

Entradas: numero binario de 4 bits A = **a3 a2 a1 a0**

Salidas: El número binario natural más alto que se puede escribir con 4 bits (1111) es el 15.

Para escribir el 15 en BCD necesito 8 bits 15 = 0001 0101

Por tanto serán 8 salidas F = f7 f6 f5 f4 f3 f2 f1 f0

	a3	a2	a1	a0		f7	f6	f5	f4	f3	f2	f1	f0
0	0	0	0	0		0	0	0	0	0	0	0	0
1	0	0	0	1		0	0	0	0	0	0	0	1
2	0	0	1	0		0	0	0	0	0	0	1	0
3	0	0	1	1		0	0	0	0	0	0	1	1
4	0	1	0	0		0	0	0	0	0	1	0	0
5	0	1	0	1		0	0	0	0	0	1	0	1
6	0	1	1	0		0	0	0	0	0	1	1	0
7	0	1	1	1		0	0	0	0	0	1	1	1
8	1	0	0	0		0	0	0	0	1	0	0	0
9	1	0	0	1		0	0	0	0	1	0	0	1
10	1	0	1	0		0	0	0	1	0	0	0	0
11	1	0	1	1		0	0	0	1	0	0	0	1
12	1	1	0	0		0	0	0	1	0	0	1	0
13	1	1	0	1		0	0	0	1	0	0	1	1
14	1	1	1	0		0	0	0	1	0	1	0	0
15	1	1	1	1		0	0	0	1	0	1	0	1

Por tanto las soluciones para F serán

$$f_0 = \Sigma_m(1,3,5,7,9,11,13,15) = \Pi_M(0,2,4,6,8,10,12,14)$$

$$f_1 = \Sigma_m(2,3,6,7,12,13) = \Pi_M(0,1,4,5,8,9,10,11,14,15)$$

$$f_2 = \Sigma_m(4,5,6,7,14,15) = \Pi_M(0,1,2,3,8,9,10,11,12,13)$$

$$f_3 = \Sigma_m(8,9) = \Pi_M(0,1,2,3,4,5,6,7,10,11,12,13,14,15)$$

$$f_4 = \Sigma_m(10,11,12,13,14,15) = \Pi_M(0,1,2,3,4,5,6,7,8,9)$$

$$f_5 = f_6 = f_7 = 0$$

Si resuelvo con minterminos por ejemplo

a3 a2	a1 a0	00	01	11	10
00	00				
01	01	1	1	1	1
11	11	1	1	1	1
10	10				

f0

a3 a2	a1 a0	00	01	11	10
00	00			1	
01	01			1	
11	11	1	1		
10	10	1	1		

f1

a3 a2	a1 a0	00	01	11	10
00	00		1		
01	01		1		
11	11		1	1	
10	10		1	1	

f2

a3 a2	a1 a0	00	01	11	10
00	00				1
01	01				1
11	11				
10	10				

f3

a3 a2	a1 a0	00	01	11	10
00	00			1	
01	01			1	
11	11			1	1
10	10			1	1

f4

Por tanto,

$$f_0 = a_0$$

$$f_1 = a_3 \cdot a_2 \cdot /a_1 + /a_3 \cdot a_1$$

$$f_2 = /a_3 \cdot a_2 + a_2 \cdot a_1$$

$$f_3 = a_3 \cdot /a_2 \cdot /a_1$$

$$f_4 = a_3 \cdot a_2 + a_3 \cdot a_1$$

$$f_5 = f_6 = f_7 = 0$$

