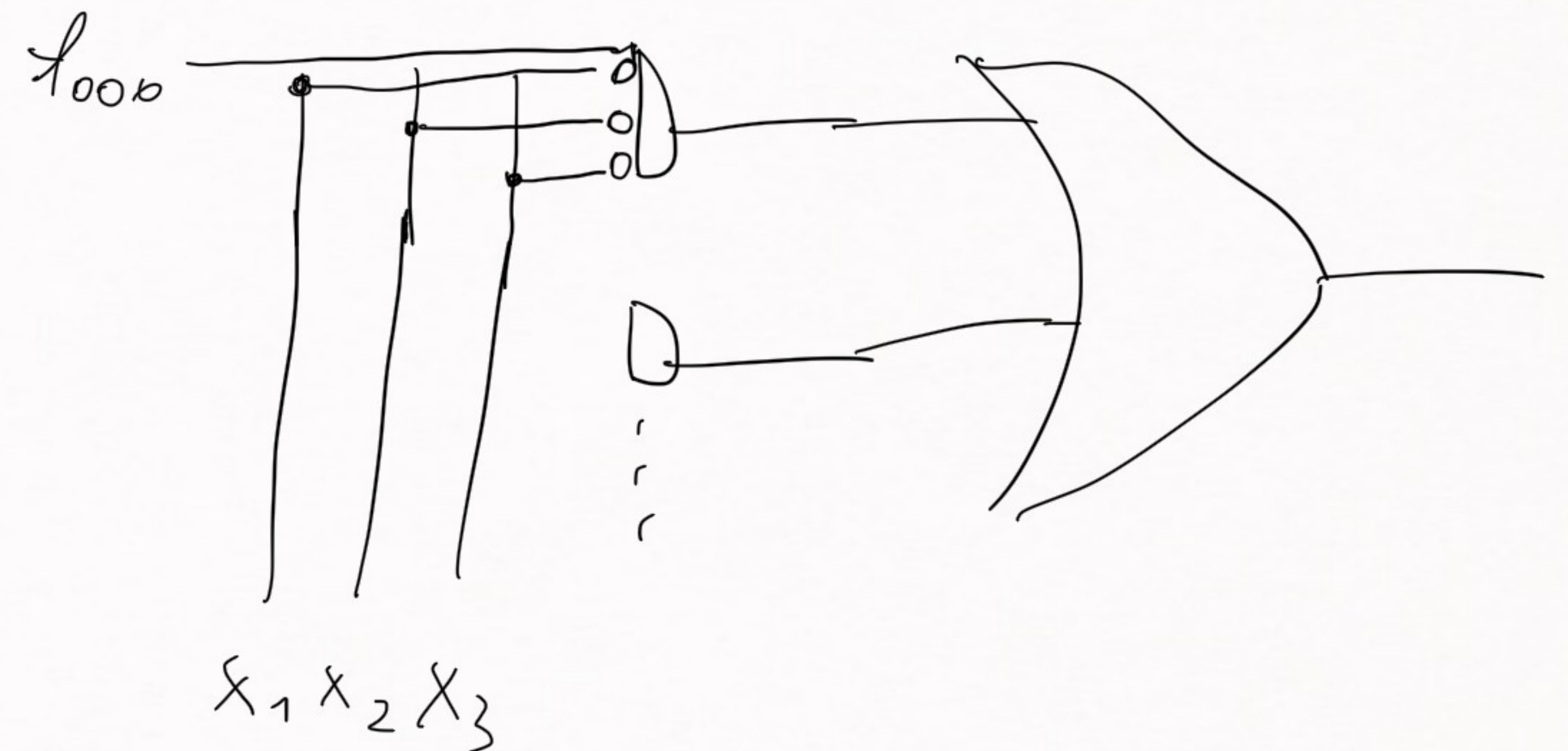
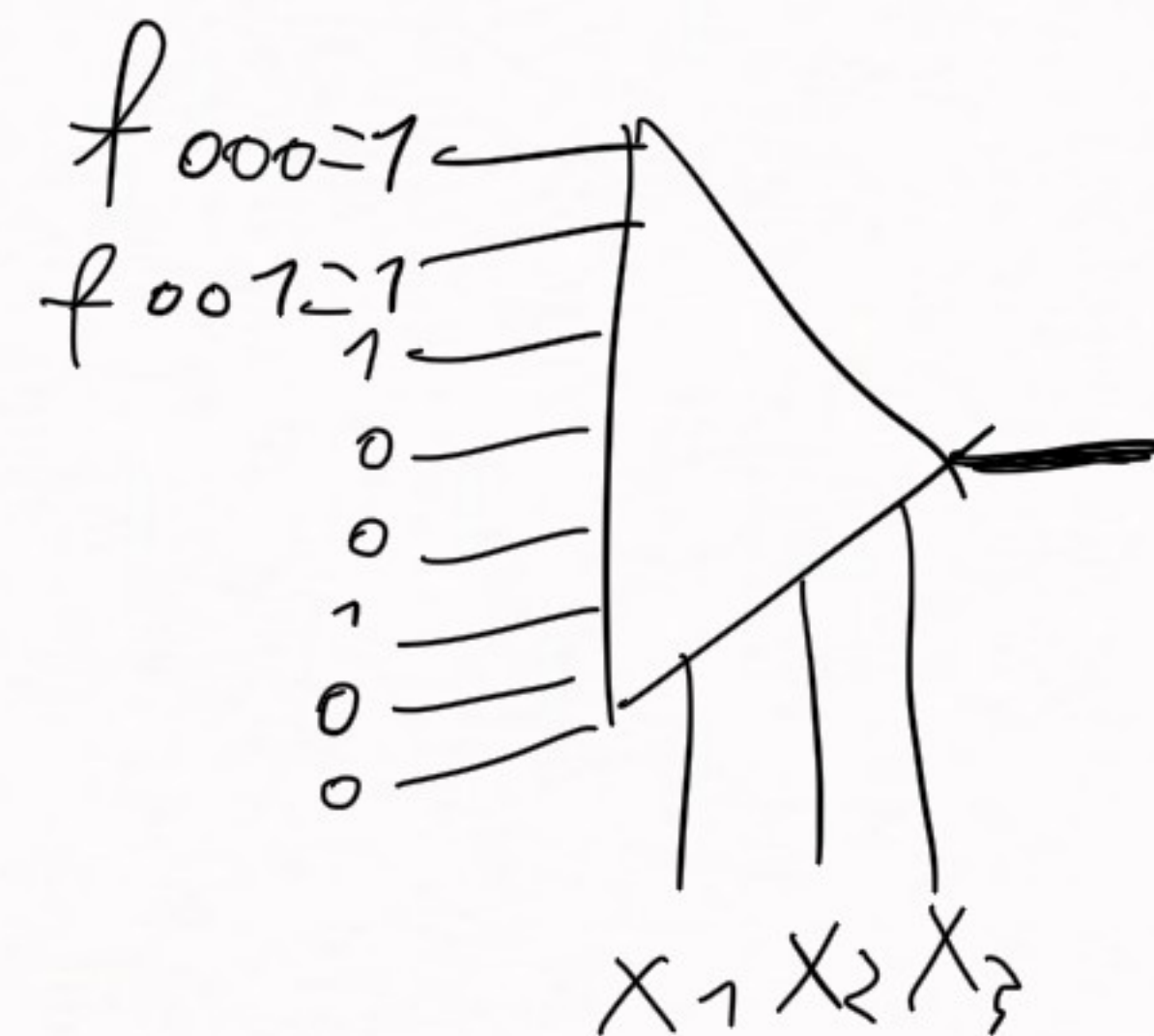


