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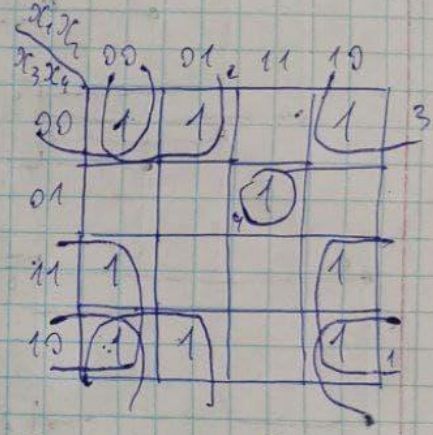
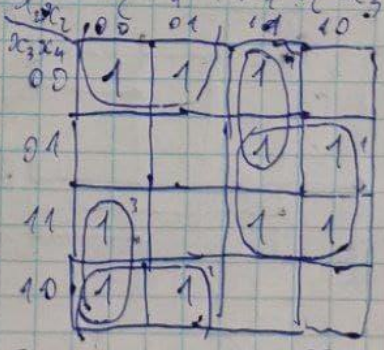
Ex 2

$$F = \begin{cases} F_1 = \Sigma(0,2,3,4,6,8,10,11,13) \\ F_2 = \Sigma(0,2,3,4,6,9,11,12,13,15) \end{cases}$$

	x_1	x_2	x_3	x_4	F_1	F_2
0	0	0	0	0	1	1
1	0	0	0	1	0	0
2	0	0	1	0	1	1
3	0	0	1	1	1	1
4	0	1	0	0	1	1
5	0	1	0	1	0	0
6	0	1	1	0	1	1
7	0	1	1	1	0	0
8	1	0	0	0	1	0
9	1	0	0	1	0	1
10	1	0	1	0	1	0
11	1	0	1	1	1	1
12	1	1	0	0	0	1
13	1	1	0	1	1	1
14	1	1	1	0	0	0
15	1	1	1	1	0	1



$$F_1 = \bar{x}_2 x_3 + \bar{x}_1 \bar{x}_4 + \bar{x}_2 \bar{x}_4 + x_1 x_2 \bar{x}_3 x_4$$



$$F_2 = x_1 x_4 + \bar{x}_1 \bar{x}_4 + \bar{x}_1 x_2 x_3 + x_1 x_2 x_4$$

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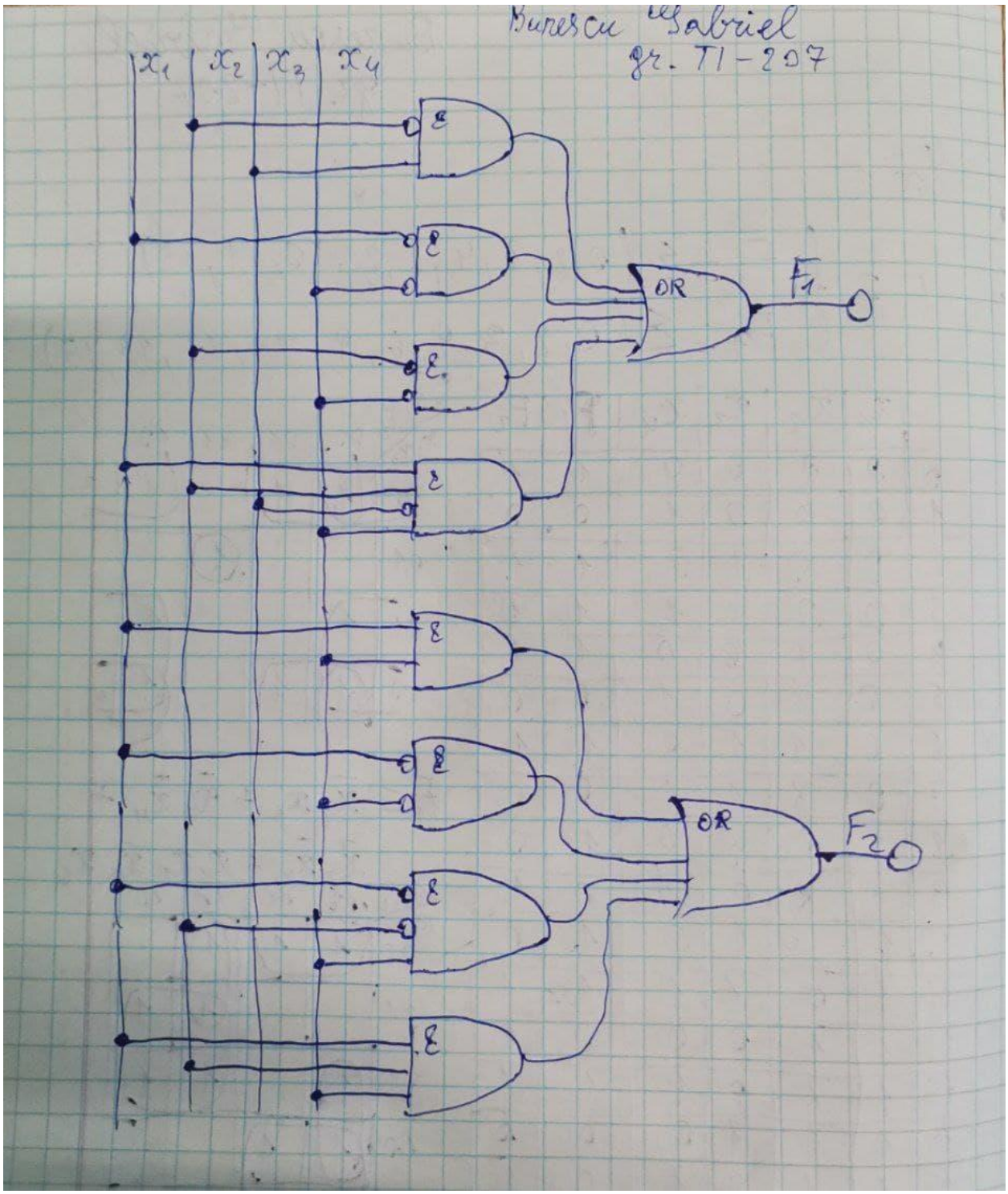

