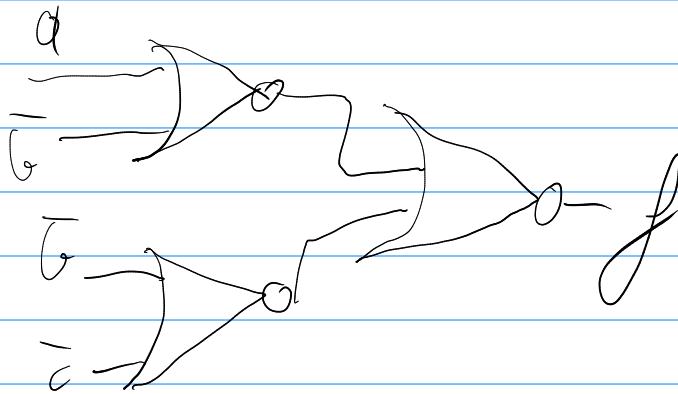


$$f(a, b, c) = a \cdot \bar{c} + \bar{b}$$

$a \backslash b \backslash c$	0	1
0 0	1	1
0 1	0	0
1 1	1	0
1 0	1	1

$$f(a, b, c) = (a + \bar{b}) \cdot (\bar{b} + \bar{c})$$

$$f(a, b, c) = \pi(2, 3, 7)$$

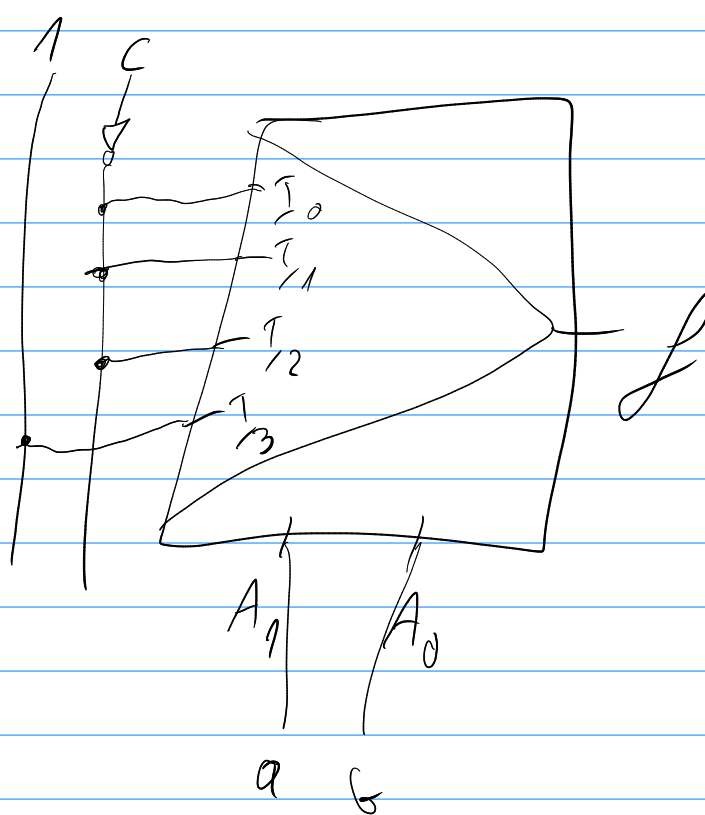


$$f(a, b, c) = (a \rightarrow \bar{b}) \rightarrow \bar{c}$$

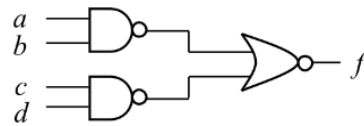
a	b	c	$a \rightarrow \bar{b}$	f
0	0	0	1	1
0	0	1	1	0
0	1	0	1	1
0	1	1	1	0
1	0	0	1	1
1	0	1	1	0
1	1	0	0	1
1	1	1	0	1

$$f(a, b, c) = \sum(0, 2, 4, 6, 7)$$

a	b	f
0	0	$\bar{c}$
0	1	c
1	0	$\bar{c}$
1	1	1



5. Jaką funkcję $f(a, b, c, d)$ realizuje sieć bramek?
 Funkcję zminimalizować po "jedynkach".



$$f(a, b, c, d) = \overline{(a \cdot b)} + \overline{(c \cdot d)}$$

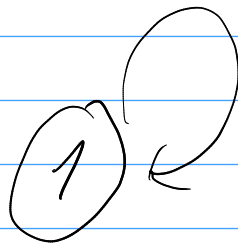
$ab \backslash cd$	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	1	0
10	0	0	0	0