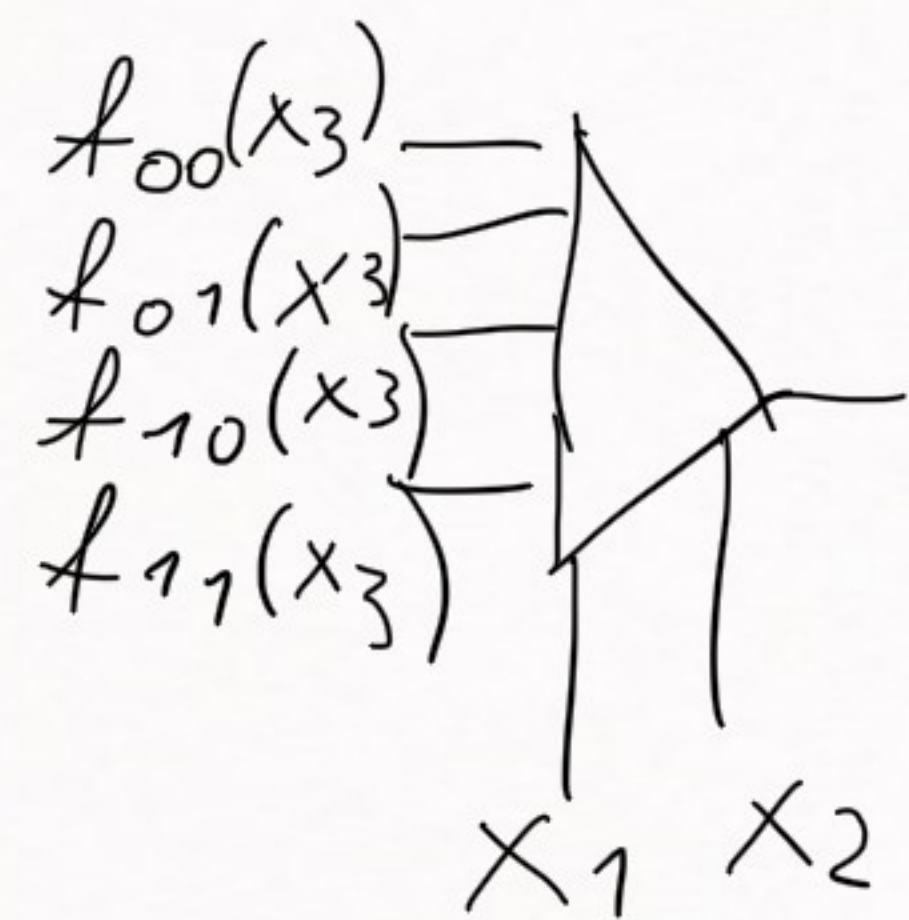
ES LOGICA

x_1	x_2	x_3	f	
0	0	0	1	$\Rightarrow 1$
0	0	1	1	
0	1	0	1	$\Rightarrow \bar{x}_3$
0	1	1	0	
1	0	0	0	$\Rightarrow x_3$
1	0	1	1	
1	1	0	0	$\Rightarrow 0$
1	1	1	0	

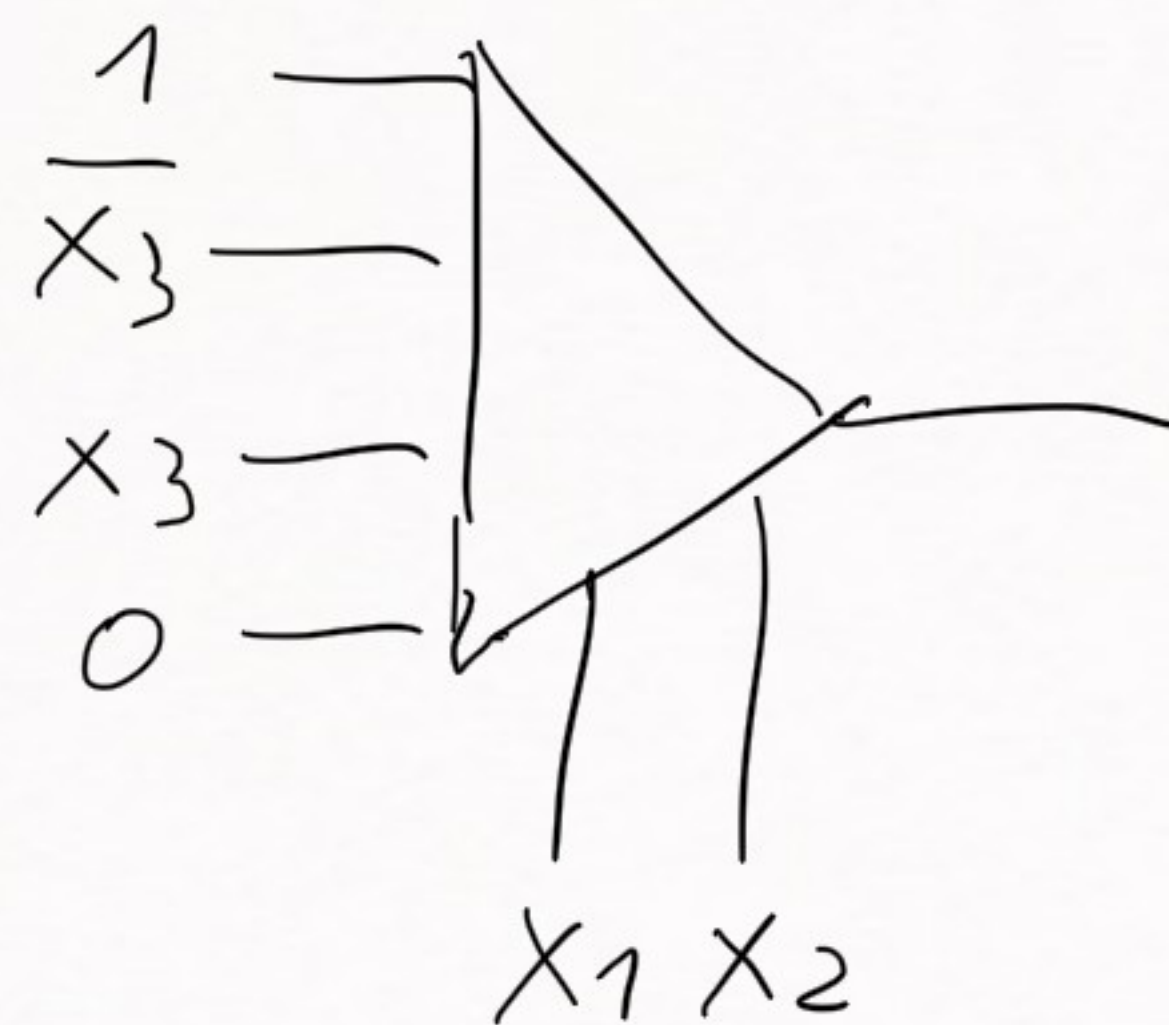
$$f(x_1, x_2, x_3) = \underbrace{f_{000} \bar{x}_1 \bar{x}_2 \bar{x}_3}_{\downarrow 1} + \underbrace{f_{001} \bar{x}_1 \bar{x}_2 x_3}_{\downarrow 1} + \dots$$

$$= \bar{x}_1 \bar{x}_2 \bar{x}_3 + \bar{x}_1 \bar{x}_2 x_3 + \bar{x}_1 x_2 \bar{x}_3 + x_1 \bar{x}_2 x_3$$



