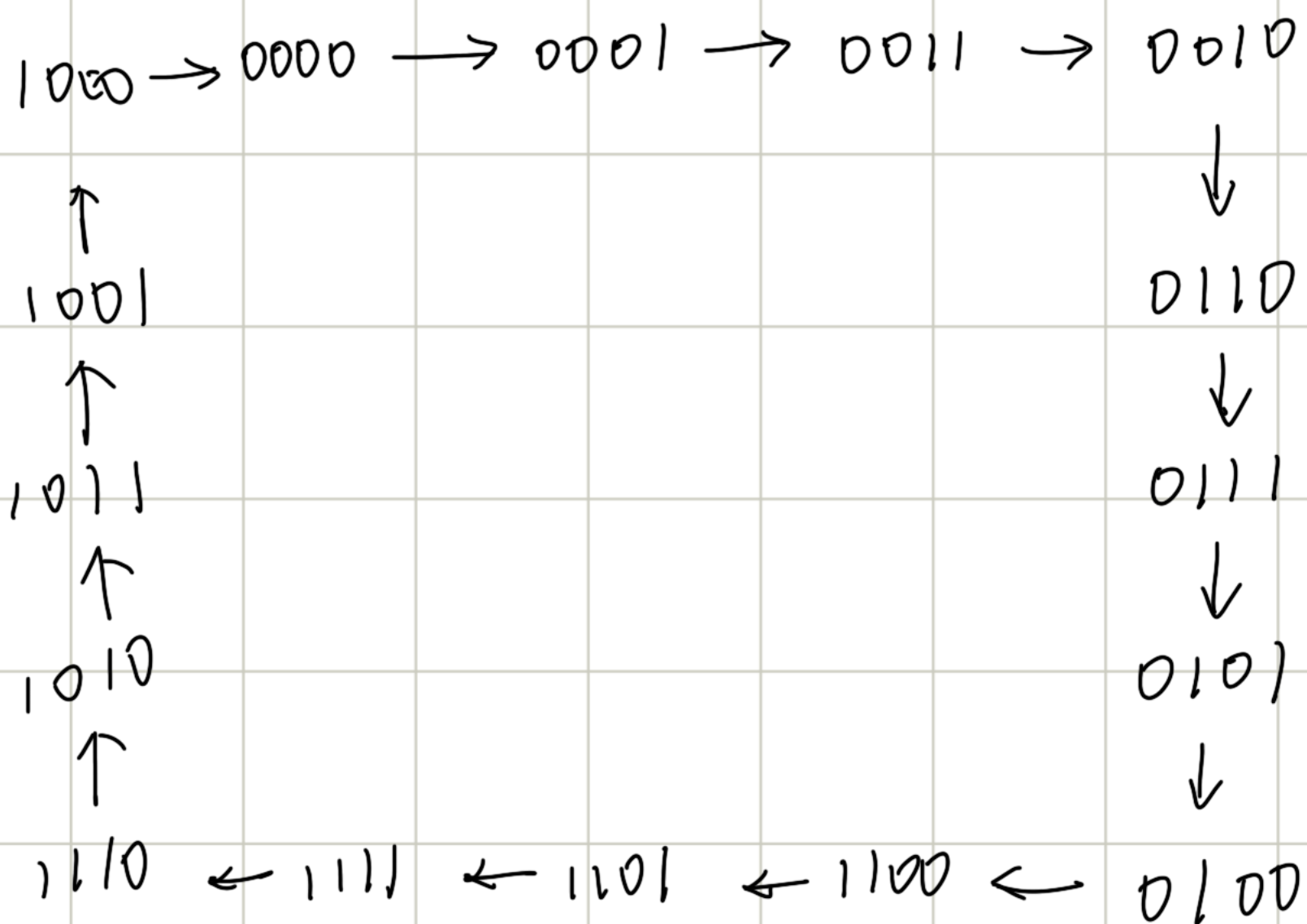


1. 状态转换表:

	C3	C2	C1	C0	N3	N2	N1	N0
0	0	0	0	0	0	0	0	1
1	0	0	0	1	0	0	1	1
2	0	0	1	1	0	0	1	0
3	0	0	1	0	0	1	1	0
4	0	1	1	0	0	1	1	1
5	0	1	1	1	0	1	0	1
6	0	1	0	1	0	1	0	0
7	0	1	0	0	1	1	0	0
8	1	1	0	0	1	1	0	1
9	1	1	0	1	1	1	1	1
10	1	1	1	1	1	1	1	0
11	1	1	1	0	1	0	1	0
12	1	0	1	0	1	0	1	1
13	1	0	1	1	1	0	0	1
14	1	0	0	1	1	0	0	0
15	1	0	0	0	0	0	0	0

