

A	B	C	D	E	Decimal Value	F
0	0	0	0	0	0	0
0	0	0	0	1	1	0
0	0	0	1	0	2	0
0	0	0	1	1	3	0
0	0	1	0	0	4	0
0	0	1	0	1	5	1
0	0	1	1	0	6	0
0	0	1	1	1	7	1
0	1	0	0	0	8	0
0	1	0	0	1	9	0
0	1	0	1	0	10	0
0	1	0	1	1	11	0
0	1	1	0	0	12	0
0	1	1	0	1	13	0
0	1	1	1	0	14	1
0	1	1	1	1	15	0
1	0	0	0	0	16	1
1	0	0	0	1	17	0
1	0	0	1	0	18	0
1	0	0	1	1	19	0
1	0	1	0	0	20	0
1	0	1	0	1	21	0
1	0	1	1	0	22	0
1	0	1	1	1	23	1
1	1	0	0	0	24	0
1	1	0	0	1	25	1
1	1	0	1	0	26	0
1	1	0	1	1	27	0
1	1	1	0	0	28	0
1	1	1	0	1	29	0
1	1	1	1	0	30	0
1	1	1	1	1	31	0

$$F = A'B'CD'E + A'B'CDE + A'BCDE' + AB'C'D'E' + AB'CDE + ABC'D'E$$

AB	CDE								
		000	001	011	010	110	111	101	100
	00						1	1	
	01					1			
	11		1						
	10	1					1		

$$F = AB'C'D'E + ABC'D'E + A'BCDE' + B'CDE + A'B'CE$$

$$F = AB'C'D'E + ABC'D'E + A'BCDE' + A'BCDE' + B'CDE + A'B'CE$$

$$F = A(B'C'D'E + BCDE') + B(AC'D'E + A'CDE') + B'CDE + A'B'CE$$

$$F = A(B \text{ XNOR } C \text{ XNOR } D \text{ XNOR } E) + B(A \text{ XNOR } C \text{ XNOR } D \text{ XNOR } E) + B'CDE + A'B'CE$$