

OSNOVE DIGITALNIH VEZIJ

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$$F^4 = V^4(0, 2, 4, 5, 8, 10, 12, 13)$$

x_1	x_2	x_3	x_4	$f(x_1, x_2, x_3, x_4)$	m_i
0	0	0	0	1	0
0	0	0	1	0	1
0	0	1	0	1	2
0	0	1	1	0	3
0	1	0	0	1	4
0	1	0	1	1	5
0	1	1	0	0	6
0	1	1	1	0	7
1	0	0	0	1	8
1	0	0	1	0	9
1	0	1	0	1	10
1	0	1	1	0	11
1	1	0	0	1	12
1	1	0	1	1	13
1	1	1	0	0	14
1	1	1	1	0	15

	f
T_0	1
T_1	0
S	1
L	0
Π	0

T_0 : $f(0, 0, 0, 0) \neq 0 \Rightarrow$ ne ohranja ničel

T_1 : $f(1, 1, 1, 1) \neq 1 \Rightarrow$ ne ohranja enic

S : $F(0, 1, 1, 0) \neq \bar{F}(1, 0, 0, 1) \Rightarrow$ f ni sebi dualna na vhodih m_6 in m_7

Π : $(0, 0, 0, 0) < (0, 0, 0, 1) \Rightarrow f(0, 0, 0, 0) < f(0, 0, 0, 1)$
 $1 < 0$

ne drži \Rightarrow funkcija ni monotona

L_0

x_1

x_2

	1		1
1			1
1	1	1	1

x_3

X_2 ni samo enaka
ali samo različna
 $\bar{X}_2 \Rightarrow f$ ni linearna

$$f_L = a_0 \Delta a_1 x_1 \Delta a_2 x_2 \Delta a_3 x_3 \Delta a_4 x_4$$

$$a_0 = f_2(0, 0, 0, 0) = f(0, 0, 0, 0) = 1$$

$$a_4: \left. \begin{aligned} f_L(0,0,0,1) &= a_0 \Delta a_4 = 1 \Delta a_4 \\ f(0,0,0,1) &= 0 \end{aligned} \right\} a_4 = 1$$

$$\begin{aligned} \text{a) } f_L(0,0,1,0) &= 1 \Delta a_3 \\ f_L(0,0,1,0) &= 1 \end{aligned} \quad \left. \vphantom{\begin{aligned} f_L(0,0,1,0) &= 1 \Delta a_3 \\ f_L(0,0,1,0) &= 1 \end{aligned}} \right\} a_3 = 0$$

$$\begin{aligned} a_2: f_1(0,1,0,0) &= 1 \Delta a_2 \\ f_1(0,1,0,0) &= 1 \end{aligned} \quad \left. \vphantom{\begin{aligned} a_2: f_1(0,1,0,0) &= 1 \Delta a_2 \\ f_1(0,1,0,0) &= 1 \end{aligned}} \right\} a_2 = 0$$

$$a_1: F_L(1, 0, 0, 0) = 1 \Delta a_1 = \bar{a}_1 \quad \} a_1 = 0$$

$$F(1, 0, 0, 0) = 1$$

$$f_L(x_1, x_2, x_3, x_4) = 1 \Delta x_4 = \bar{x}_4$$

~~44~~ Protipmer: $f(0, 1, 0, 1) \neq f_L(0, 1, 0, 1) \Rightarrow f$ ni linearna