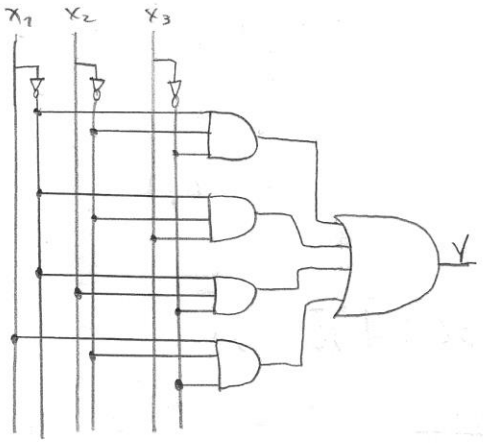
1)

	x_1	x_2	x_3	Y
0	0	0	0	1
1	0	0	1	1
2	0	1	0	1
3	0	1	1	0
4	1	0	0	1
5	1	0	1	0
6	1	1	0	0
7	1	1	1	1

$$\bar{x}_1 \cdot \bar{x}_2 \cdot \bar{x}_3 + \bar{x}_1 x_2 x_3 + \bar{x}_1 x_2 \bar{x}_3 + x_1 \bar{x}_2 \bar{x}_3$$



2)

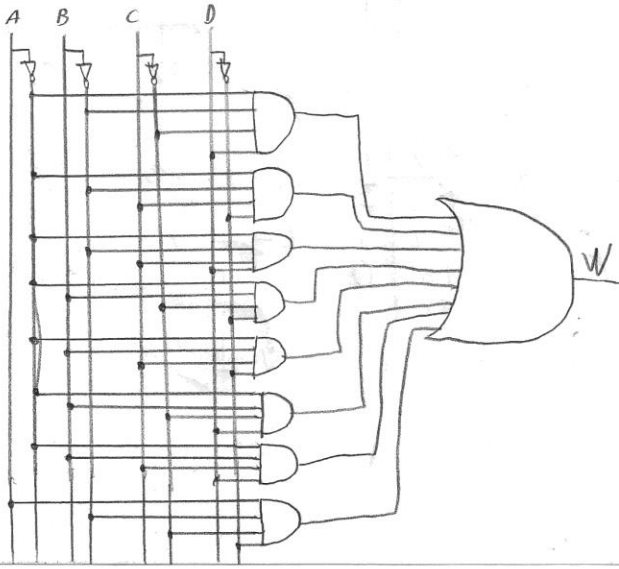
	A	B	C	D	W	X	Y	Z	
0	0	0	0	0	0	1	1	1	0
1	0	0	0	1	1	0	0	0	1
2	0	0	1	0	1	0	0	1	2
3	0	0	1	1	1	1	0	0	3
4	0	1	0	0	1	1	1	0	4
5	0	1	0	1	1	0	1	0	5
6	0	1	1	0	1	1	0	1	6
7	0	1	1	1	1	1	1	1	7
8	1	0	0	0	1	0	1	1	8
9	1	0	0	1	0	1	0	1	9

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

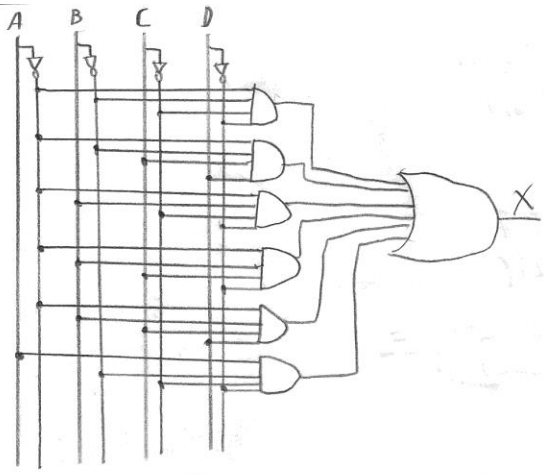
$x = \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}CD + \bar{A}B\bar{C}\bar{D} + \bar{A}BC\bar{D} + \bar{A}BCD + A\bar{B}\bar{C}D$

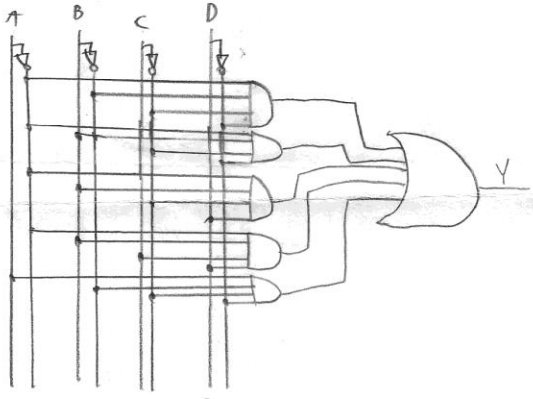
$Y = \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}B\bar{C}\bar{D} + \bar{A}\bar{B}C\bar{D} + \bar{A}BCD + A\bar{B}\bar{C}\bar{D}$

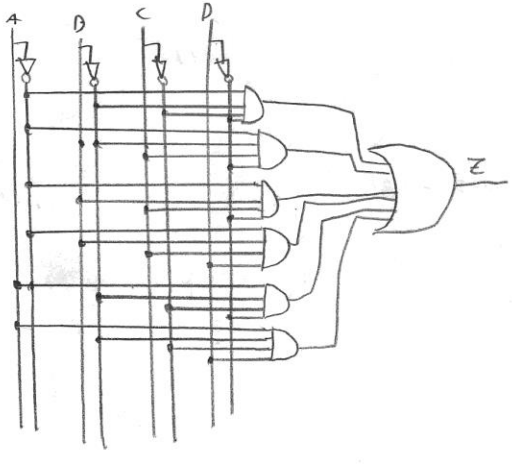
$Z = \bar{A}\bar{B}\bar{C}D + \bar{A}B\bar{C}\bar{D} + \bar{A}BC\bar{D} + \bar{A}BCD + AB\bar{C}\bar{D} + A\bar{B}\bar{C}D$