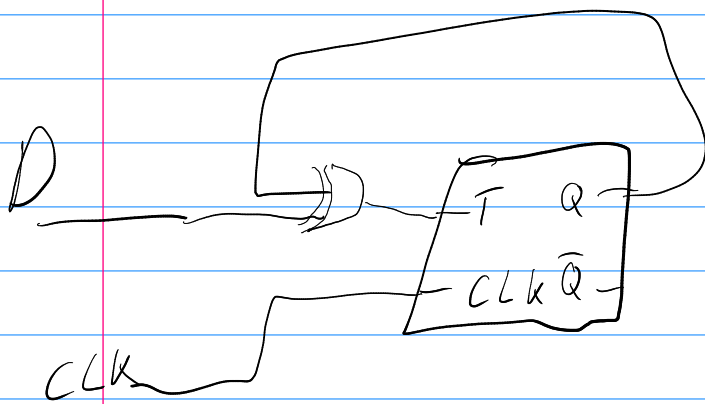
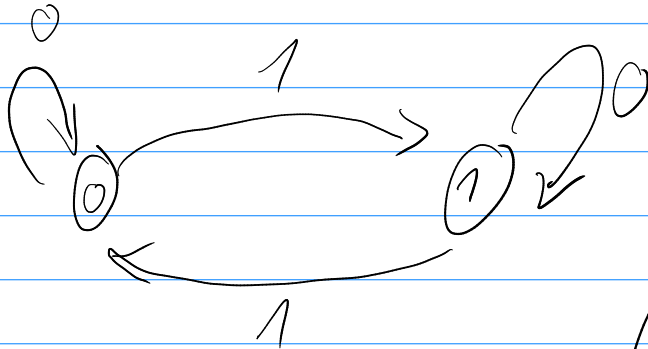
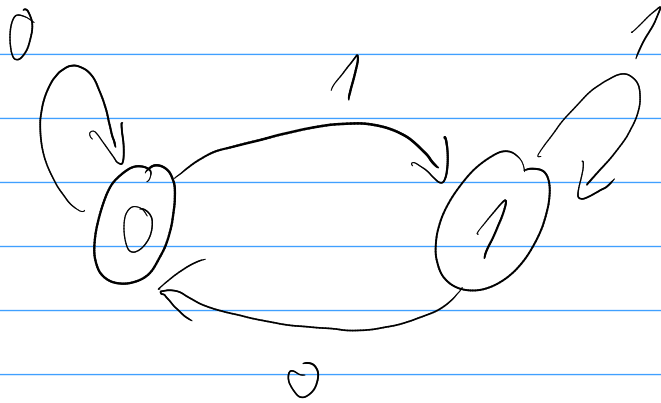
$$f(a, b, c, d) = abcd$$

