Metoda lui Quine:

2. $f(x_1,x_2,x_3) = x_3(x_1 \vee x_2) \vee (\bar{x}_2 \downarrow x_3)$

x_1	x_2	x_3	$x_1 \vee x_2$	$x_3(x_1 \vee x_2)$	$\bar{x}_2$	$\bar{x}_2 \downarrow x_3$	$f(x_1,x_2,x_3)$
0	0	0	0	0	1	0	0
0	0	1	0	0	1	0	0
0	1	0	1	0	0	1	1
1	0	0	1	0	1	0	0
0	1	1	1	1	0	0	1
1	0	1	1	1	1	0	1
1	1	0	1	0	0	1	1
1	1	1	1	1	0	0	1

$S_f = \{(0,1,0),(0,1,1),(1,0,1),(1,1,0),(1,1,1)\}$

	x_1	x_2	x_3	
I	1	1	1	m_7 ✓
II	1	1	0	m_6 ✓
	1	0	1	m_5 ✓
	0	1	1	m_3 ✓
III	0	1	0	m_2 ✓
IV = I + II	1	1	–	$m_7 \vee m_6$ ✓
	1	–	1	$m_7 \vee m_5 = max_1 = x_1x_3$
	–	1	1	$m_7 \vee m_3$ ✓
V = II + III	–	1	0	$m_6 \vee m_2$ ✓
	0	1	–	$m_3 \vee m_2$ ✓
VI = IV + V	–	1	–	

Factorizarea simplă

Factorizare dublă

$m_7 \vee m_3 \vee m_6 \vee m_2 = m_7 \vee m_6 \vee m_3 \vee m_2 = max_2 = x_2$

$M(f) = \{x_1x_3,\ x_2\}$

mintermi \ monoame maximale	max_1	max_2
m_7	*	*
m_6		*
m_5	*	
m_3		*
m_2		*

$C(f) = M(f) \Rightarrow$ cazul I

forma simplificată a lui f:

$f'(x_1,x_2,x_3) = x_1x_3 \vee x_2$

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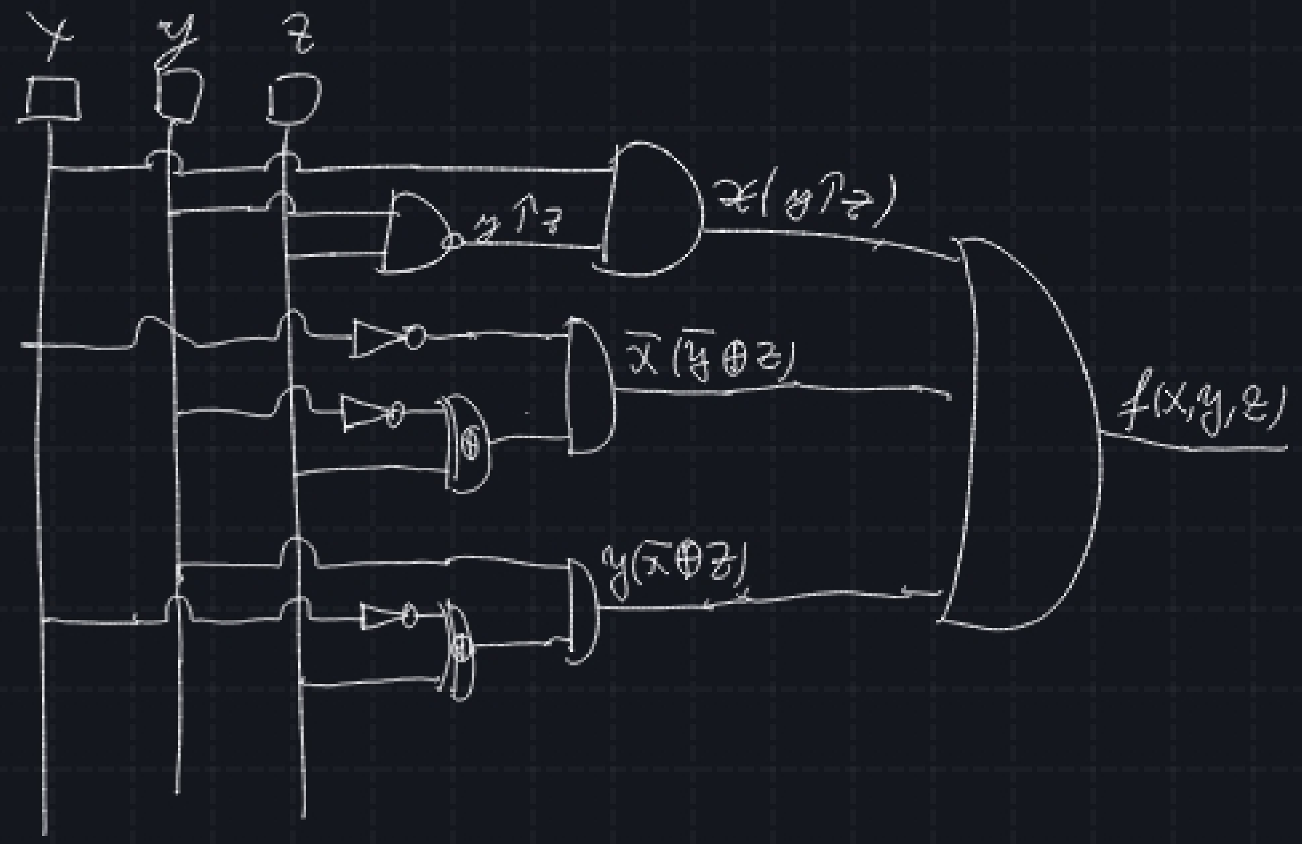
2. $f(x,y,z) = x(y \uparrow z) \vee \overline{x}(\overline{y} \oplus z) \vee y(\overline{x} \oplus z)$



x	y	z	$y\uparrow z$	$\overline{y}\oplus z$	$\overline{x}\oplus z$	$x(y\uparrow z)$	$\overline{x}(\overline{y}\oplus z)$	$y(\overline{x}\oplus z)$	$f(x,y,z)$	
0	0	0	1	1	1	0	1	0	1	m_0
0	0	1	1	0	0	0	0	0	0	
0	1	0	1	0	1	0	0	1	1	m_2
0	1	1	0	1	0	0	1	0	1	m_3
1	0	0	1	1	0	1	0	0	1	m_4
1	0	1	1	0	1	1	0	0	1	m_5
1	1	0	1	0	0	1	0	0	1	m_6
1	1	1	0	1	1	0	0	1	1	m_7

Metoda diagramelor Karnaugh

$x \backslash yz$	00	01	11	10
0	m_0		m_3	m_2
1	m_4	m_5	m_7	m_6

$max_1 = m_2 \vee m_3 \vee m_7 \vee m_6 = y^1 = y$

$max_2 = m_4 \vee m_5 \vee m_7 \vee m_6 = X^1 = X$

$max_3 = m_0 \vee m_4 \vee m_2 \vee m_6 = z^0 = \overline{z}$

$M(f) \Rightarrow \{max_1, max_2, max_3\} = C(f) \Rightarrow$ Cot I

$f'(x,y,z) = X \vee y \vee \overline{z}$