状态图:



N3:

$\begin{array}{c cc} C3 & C2 \\ \hline C1 & C0 \end{array}$	00	01	11	10
00	0	1	1	0
01	0	0	1	1
11	0	0	1	1
10	0	0	1	1

$$N3 = (C2 + C1 + C0) \cdot (C3 + C1 + C0') \cdot (C3 + C1')$$

N2:

$\begin{array}{c cc} C3 & C2 \\ \hline C1 & C0 \end{array}$	00	01	11	10
00	0	1	1	0
01	0	1	1	0
11	0	1	1	0
10	1	1	0	0

$$N2 = (C2 + C1 + C0) \cdot (C2 + C1') \cdot (C3' + C1' + C0)$$

N1

$\begin{array}{c cc} C3 & C2 \\ \hline C1 & C0 \end{array}$	00	01	11	10
00	0	0	0	0
01	1	0	1	0
11	1	0	1	0
10	1	1	1	1

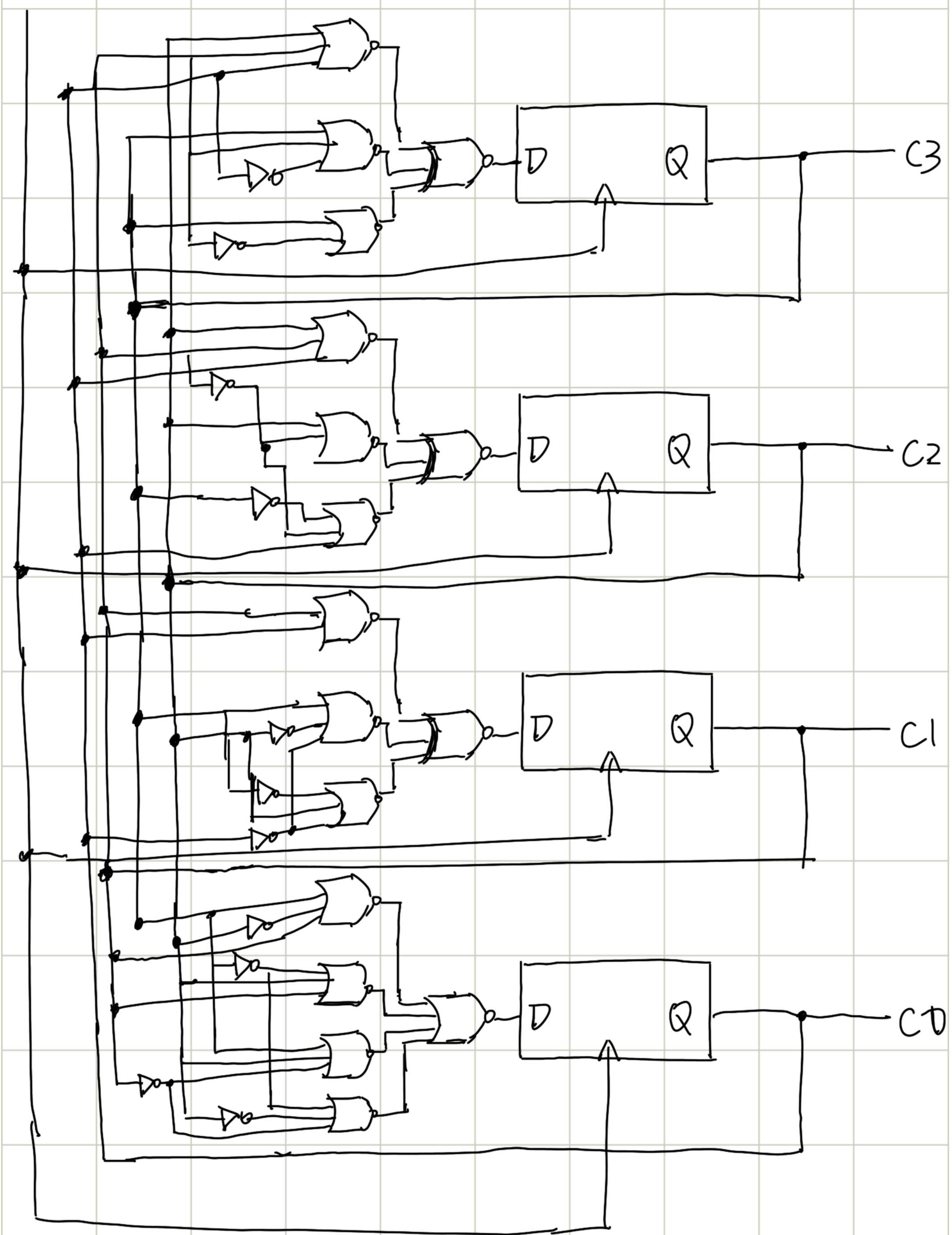
$$N1 = (C1 + C0) \cdot (C3 + C2' + C0') \cdot (C3' + C2 + C0')$$