6. Funkcję $f(a,b,c,d) = \Sigma(4,6,8,9,10,11,(12,14))$ zminimalizować po "zerach" bez hazardu.

$ab \backslash cd$	00	01	11	10
00	0	0	0	0
01	1	0	0	1
11	X	0	0	X
10	1	1	1	1

$$f(a,b,c,d) = (a+b) \cdot (\bar{b} + \bar{d}) \cdot (\bar{a} + \bar{b})$$



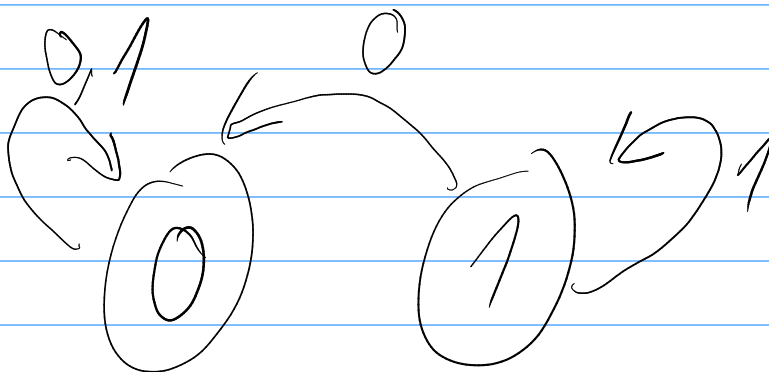
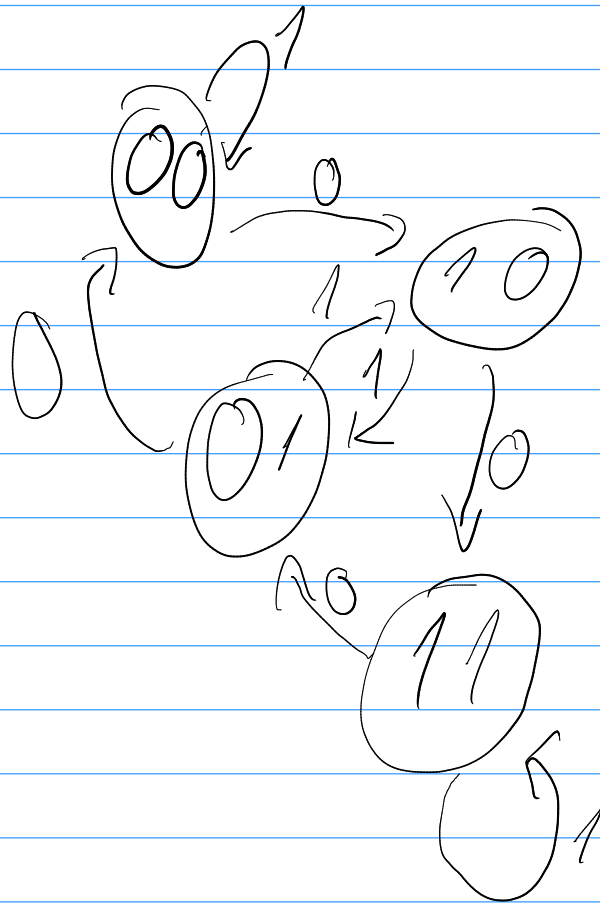
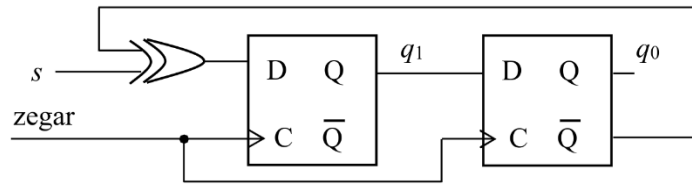


