

Group 20

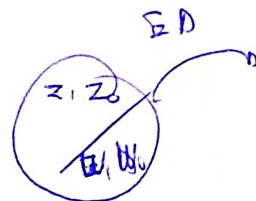
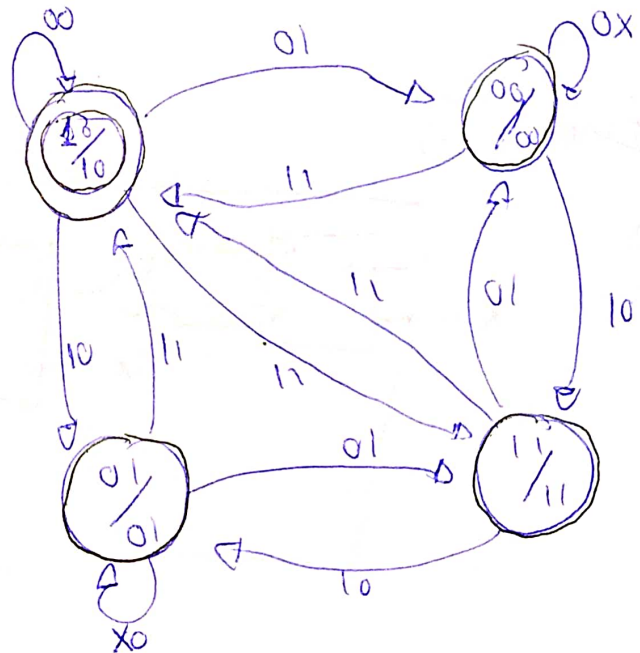
### Exercici 1

Accio del GTSZ	Z1	Zo
A la destra	0	0
A l'inghera	0	1
Paran	1	0
Tenderant	1	1

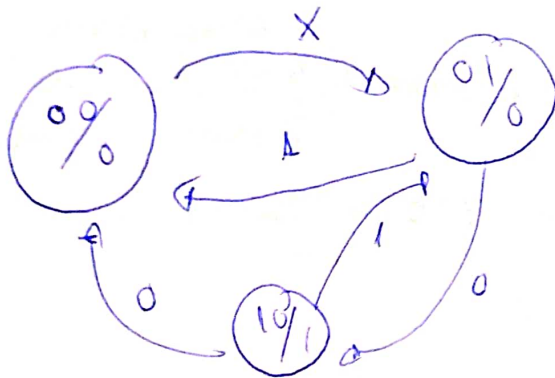
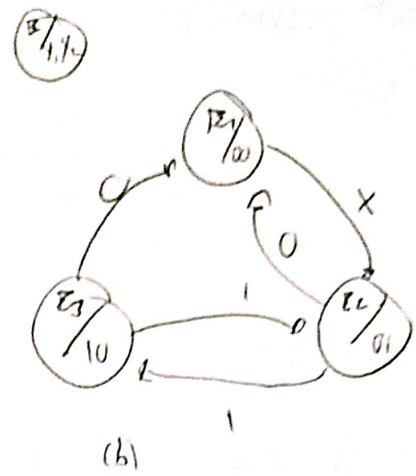
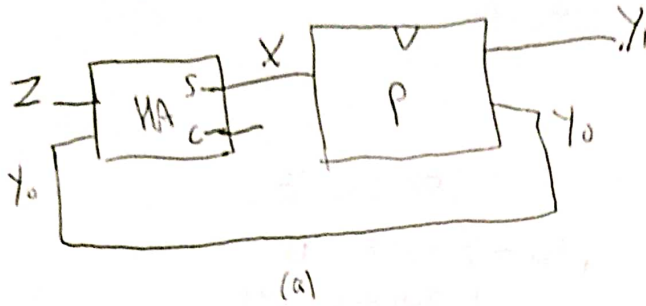
c. Movement "E"  $\left\{ \begin{array}{l} \text{Esquena neta} \\ \text{nete neta} \\ \text{gincant si ja ho joia} \end{array} \right.$