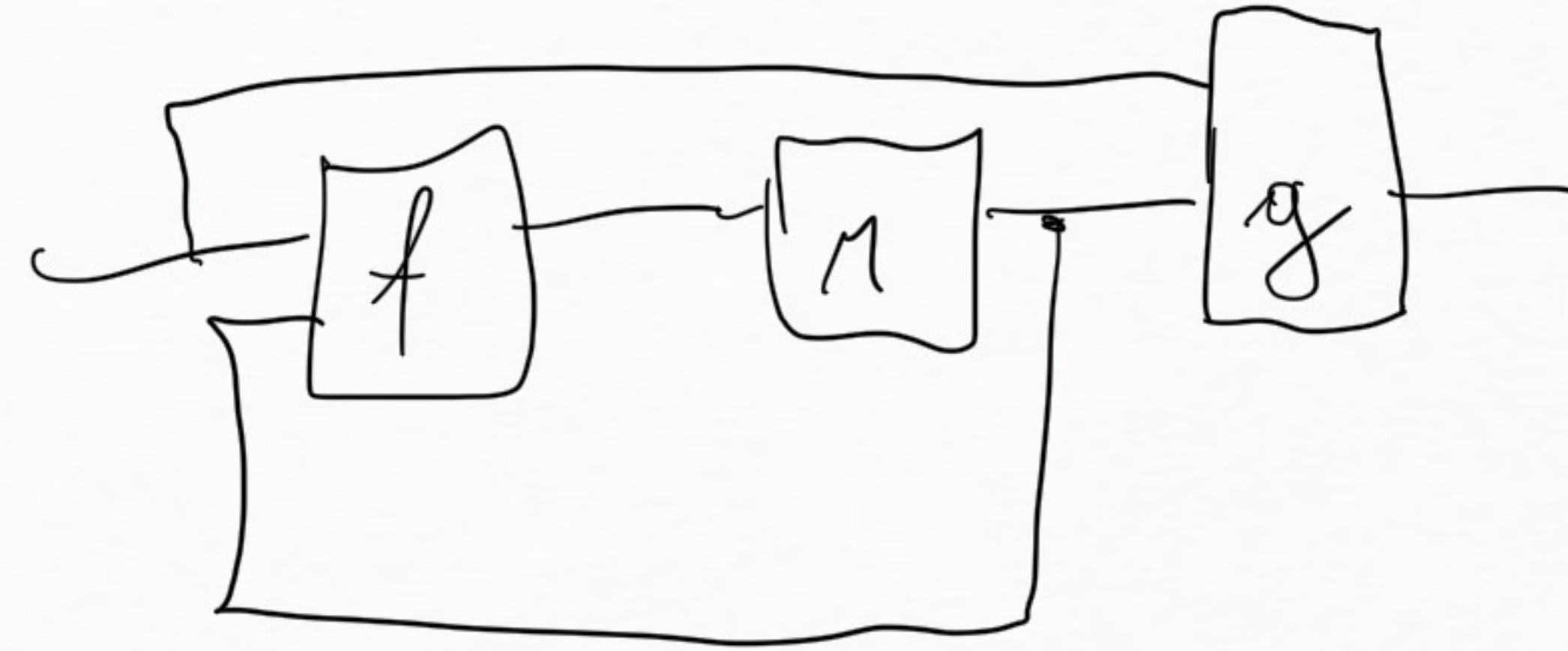
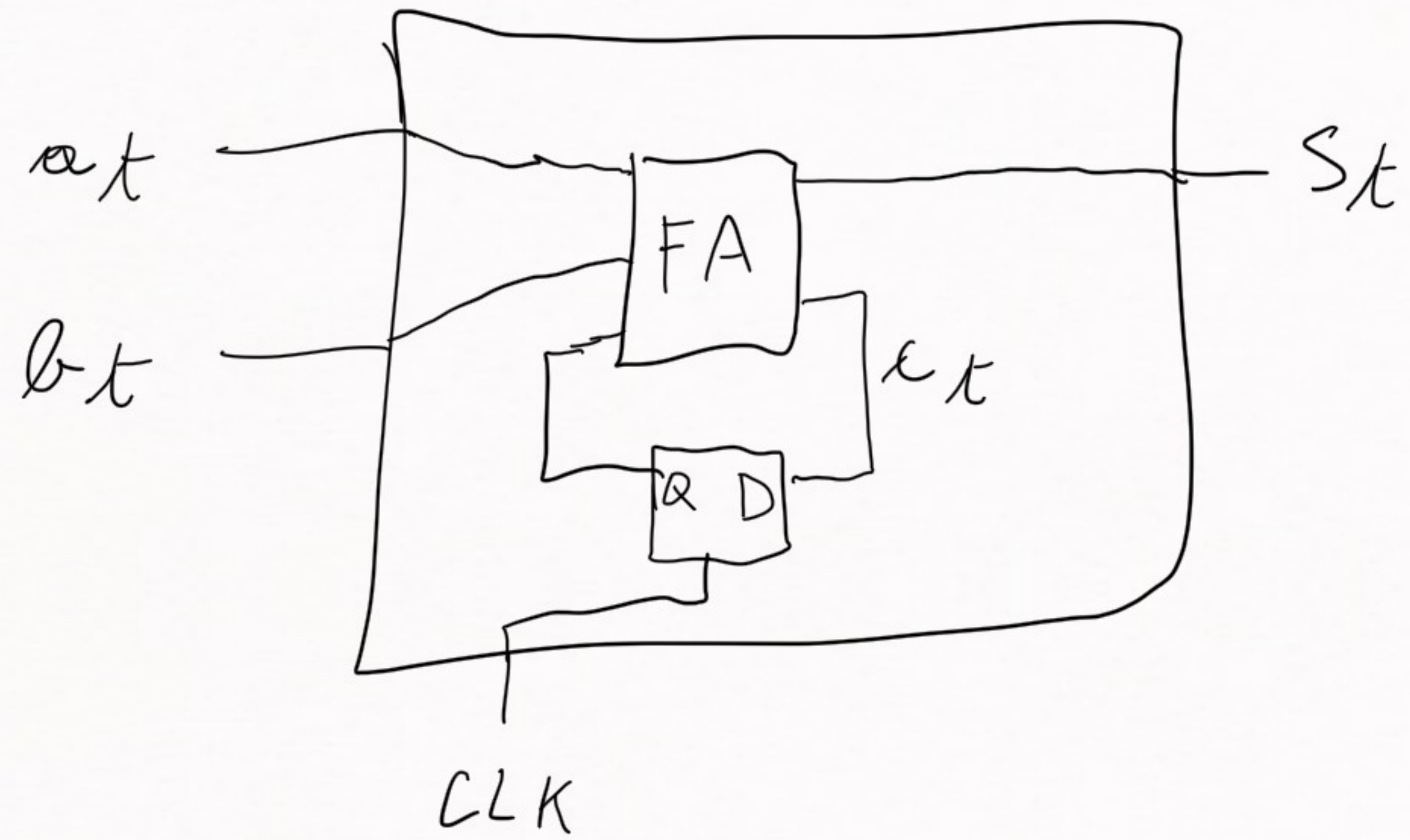


$$f(x_1, x_2, x_3) \Rightarrow 4 \cdot f(x_3)$$



$$\begin{aligned}
 f(x_1, x_2, x_3) &= x_1 x_2 + \overline{x_1} x_3 = x_1 x_2 \overbrace{(x_3 + \overline{x_3})}^1 + \overline{x_1} x_3 (x_2 + \overline{x_2}) = \\
 &= x_1 x_2 x_3 + x_1 x_2 \overline{x_3} + \overline{x_1} x_2 x_3 + \overline{x_1} \overline{x_2} x_3
 \end{aligned}$$

