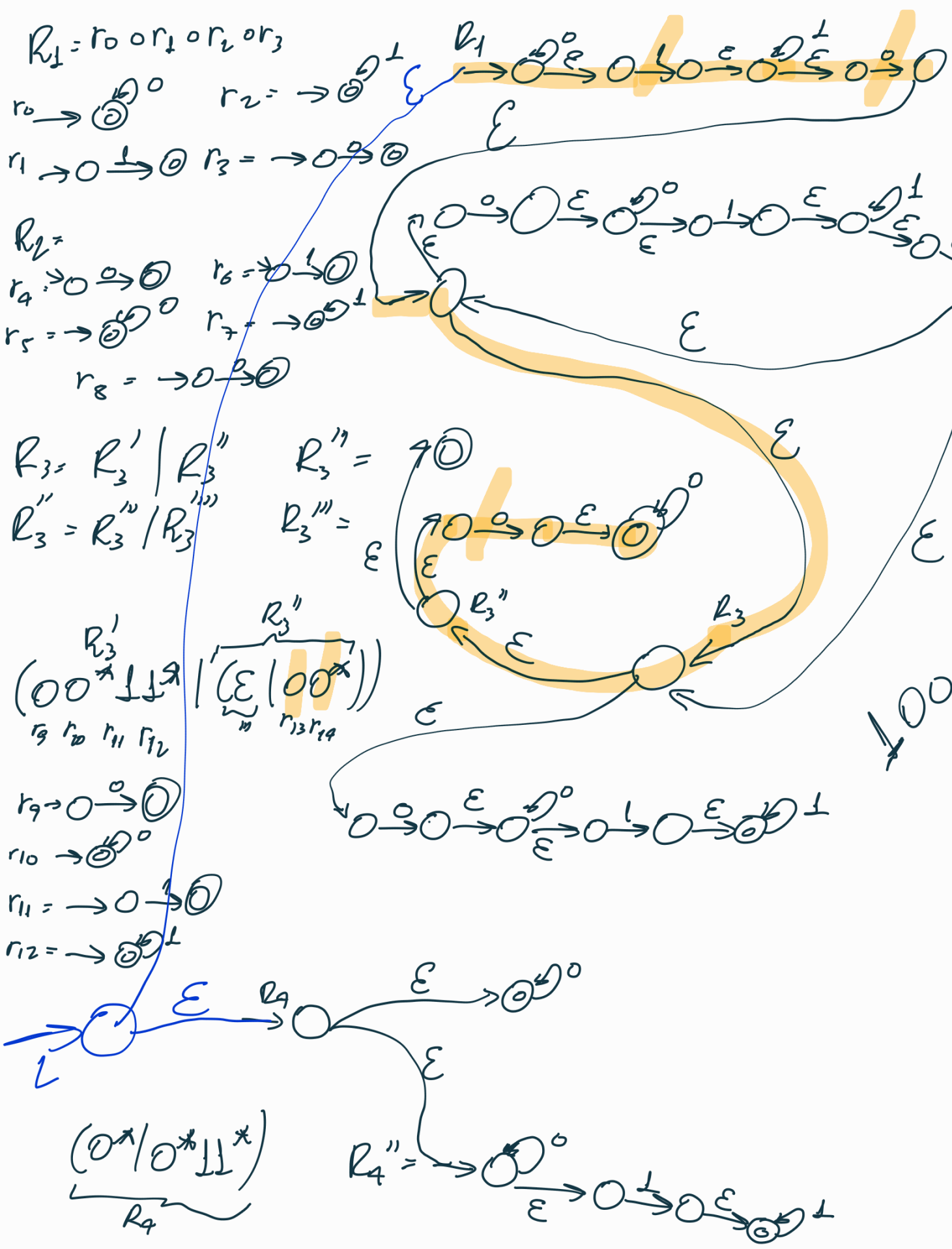
$$\Big(\underbrace{00^*11^*}_{r_9\ r_{10}\ r_{11}\ r_{12}}\ \Big|\ \underbrace{\big(\underbrace{\varepsilon}_{r_{13}}\ \big|\ \underbrace{00^*}_{r_{13}\ r_{14}}\big)}_{R_3''}\Big)$$

$r_9 =$

$r_{10} =$

$r_{11} =$

$r_{12} =$



$$\underbrace{(0^*|0^*11^*)}_{R_4}$$

$R_4 = R_4' \mid R_4''$

$R_4' =$