$E^1 D$  en  $\text{fct}$

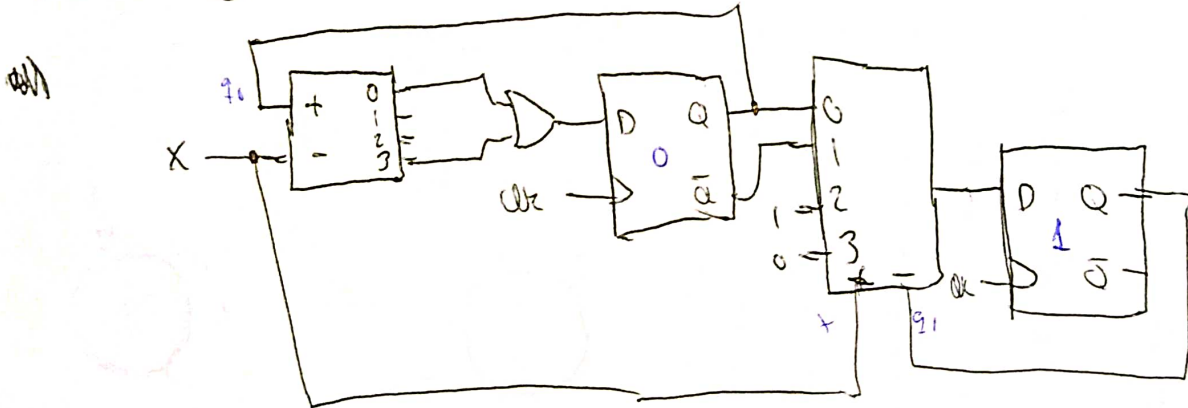
$Z_1$	$Z_0$	$E$	$D$	$Z_1^+$	$Z_0^+$
0	0	0	0	0	0
0	0	0	1	0	0
0	0	1	0	1	1
0	0	1	1	1	0
0	1	0	0	0	1
0	1	0	1	1	1
0	1	1	0	0	1
0	1	1	1	1	0
1	0	0	0	1	0
1	0	0	1	0	0
1	0	1	0	0	1
1	0	1	1	1	1
1	1	0	0	1	1
1	1	0	1	0	0
1	1	1	0	0	1
1	1	1	1	1	0



## Exercice ② Dibuira el grao



## Exercice ③



a) Expressions logiques de  $D_0$  et  $D_1$

$$D_0 = \bar{q}_0 \cdot \bar{X} + q_0 \cdot X$$

$$D_1 = X(\bar{q}_1) + \bar{X} \cdot (q_1 \cdot \bar{q}_0 + \bar{q}_1 \cdot q_0) \Rightarrow$$

X	q <sub>1</sub>	D <sub>1</sub>
0	0	0
0	1	0
1	0	1
1	1	0

b) Taula de Transicions i de Sortides.

• Taula Transicions

X	q <sub>1</sub>	q <sub>0</sub>	q <sub>1</sub> <sup>+</sup>	q <sub>0</sub> <sup>+</sup>
0	0	0	0	1
0	0	1	1	0
0	1	0	1	1
0	1	1	0	0
1	0	0	1	0
1	0	1	1	1
1	1	0	0	0
1	1	1	0	1

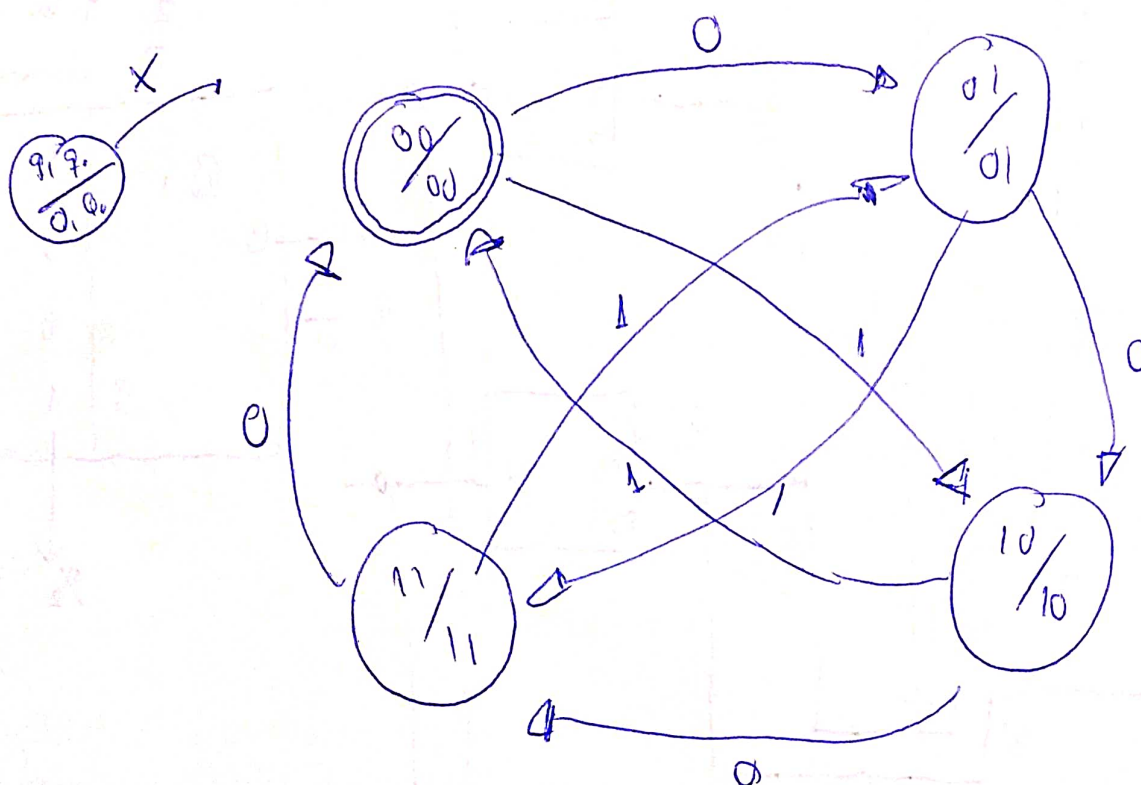
• Taula Sortida Q<sub>0</sub>

X	q <sub>1</sub>	q <sub>0</sub>	Q <sub>0</sub>
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1