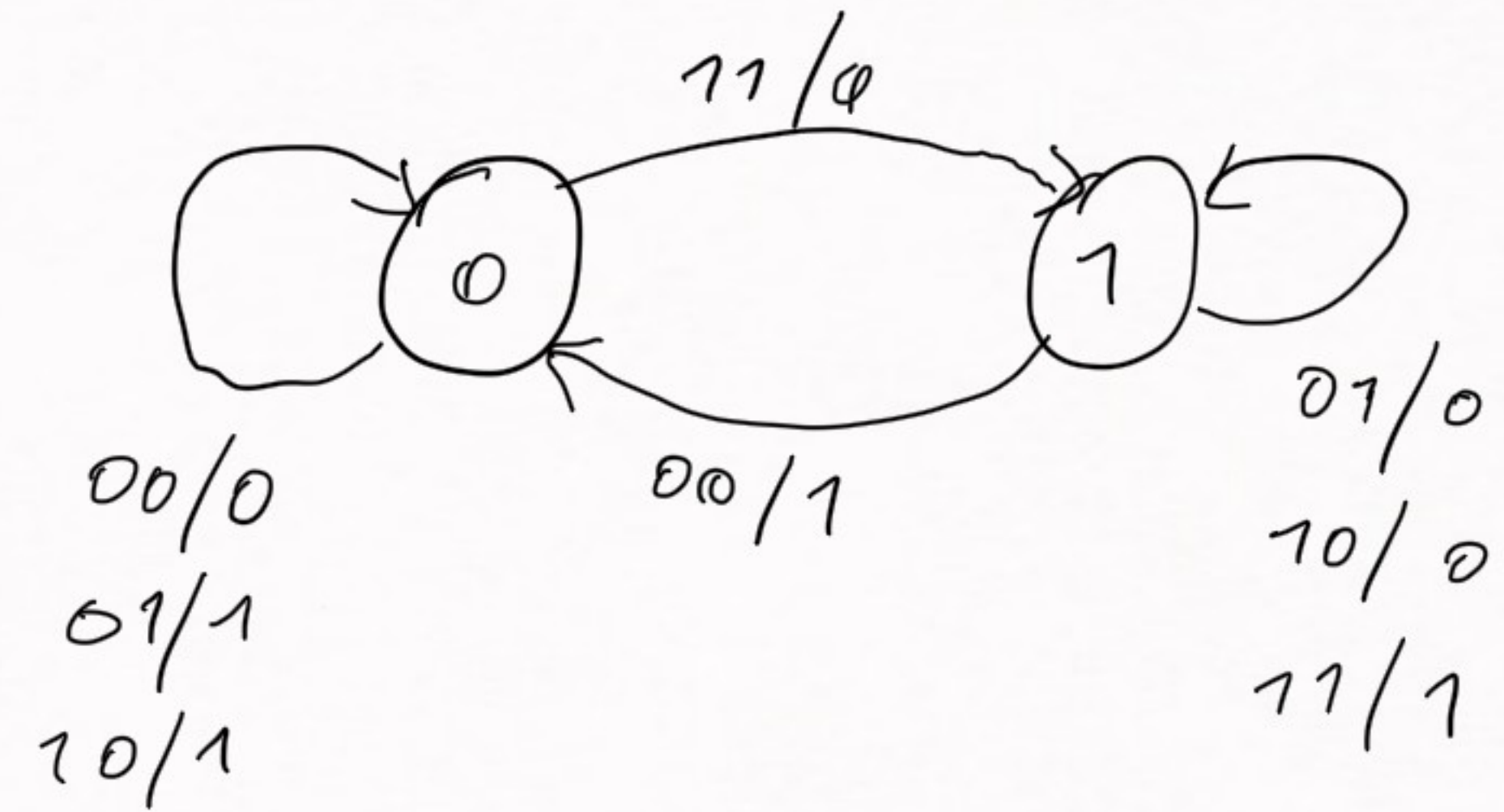
SOMNATORE



$$A = a_7 a_6 \dots a_0$$

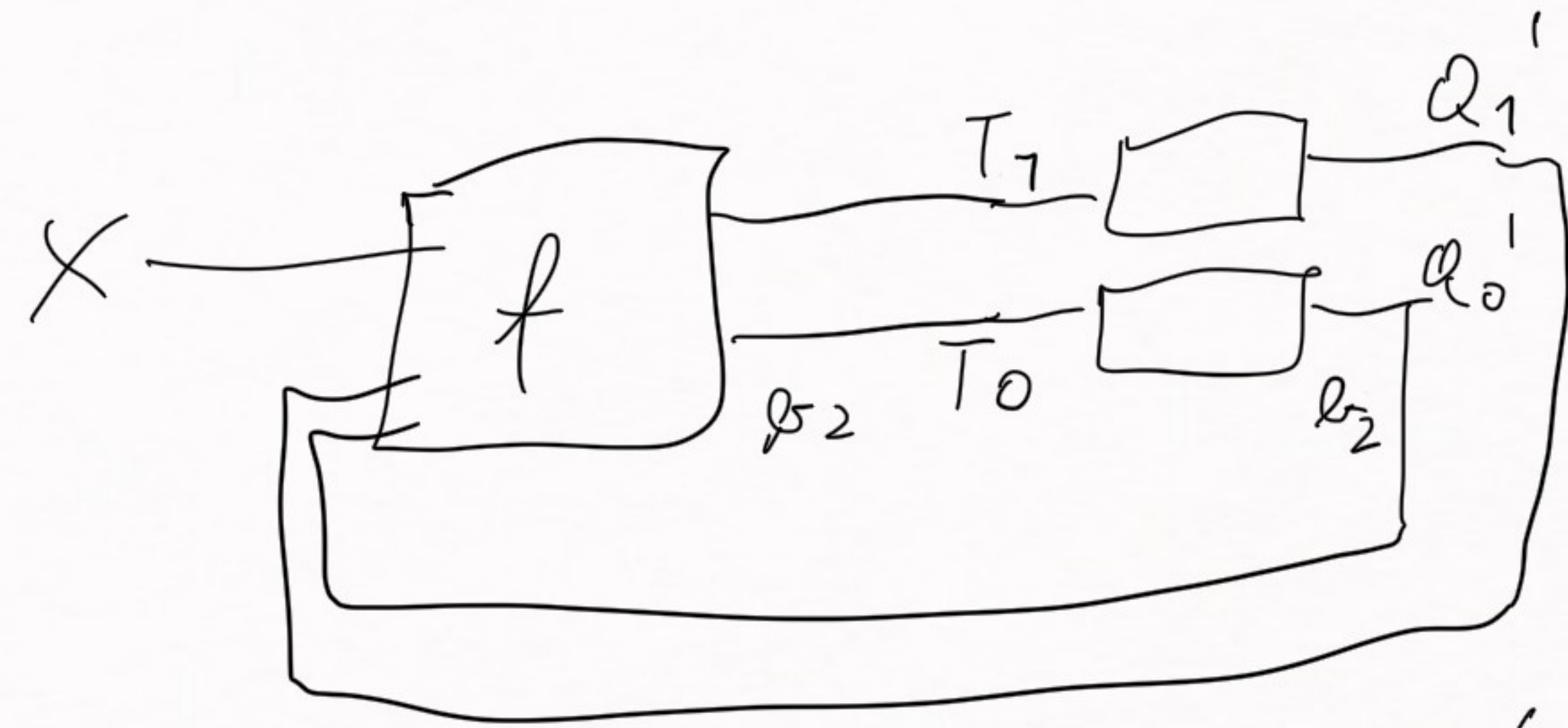
$$B = b_7 b_6 \dots b_0$$

$$S = s_7 s_6 \dots s_0$$



obiettivo $\begin{cases} Q_1' = x Q_0 + \bar{x} Q_1 \\ Q_0' = \bar{x} + \bar{Q}_0 \end{cases}$

vincolo $\begin{cases} Q_1' = T_1 \oplus Q_1 = T_1 \bar{Q}_1 + \bar{T}_1 Q_1 \\ Q_0' = T_0 \oplus Q_0 = T_0 \bar{Q}_0 + \bar{T}_0 Q_0 \end{cases}$



$$T_1 \oplus Q_1 = (x(Q_1 \oplus Q_0)) \oplus Q_1$$

$$a(x, Q_1, Q_0) = T_1 = a_0 (\bar{x} \bar{Q}_1 \bar{Q}_0) + a_1 \bar{x} \bar{Q}_1 Q_0 \dots$$

