

①

$$\begin{array}{r} 040440044101_2 \\ \hline 5 \quad 9 \quad 13 \\ \hline \end{array} = 59d_{16}$$

②

$$27 = 1 \ 1 \ 0 \ 1 \ 1$$

$$27 - 2^4 = 11 - 2^3 = 3 - 2^1 = 1 - 2^0 = 0$$

③

$$0,875 = 0,1110_2$$

$$\begin{array}{r} 0,875 \\ \times 2 \\ \hline 1,750 \\ \times 2 \\ \hline 1,500 \\ \times 2 \\ \hline 1,000 \end{array}$$

④

$$+25 = 011001_2$$

$$25 - 2^4 = 9 - 2^3 = 1 - 2^0 = 0$$

⑤

$$\begin{array}{r} 001011 \\ - 110101 \\ \hline 001011 \\ + 001011 \\ \hline 010110 \\ \hline +22 \end{array} \rightarrow \begin{array}{r} 001010 \\ +1 \\ \hline 001011 \\ \hline CP2 \end{array}$$

⑥

$$F = (\bar{A} + \bar{B}) \cdot (B + C)$$

A	B	C	$\bar{A} \cdot \bar{B}$	$B + C$	F
0	0	0	1	0	1
0	0	1	1	1	0
0	1	0	1	1	0
0	1	1	1	1	0
1	0	0	1	0	1
1	0	1	1	1	0
1	1	0	0	1	1
1	1	1	0	1	1

⑦ OU-EXCLUSIVO $\rightarrow F = A\bar{B} + \bar{A}B$
 $S \rightarrow S_3 S_2 S_1 S_0$

$C=0$

$$S_0 = 1 \quad S_1 = 1 \quad S_2 = 1$$

$$S_3 = 0$$

$$S = 0111$$

$C=1$

$$S_0 = 1 \quad S_1 = 0 \quad S_2 = 1$$

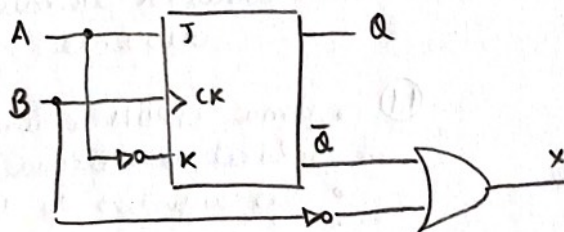
$$S_3 = 1$$

$$S = 1101 \quad ??$$

⑧

comador / subtrator para m^{os}
em complementar para 2

⑨



J	K	a
0	0	manter-se
1	1	comuta
0	1	"reset" $\rightarrow Q=0$
1	0	"set" $\rightarrow Q=1$