Q	Q'	T	D
0	0	0	0
0	1	1	1
1	0	1	0
1	1	0	1

Q	Q'	T	Q	Q'
0	0	0	0	x
0	1	1	1	x
1	0	1	x	1
1	1	0	x	0

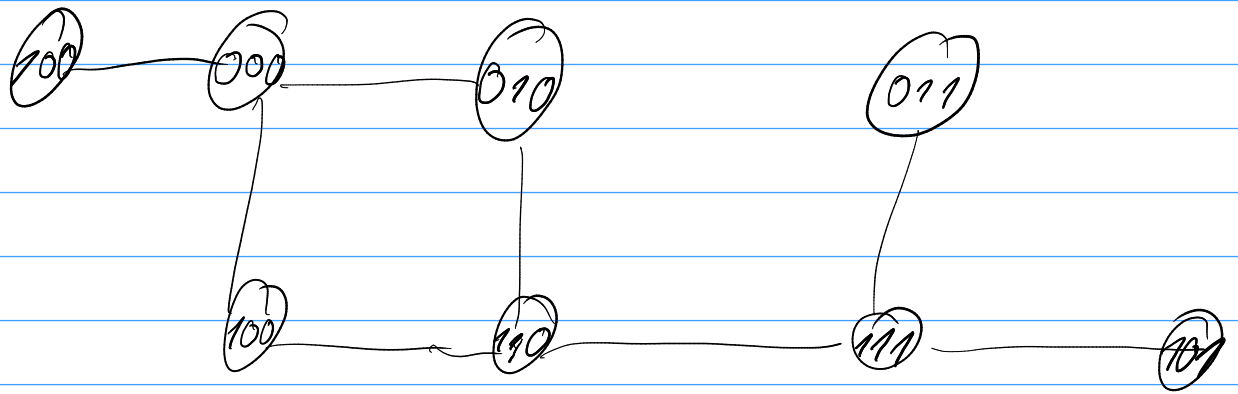
$$T = \overline{Q} \cdot y + Q \cdot k$$

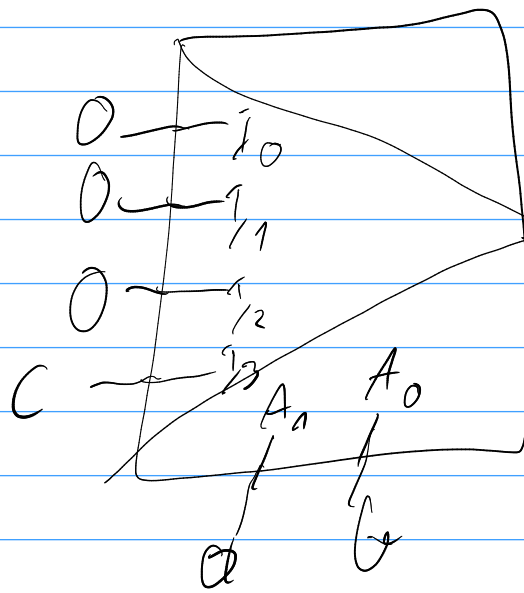
9. Odtworzyć pełny graf realizowany przez podany układ (stan: q_1 q_0).



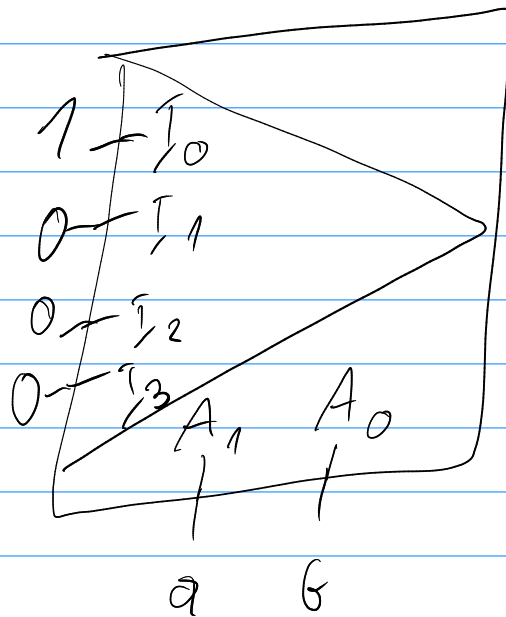
ab	$b+c$	d
0	0	
0	1	0
1	0	0
1	1	1

$ab \backslash cd$	00	01	11	10
00	0	1	3 0	2 0
01	4 X	5 X	7 0	6 0
11	12 1	13 1	15 1	14 1
10	8 0	9 1	11 X	10 X





$$f(a, b, c) = a \cdot b \cdot c$$



$$f(a, b) = \overline{(a + b)}$$

$a \ b \backslash \ c \ d$	00	01	11	10
00	0 1	1	3 1	2 1
01	4	5	7 1	6
11	12	13	15 1	14
10	8 1	9	11 1	10 1

$$f(a, b, c, d) = cd + \bar{b}\bar{d} + \bar{a}\bar{b}c$$

-128

10000000

01111111

10000000

101

010

1011