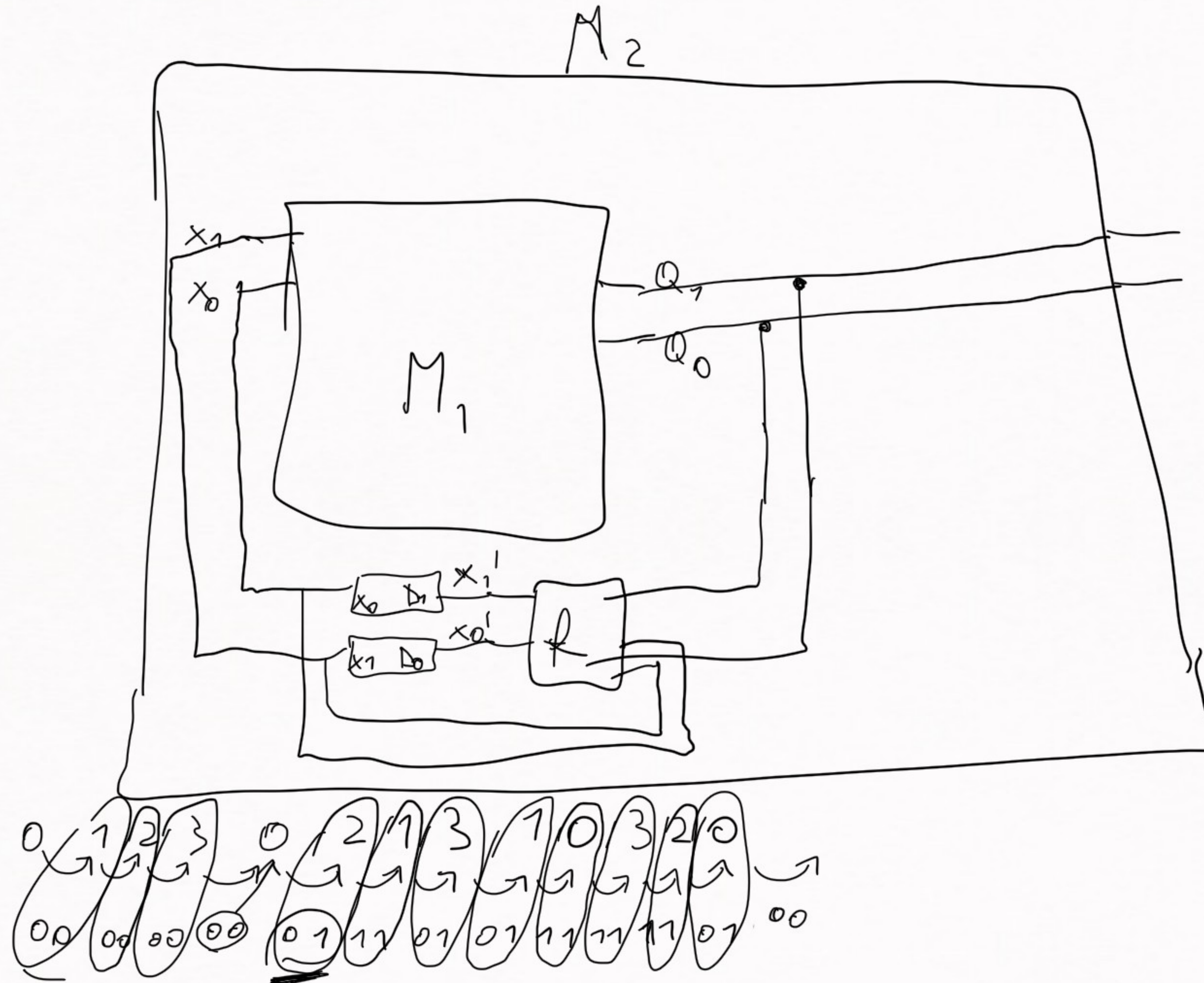
$$b(x, Q_1, Q_0) = T_0$$

$$T_1 = x(Q_1 \oplus Q_0)$$

$$T_1 = x \bar{Q}_1 Q_0 + x Q_1 \bar{Q}_0 = x(\bar{Q}_1 Q_0 + Q_1 \bar{Q}_0)$$

$$T_0 = \bar{x} Q_0 = \bar{x} + \bar{Q}_0$$

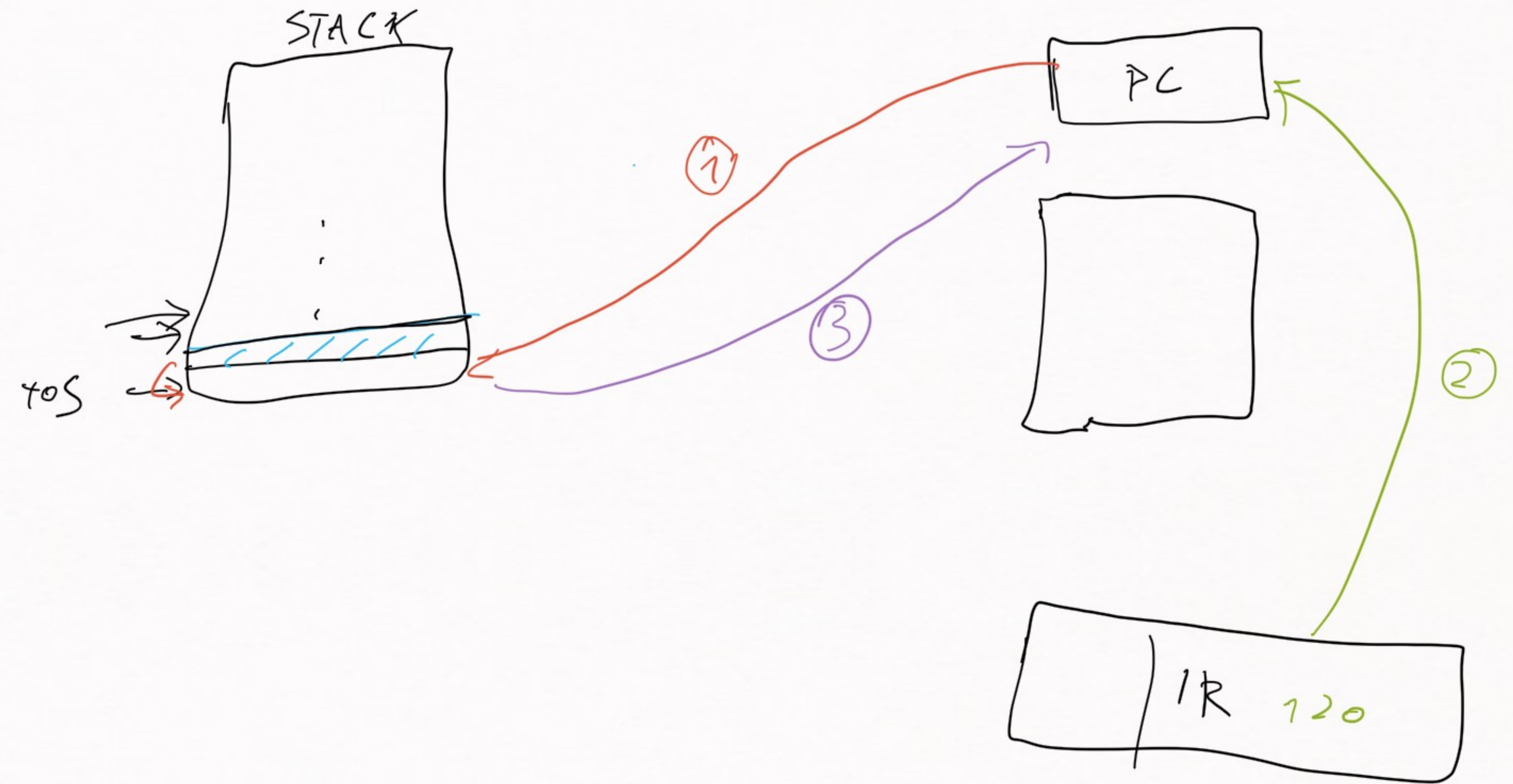
$x \ Q_1 \ Q_0$	T_1	$Q_1' = x Q_0 + \bar{x} Q_1 \Rightarrow T_1$	T_0	$Q_0' = \bar{x} + \bar{Q}_0$	T_0
0 0 0	a_0	a_0	0	1	1
0 0 1	a_1	a_1	0	1	0