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Ex 3

$X = 100011_2 \quad Y = 0,253_6 \quad Z = AB4_{16}$

$X_{10} = \overset{5\,4\,3\,2\,1\,0}{100011_2} = 1\cdot 2^5 + 1\cdot 2^1 + 1\cdot 2^0 = 32 + 2 + 1 = 35_{10}$

$Z_{10} = AB4_{16} = \overset{11\,10\,9\,8\,7\,6\,5\,4\,3\,2\,1\,0}{101010110100_2} = 1\cdot 2^{11} + 1\cdot 2^9 + 1\cdot 2^4 +$

$+ 1\cdot 2^5 + 1\cdot 2^4 + 1\cdot 2^2 = 4 + 16 + 32 + 128 + 512 + 2048 =$

$= 2740_{10}$

$Y_{10} = \overset{0\,-1\,-2\,-3}{0,253_6} = 2\cdot 6^{-1} + 5\cdot 6^{-2} + 3\cdot 6^{-3} = 0,33 + 0,138 +$

$+ 0,0138 = 0,486_{10}$

Ex 1

$F\ \bar{x}_2\left(x_1 + \left(\overline{x_3 x_4} \cdot \overline{\bar{x}_1 x_3 \bar{x}_4}\right)\right) + \left(\overline{x_1 + x_2 + x_3}\right)$

~~$x_4(x_4 \bar{x}_1 + \overline{x_1 x_2}) + x_3$~~

Aplicăm legea Idempotență $A \cdot A = A$

$x_4(x_4 + \bar{x}_1 + \bar{x}_2) + x_3$

Aplicăm Distribuția

$x_4 x_4 + x_4 \bar{x}_1 + x_4 \bar{x}_2 + x_3$

Aplicăm Idempotența

$x_4 + \bar{x}_1 x_4 + x_3$

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Aplicăm legea absorției $A + AB = A$

$x_4 + x_3$

Ex 9

$X = 75 \quad Y = -15 \quad Z = -0,36$

$75 : 2 = 37 \mid 1$
$37 : 2 = 18 \mid 1$
$18 : 2 = 9 \mid 0$
$9 : 2 = 4 \mid 1$
$4 : 2 = 2 \mid 0$
$2 : 2 = 1 \mid 0$
$1 : 2 = 0 \mid 1$

$X_{10} = 01001011_2$
CD
01001011_2
CI
01001011_2
CC
01001011_2

$Y = -15$

$15 : 2 = 7 \mid 1$
$7 : 2 = 3 \mid 1$
$3 : 2 = 1 \mid 1$
$1 : 2 = 0 \mid 1$

$Y = 11111_2$
CD
00011111_2
CI
11100000_2
CC
11100001_2

$Z = -0,36$

$0,36 \cdot 2 = 0,72$
$0,72 \cdot 2 = 1,44$
$0,44 \cdot 2 = 0,88$
$0,88 \cdot 2 = 1,76$

$Z = 0,0101 = 1,0101$
CD $00000001,0101$
CI $11111110,1010$
CC $11111111,1010$