2)







3) $Y = AB + C$

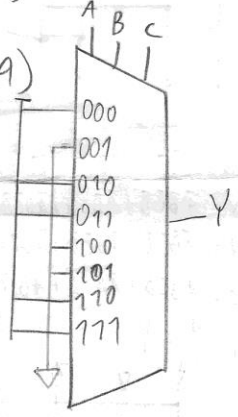
A	B	C	Y
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

---

4) $Y = BC + \bar{A}\bar{B}\bar{C} + B\bar{C}$

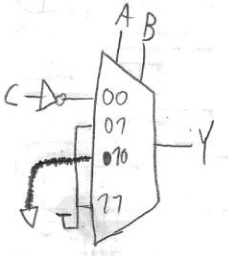
A	B	C	Y
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	1

A)



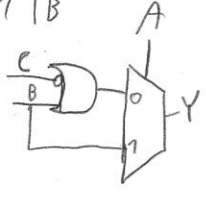
B)

A	B	Y
0	0	$\bar{C}$
0	1	1
1	0	0
1	1	1



C)

A	Y
0	$B+\bar{C}$
1	B



5)

X	Y	Z	Y
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	0

$$Y = \overline{\left((xy+\bar{z})\cdot(\bar{x}y)\right)+\overline{x\bar{z}}}$$

$$Y = \overline{(\bar{x}y(xy+z))}\cdot x\bar{z}$$

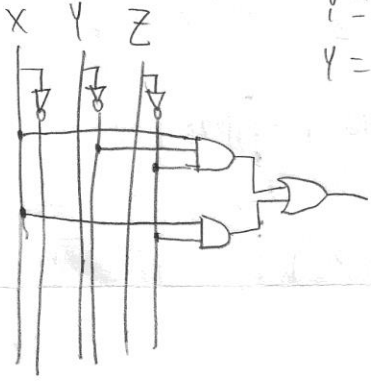
$$Y = \overline{(\bar{x}y\cdot x\bar{y}+\bar{x}y\bar{z})}\cdot x\bar{z}$$

$$Y = \overline{\bar{x}y\bar{z}}\cdot x\bar{z}$$

$$Y = (x+\bar{y}+\bar{z})\cdot x\bar{z}$$

$$Y = x\bar{z}+x\bar{y}\bar{z}+x\bar{z}$$

$$Y = x\bar{z}+x\bar{y}\bar{z}$$

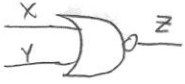


6) (x=0) = dado dió 1, 3, 5 (impar)
(x = 1) = dado dió 2, 4, 6 (par)
(Y = 0) = cello
Y = 1) = cara

X	Y	Z
0	0	1
0	1	0
1	0	0
1	1	0

$Z = \overline{X} \cdot \overline{Y}$

$Z = \overline{X+Y}$



7) Decimal | Binário | Octal

$4_{10} = 0100_2$ $7_{10} = 0111_2$ $3_{10} = 0011_2$ $5_{10} = 0101$ $6_{10} = 0110$ $7_{10} = 0001$ $8_{10} = 1000$

$0100\,0111\,0011, 0101\,0111\,0001\,1000_2$

7010|7701|7077

10 13 11 → 7013,11

7010|7701|7077

A_{16} D_{16}, B_{16}

$A_{16} = 000$ $F_{16} = 7777$ $C_{16} = 7700$ $3_{16} = 0011$ $B_{16} = 7077$

7010|7777|7700|0011, 7077

~~10 15 12 3, 11 → 7015,7311~~

$A \times 16^3 + F \times 16^2 + C \times 16^1 + 3 \times 16^0 + B \cdot 16^{-1}$

$10 \cdot 4096 + 15 \cdot 256 + 12 \cdot 16 + 3 \cdot 1 + 11 \cdot \frac{1}{16}$

$40960 + 3840 + 792 + 3 + 0,6875$

44995.6875

0100|0111|0011|0101|0111|0001|1000

4_{16} 7_{16} 3_{16}, 5_{16} 6_{16} 1_{16} 8_{16}

7)

2 1 6 3 , 2 5 4 3

$2^3 = 8$

8 4 , 5 2

1000 0100 , 0101 0010

1000 0100 , 0101 0010

2 0 4 , 2 4 4

8 4 , 5 2

10	9
0	0
1	1
2	2
4	4
5	10
10	20
20	40
25	100
30	110

$47 : 25 = 18$

25

223

200

23

2 5 5 5 4

1 2 7 7 0 3 , 5 4

2 3 7 , 5

9_{16} F_{16} , A_{16}

$9 \cdot 16^1 + F \cdot 16^0 + A \cdot 16^{-1}$

$9 \cdot 16 + 15 \cdot 1 + 10 \cdot \frac{1}{16}$

$144 + 15 + 0{,}625$

159.625

$3 \cdot 5^2 + 7 \cdot 5^1 + 4 \cdot 5^0 + 2 \cdot 5^{-1} + 3 \cdot 5^{-2}$

$3 \cdot 25 + 7 \cdot 5 + 4 \cdot 1 + 2 \cdot \frac{1}{5} + 3 \cdot \frac{1}{25}$

$75 + 35 + 4 + \frac{2}{5} + \frac{3}{25}$

$84 + 0{,}4 + 0{,}12$

$84{,}52$