0 1 0	a_2	$\bar{a}_2$	1	1	1
0 1 1	a_3	$\bar{a}_3$	1	1	0
1 0 0	a_4	a_4	0	1	1
1 0 1	a_5	a_5	1	0	1
1 1 0	a_6	$\bar{a}_6$	0	1	1
1 1 1	a_7	$\bar{a}_7$	1	0	1



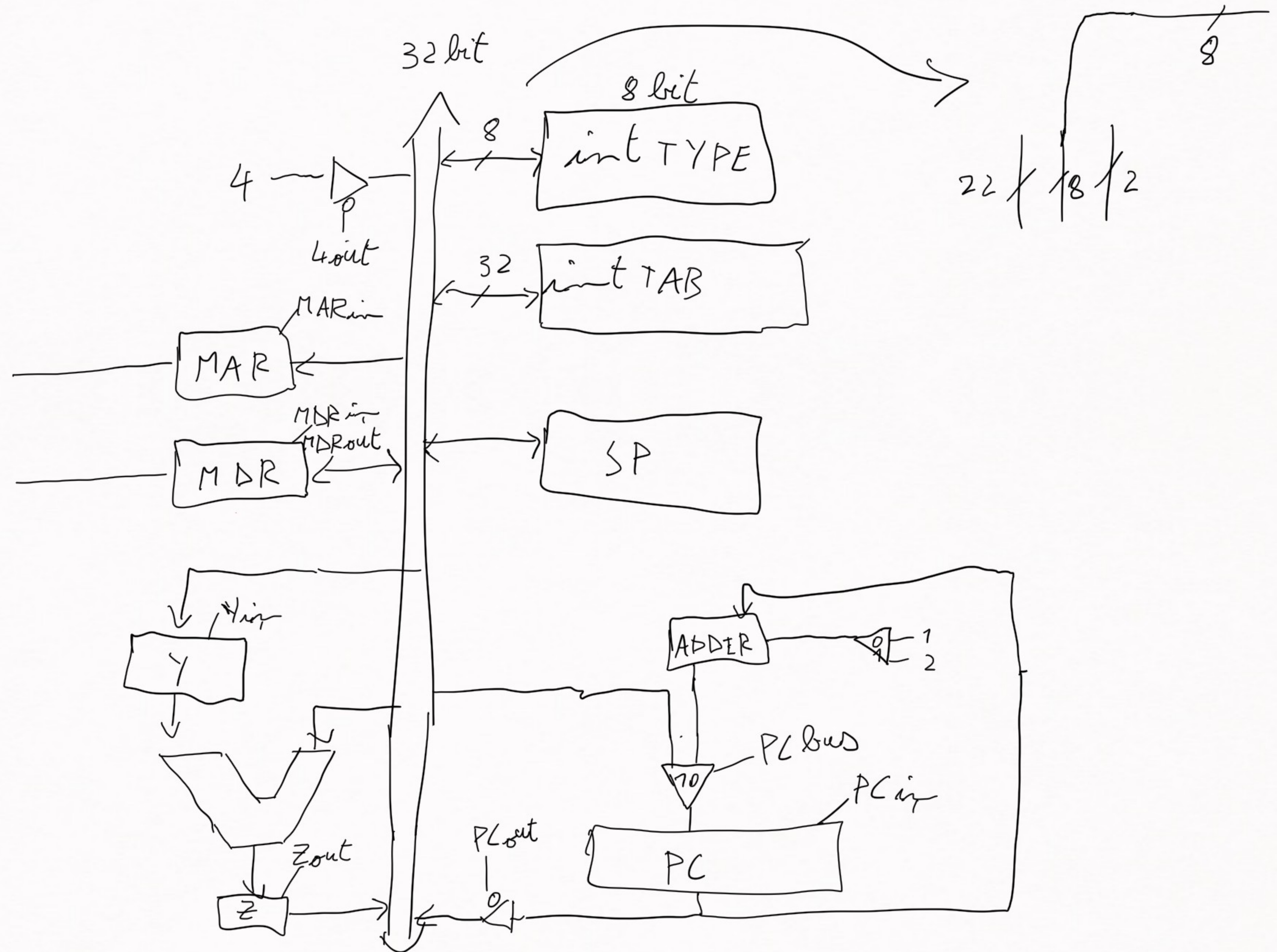
$Q_1 Q_0$	$x_1 x_0$	$x_1' x_0'$
00	00	0 1
00	01	0 0
00	10	X X
00	11	1 1
01	00	0 0
01	01	1 1
01	10	X X
01	11	0 1
10	00	0 0
10	01	1 1
10	10	X X
10	11	0 1
11	00	0 0
11	01	0 1
11	10	X X
11	11	1 1