N0

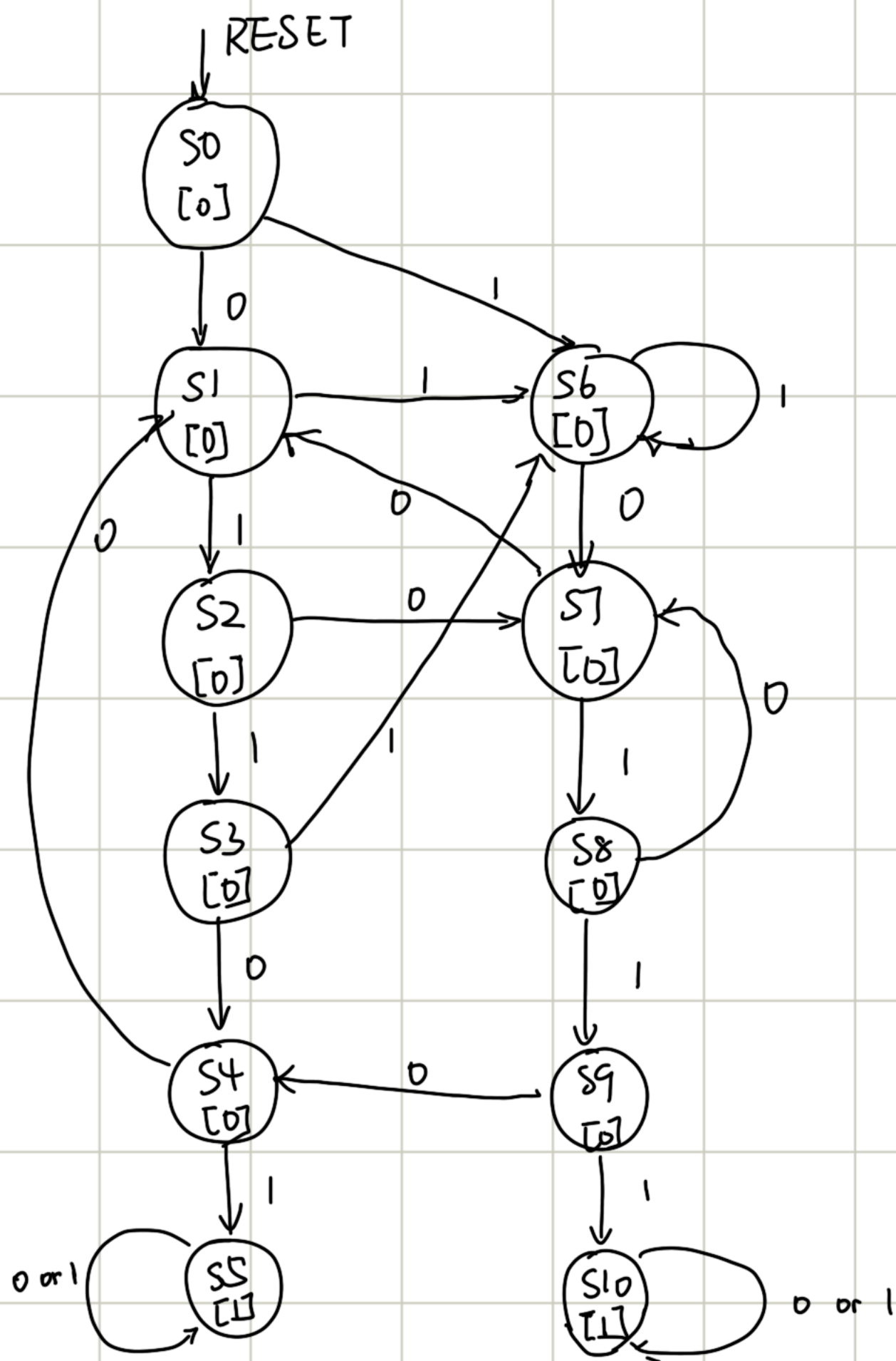
$\begin{array}{c cc} C3 & C2 \\ \hline C1 & C0 \end{array}$	00	01	11	10
00	1	0	1	0
01	1	0	1	0
11	0	1	0	1
10	0	1	0	1

$$N0 = (C3 + C2' + C1) \cdot (C3' + C2 + C1) \cdot (C3 + C2 + C1') \cdot (C3' + C2' + C1')$$

CLK



2.



3.