• Taula Sortida Q<sub>1</sub>

X	q <sub>1</sub>	q <sub>0</sub>	Q <sub>1</sub>
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

c) Graeg

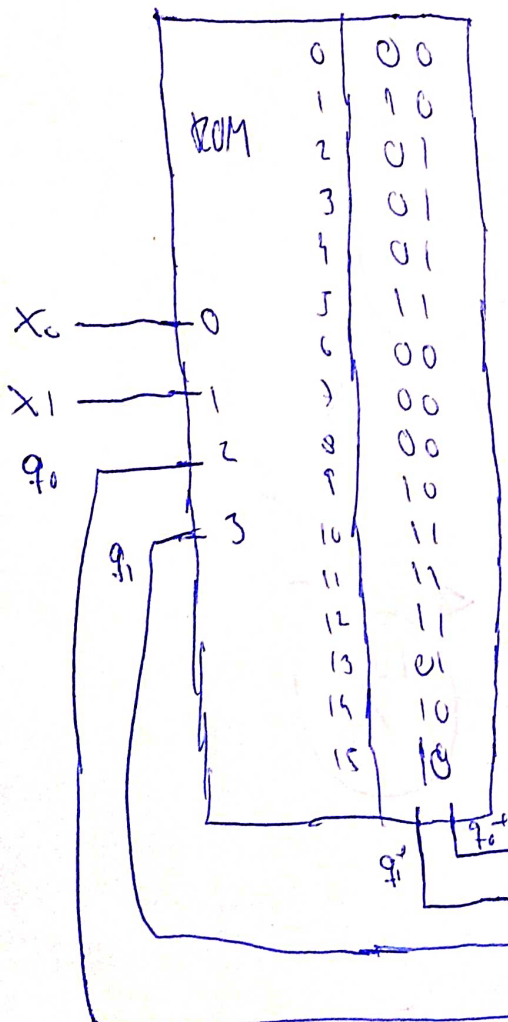


exercici 4) Sistema lògic amb 2 B0 i 2 Rom

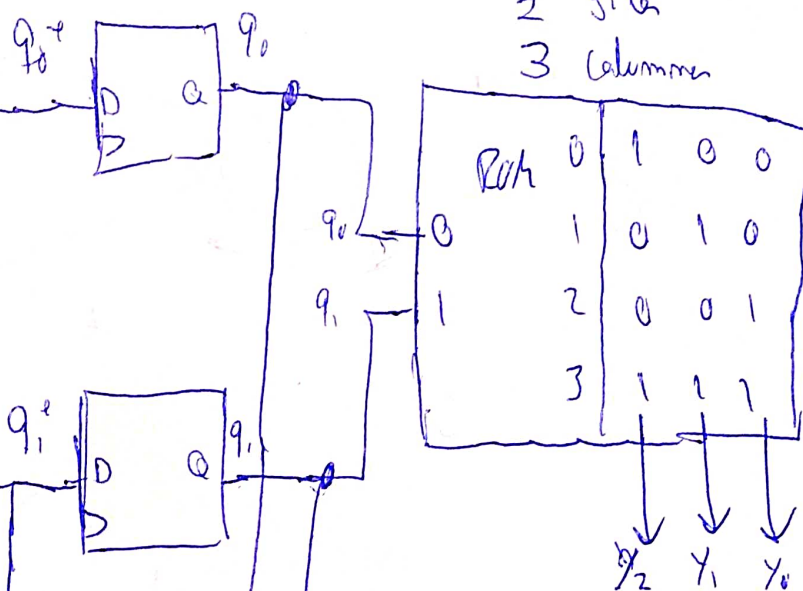
E	$q_1$	$q_0$	$q_1$	$q_0$	$X_1$	$X_0$	$q_1^+$	$q_0^+$
A	0	0	0	0	0	0	0	0
B	0	1	0	0	0	1	1	0
C	1	0	0	0	1	0	0	1
D	1	1	0	0	1	1	0	1
			0	1	0	0	0	1
			0	1	0	1	1	1
			0	1	1	0	0	0
			0	1	1	1	0	0
			1	0	0	0	1	0
			1	0	0	1	1	1
			1	1	0	0	0	1
			1	1	0	1	1	0

$q_1$	$q_0$	$y_2$	$y_1$	$y_0$
0	0	1	0	0
0	1	0	1	0
1	0	0	0	1
1	1	1	1	1

2<sup>4</sup> bits  
2 columnes



2<sup>2</sup> bits  
3 columnes





Exercice (5)

$$\text{Data out} = \frac{\text{Data in}(i) + \text{Data in}(i-1) + \text{Data in}(i-2) + \text{Data in}(i-3)}{4}$$

1)

Cide	0	1	2	3	4	5
Data in	0x0010	0x0043	0x0022	0x000B	0x0010	0x0013
Data out	mm	mm	mm	0x0020	0x0020	0x0014

2)