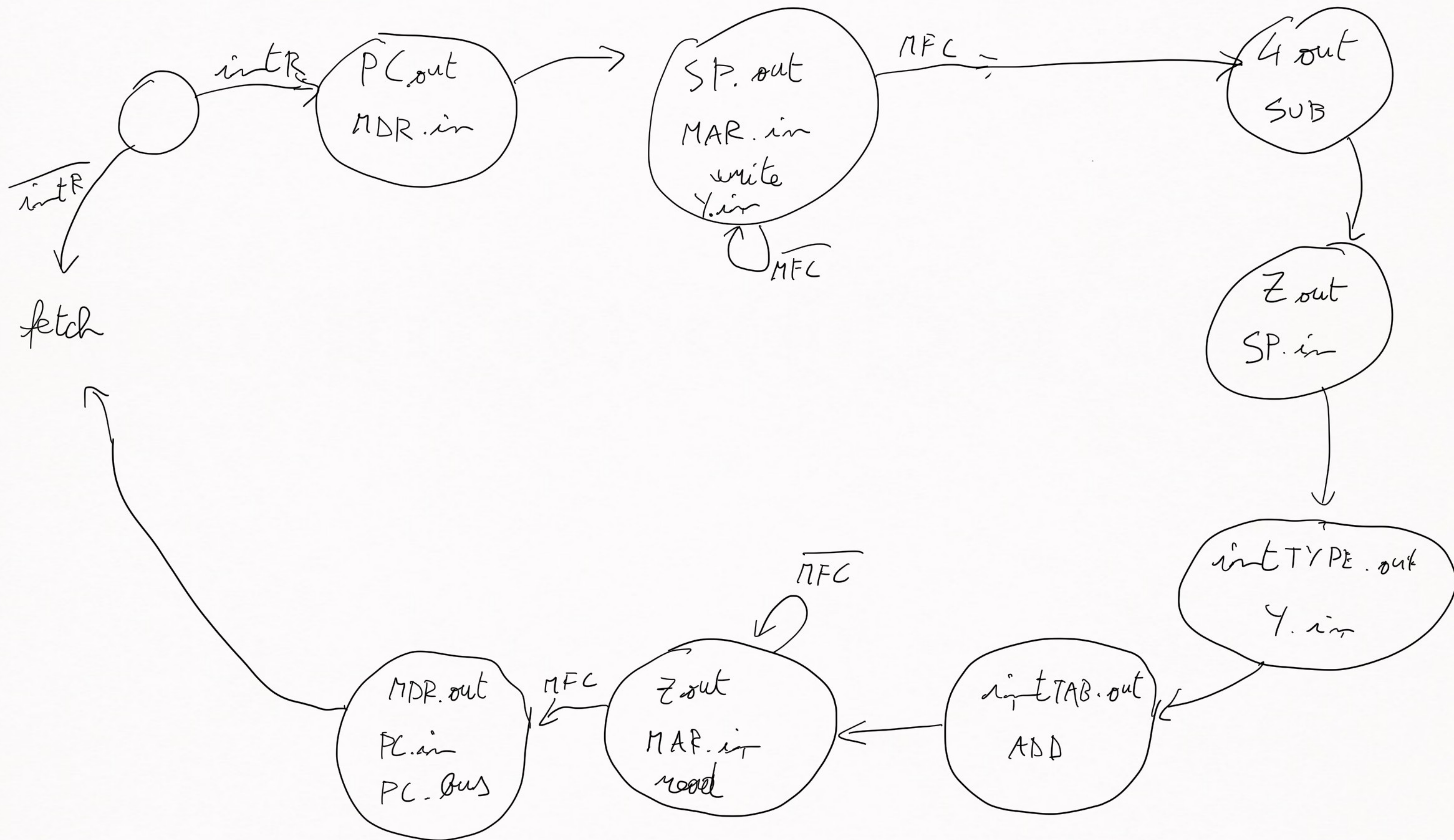
ISTRUZIONE CALL

(PUSH PARAMETRI)
CALL SOMMA;
2:
:
:
:
120: SOMMA: ADD
→ :
:
RET 2



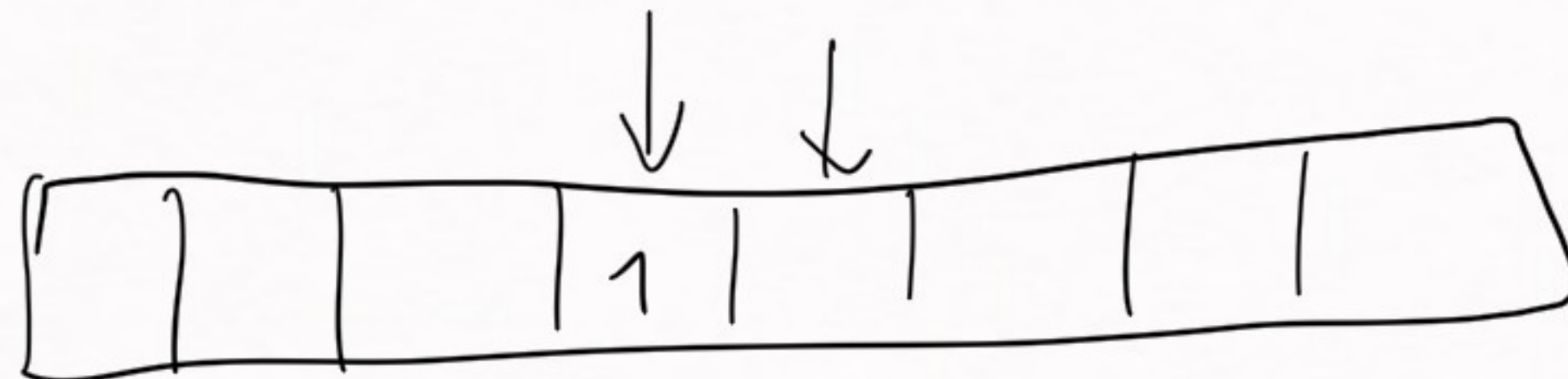
COMPITO 8 LUGLIO 2019 ES1





A 0 B 1 C 2

0 25



xor cx, cx

mov bx, offset tape

add bx, 16

mov si, 0

CYCLE: mov di, index[si]

mov ah, [bx]

cmp ah, 0

je ZERO

ONE: mov al, machine[di+3]
mov dh, machine[di+4]

mov dl, machine[di+5]