transição positiva

PERGUNTAS SOLTAS

②

$$A56_{16} = \frac{1010}{=A} \quad \frac{0101}{=5} \quad \frac{0110}{=6}$$

③

$$22 = 10110$$

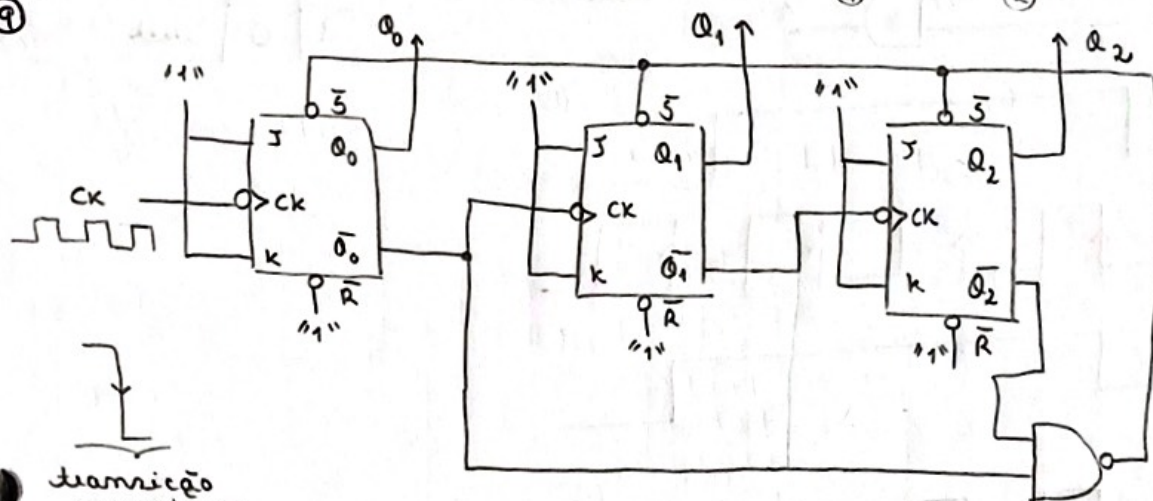
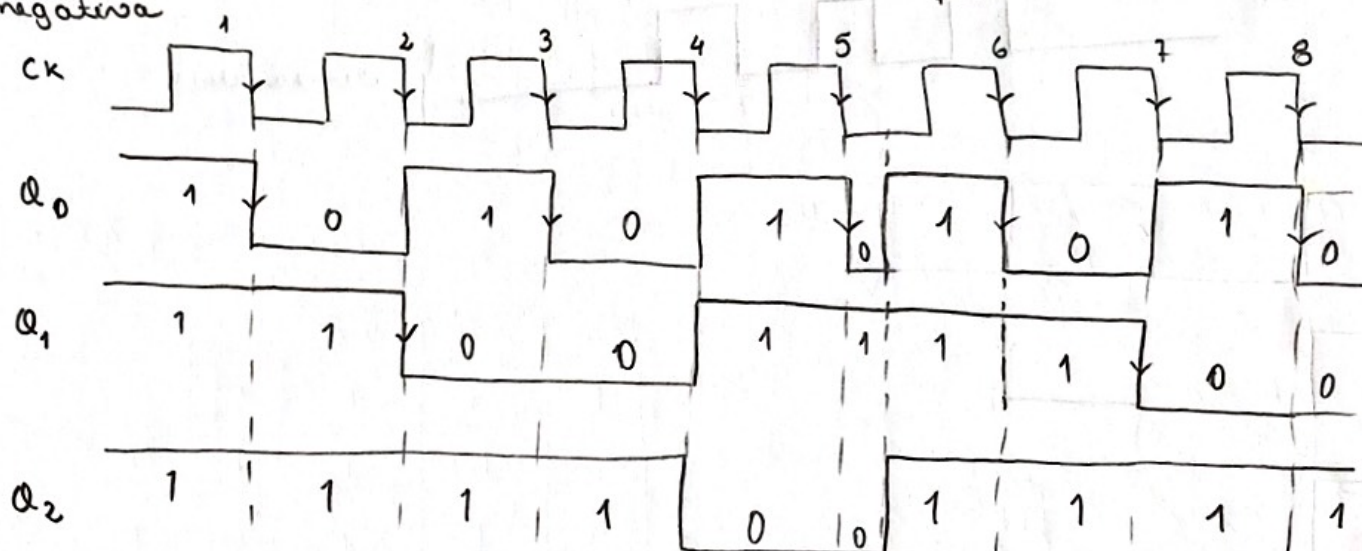
$$22 - 2^4 = 6 - 2^2 = 2 - 2^1 = 0$$

④

②

①

⑨

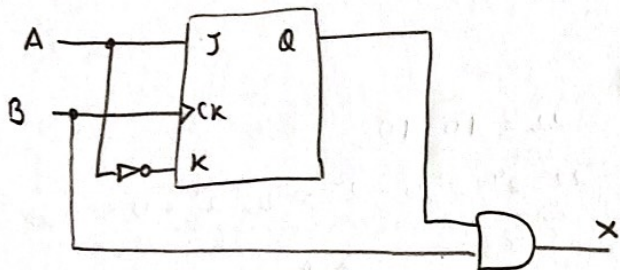
transição
negativa

A tabela ficaria da seguinte forma:

CK	Q ₂ Q ₁ Q ₀
0	111
1	110
2	101
3	100
4	011
5	111
6	110
7	101

Temos aqui um contador
descendente de 0 a 4.

8



transição
positiva

J	K	Q
0	0	Q mantém-se
1	1	Q comuta
0	1	"reset" Q = 0
1	0	"set" Q = 1

