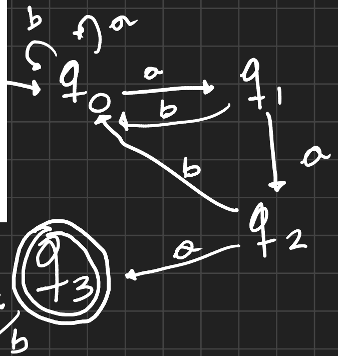
Ejercicio 1. Para los siguientes autómatas finitos no determinísticos, dar un autómata determinístico mínimo que reconozca el mismo lenguaje:

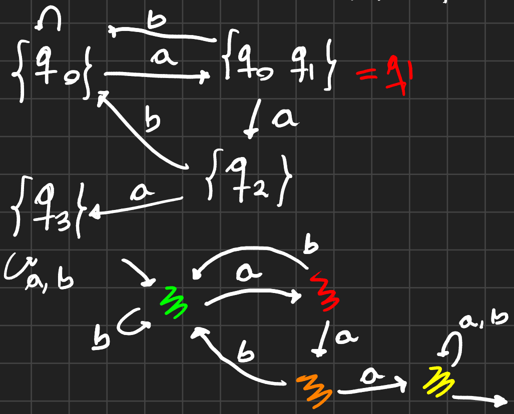
a. $M_0 = \langle\{q_0, q_1, q_2, q_3\}, \{a, b\}, \delta_0, q_0, \{q_3\}\rangle$,

$\delta_0 =$

	a	b	λ
q_0	$\{q_0, q_1\}$	$\{q_0\}$	∅
q_1	$\{q_2\}$	$\{q_0\}$	∅
q_2	$\{q_3\}$	$\{q_0\}$	∅
q_3	$\{q_3\}$	$\{q_3\}$	∅



Armado: q_0 $\{q_0 q_1\}$



	$\equiv_0$	a	b	$\equiv_1$	a	b	$\equiv_2$
q_0	NF	NF	NF	Δ	Δ	Δ	ʒ
q_1	NF	NF	NF	Δ	□	Δ	ʒ
q_2	NF	F	NF	□	*	Δ	ʒ
q_3	F	F	F	*	*	*	ʒ

Todos diferentes en lo más lejos podemos llegar o sea es mínimo

b. $M_0 = \langle\{0, 1, 2, 3, 4, 5, 6\}, \{a, b\}, \delta_0, 0, \{6\}\rangle$,

$\delta_0 =$

	a	b	λ
0	{1}	{2}	{4}
1	∅	∅	{0, 3}
2	∅	∅	{0, 3}
3	{4}	∅	∅
4	∅	∅	{5}
5	{6}	{6}	∅
6	∅	∅	{5}

$Cl_\lambda(\{q_0\}) = \{0,4,5\}$

$Cl_\lambda(\{q_1\}) = \{0,1,4,5,3\}$

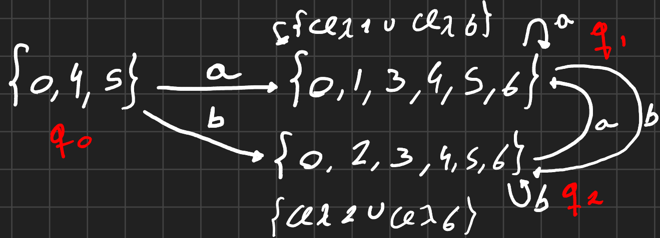
$Cl_\lambda(\{q_2\}) = \{0,2,4,5,3\}$

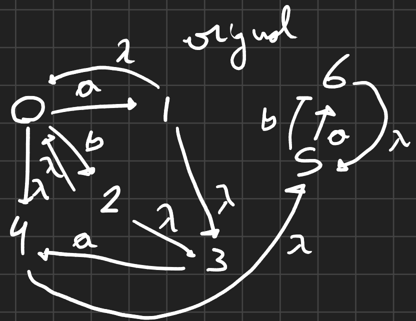
$Cl_\lambda(\{q_3\}) = \{3\}$

$Cl_\lambda(\{4\}) = \{4,5\}$

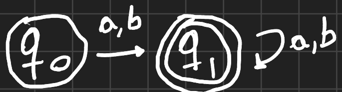
$Cl_\lambda(\{5\}) = \{5\}$

$Cl_\lambda(\{6\}) = \{5,6\}$





	$\equiv_0$	a	b	$\equiv_1$
q_0	NF	F	F	|||
q_1	F	F	F	*
q_2	F	F	F	*

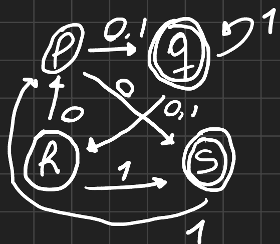


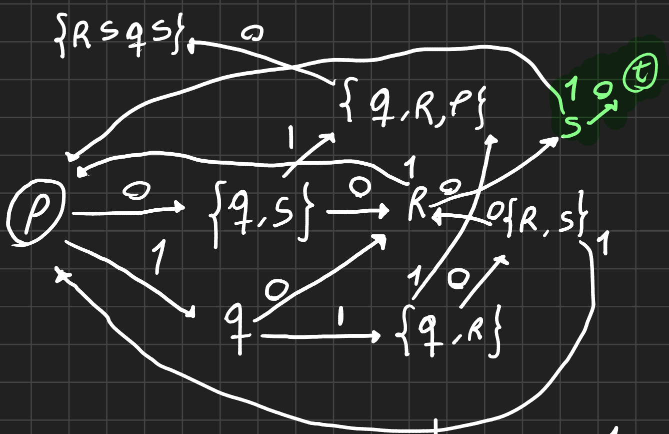
c. $M_0 = \langle\{p, q, r, s\}, \{0, 1\}, \delta_0, p, \{q, s\}\rangle$,

$\delta_0 =$

	0	1	λ
p	{q, s}	{q}	∅
q	{r}	{q, r}	∅
r	{s}	{p}	∅
s	∅	{p}	∅

Dice que no es -λ





	$\equiv_0$ 0	1	$\equiv_1$ 0	1	$\equiv_2$ 0	1
p	N F	F	A B	B	1 2	2
qs	F N	F	B C	D	2 3	4
q	F N	F	B C	D	2 3	5
R	N F	N	C E	A	3 6	7
qRP	F F	F	D D	F	4 5	4
qR	F F	F	D F	D	5 8	4
S	F N	N	E E	A	6 6	7
P	N F	F	A B	B	7 2	2
RSq	F F	F	D F	D	5 8	4
RS	F F	N	F E	A	8 6	7

	0	1
P	{q s}	{q}
q s	{R}	{q R, P}
q	{R}	{q R}
R	{S}	{P}
qRP	{R S q}	{q R P}
qR	{RS}	{q R P}
(t) ← S	∅	{P}
P	{qs}	{q}
RSq	{RS}	{qRP}
RS	{S}	{P}