JMP update

ZERO:

di
di+1
di+2

UPDATE: mov [bx], dh

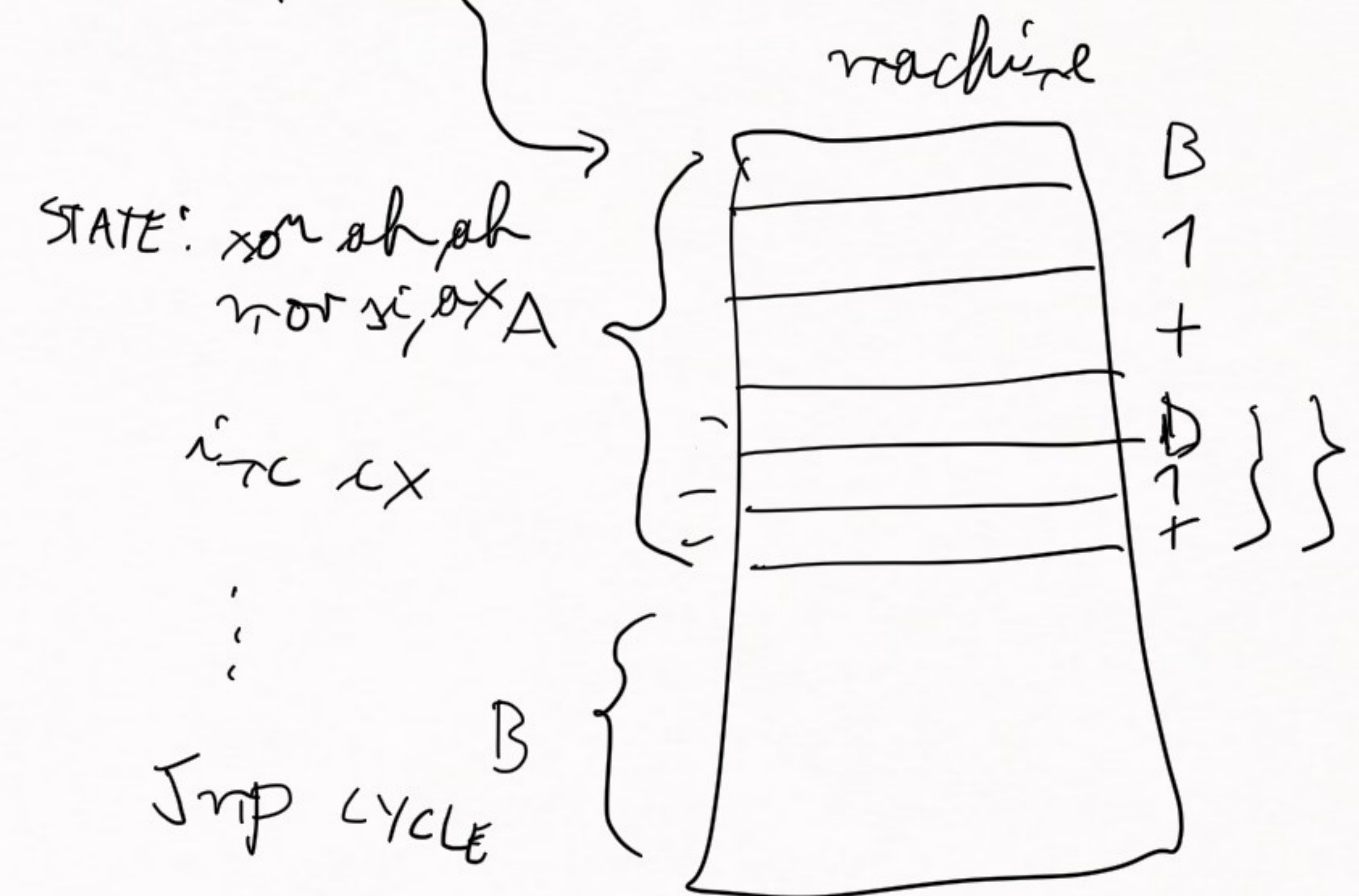
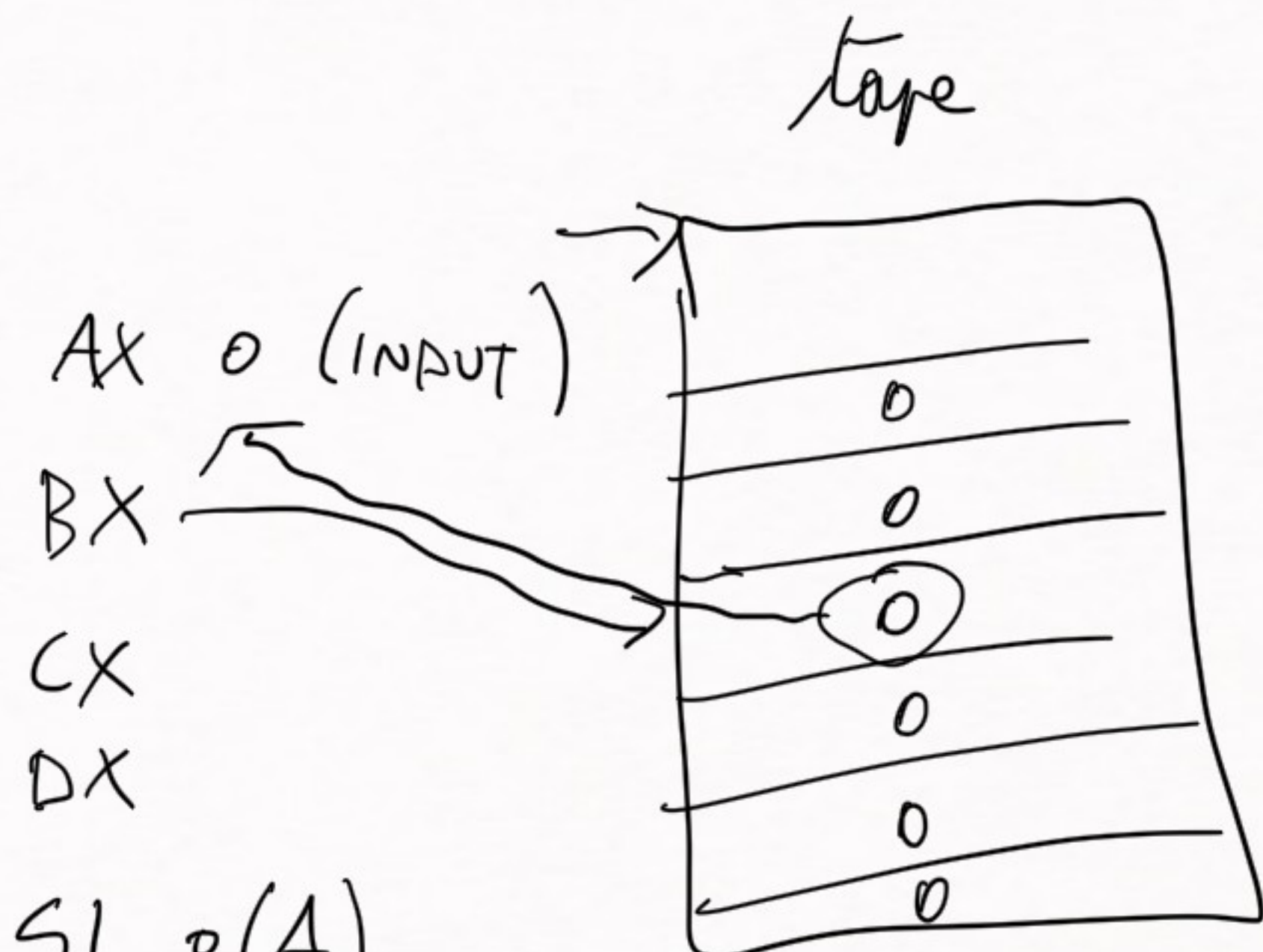
cmp dl, 1

je INC

dec bx

JMP STATE

INC: inc bx



STATE: xor ah, ah
mov si, 0xA

inc cx

Jmp CYCLE

- +
0 1