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Grupa 164

Examen Partial
Proiectul Logică

1.1.1.

a) $2d7_{(16)} \rightarrow 2 \cdot 16^2 + 13 \cdot 16^1 + 7 \cdot 16^0$

$\rightarrow 727_{(10)}$

$727_{(10)} \longrightarrow 1011010111_{(2)}$

727	2
363	1
181	1
90	1
45	0
22	1
11	0
5	1
2	1
1	0
0	

727	4
181	3
45	1
11	1
2	3
.	2

727	8
90	7
11	2
1	3
0	1

$727_{(10)} \longrightarrow 23113_{(4)}$

$727_{(10)} \longrightarrow 1327_{(8)}$

b) $x + y = x + [y]_2 = x + [y]_1 + 1$

$[00100010]_2 = [00100010]_1 + 00000001$

$= 11011101 + 00000001$

$= 11011110$

$00011011 - 00100010 = 00011011 + [00100010]_2$

$= 00011011 +$
11011110

100111101
$1\ 1\ 1\ 1\ 1$

$0\ 11111001$
$\ \ 11111$

$\Rightarrow \quad = 11111001$

Ca să facem complementul față de 2 înapoi vom avea

$[01111001]_1 + 1 = 111_{(2)} = -7_{(10)}$

2. $-13,1875$

$-13.875_{(10)} = 1101.111 = 2^3\left(1 + 2^{-1} + 2^{-3} + 2^{-4} + 2^{-5} + 2^{-6}\right)$

$0.875 \times 2 = 1,75$

$0,75 \times 2 = 1,5$

$0,5 \times 2 = 1$

$13 = 1101$

offsetul $= 2^{10} - 1 = 1023$

$1023 + 3 = 1026 = 1024 + 2 = 2^{10} + 2^1$

$\Rightarrow$ exp $= 10000000100$

$m = 1011110000$

$\Rightarrow$ Numărul în limbaj 64 este

$1 \quad 10000000100 \quad 1011110000$

3

$f = \sum_1 (0,2,4,5,8,9,A,B)$

#	A	B	C	D	Y
0	0	0	0	0	1
1	0	0	0	1	0
2	0	0	1	0	1
3	0	0	1	1	0
4	0	1	0	0	1
5	0	1	0	1	1
6	0	1	1	0	0
7	0	1	1	1	0
8	1	0	0	0	1
9	1	0	0	1	1
A	1	0	1	0	1
B	1	0	1	1	1
C	1	1	0	0	0
D	1	1	0	1	0
E	1	1	1	0	0
F	1	1	1	1	0

$FCD = \Sigma(0,2,4,5,8,9,A,B) = m(0,2,4,5,8,9,A,B)$

$= \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}C\bar{D} + \bar{A}B\bar{C}\bar{D} + \bar{A}B\bar{C}D + A\bar{B}\bar{C}\bar{D} + A\bar{B}\bar{C}D + A\bar{B}C\bar{D} + A\bar{B}CD$

$FCC = \Pi(1,3,6,7,C,D,E,F) = M(1,3,6,7,C,D,E,F)$

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

4.

$f = \Pi(4,6,C,E)$

#	A	B	C	D	Y
0	0	0	0	0	1
1	0	0	0	1	1
2	0	0	1	0	1
3	0	0	1	1	1
4	0	1	0	0	0
5	0	1	0	1	1
6	0	1	1	0	0
7	0	1	1	1	1
8	1	0	0	0	1
9	1	0	0	1	1
A	1	0	1	0	1
B	1	0	1	1	1
C	1	1	0	0	0
D	1	1	0	1	1
E	1	1	1	0	0
F	1	1	1	1	1

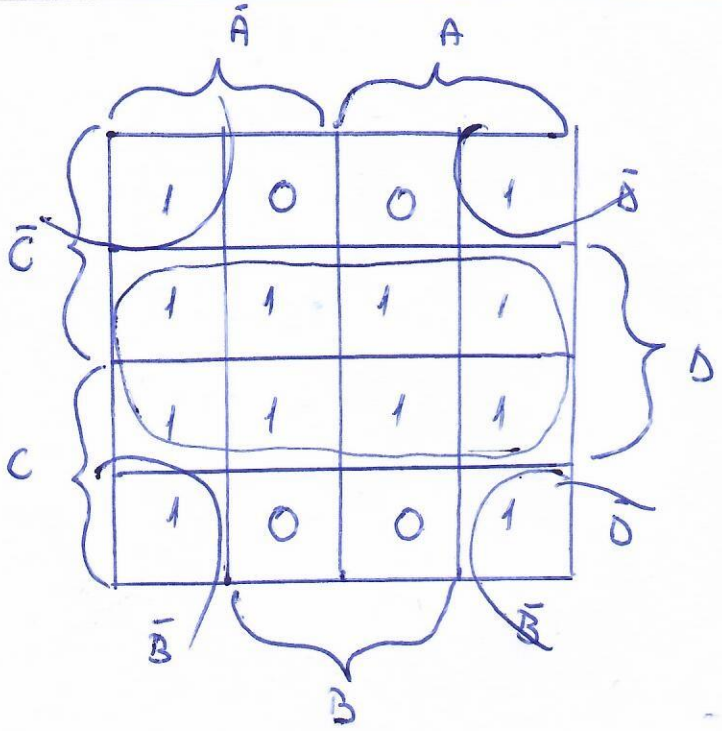
$FCC = \Pi(4,6,C,E) = M(4,6,C,E)$

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

$FCD = \Sigma_1(0,1,2,3,5,7,8,9,A,B,D,F)$

$= m(0,1,2,3,5,7,8,9,A,B,D,F)$

$= \bar{A}B\bar{C}\bar{D} + A\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}C\bar{D} + \bar{A}B\bar{C}D + \bar{A}BCD + A\bar{B}\bar{C}\bar{D} + A\bar{B}\bar{C}D + A\bar{B}CD + AB\bar{C}D + ABCD$



$f = D + \bar{B}\bar{D}$

~~(Sau $DC + D\bar{C} + B\bar{A} + B\bar{A}$, dar fără factor comun termen $B + D$)~~