

# SUM of PRODUCTS

Map

Addresses	$\overline{D.E.F}$	$\overline{D.E.F}$	$\overline{D.E.F}$	$\overline{D.E.F}$	$D.E.F$	$D.E.F$	$D.E.F$	$D.E.F$
$\overline{A.B.C}$	1	0	1	1	0	1	1	1
$\overline{A.B.C}$	1	1	1	1	1	1	1	1
$\overline{A.B.C}$	1	1	1	1	1	1	0	0
$\overline{A.B.C}$	1	0	0	1	0	0	0	0
$A.B.C$	0	0	1	0	0	0	0	0
$A.B.C$	x	x	x	x	x	x	x	x
$A.B.C$	x	x	x	x	x	x	x	x
$A.B.C$	x	x	x	x	x	x	x	x

Map Layout

	$\overline{D.E.F}$	$\overline{D.E.F}$	$\overline{D.E.F}$	$\overline{D.E.F}$	$D.E.F$	$D.E.F$	$D.E.F$	$D.E.F$
$\overline{A.B.C}$	0	1	3	2	4	5	7	6
$\overline{A.B.C}$	8	9	11	10	12	13	15	14
$\overline{A.B.C}$	24	25	27	26	28	29	31	30
$\overline{A.B.C}$	16	17	19	18	20	21	23	22
$A.B.C$	32	33	35	34	36	37	39	38
$A.B.C$	40	41	43	42	44	45	47	46
$A.B.C$	56	57	59	58	60	61	63	62
$A.B.C$	48	49	51	50	52	53	55	54

Groups

(8,9,10,11,24,25,26,27,40,41,42,43,56,57,58,59)	$C.D$
(8,9,12,13,24,25,28,29,40,41,44,45,56,57,60,61)	$C.E$
(0,2,8,10,16,18,24,26)	$\overline{A.D.F}$
(2,3,6,7,10,11,14,15)	$\overline{A.B.E}$
(5,7,13,15)	$\overline{A.B.D.F}$
(3,11,35,43)	$\overline{B.D.E.F}$

$$y = CD' + CE' + A'D'F' + A'B'E + A'B'DF + B'D'EF$$

$$A \bar{A} B \bar{B} C \bar{C} D \bar{D} E \bar{E} F \bar{F}$$

Addresses

www.  
32x8  
.com

$$A \bar{A} B \bar{B} C \bar{C} D \bar{D} E \bar{E} F \bar{F}$$

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$$A \bar{A} B \bar{B} C \bar{C} D \bar{D} E \bar{E} F \bar{F}$$

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$$A \bar{A} B \bar{B} C \bar{C} D \bar{D} E \bar{E} F \bar{F}$$

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**Truth Table**

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

31	0	1	1	1	1	1	0
32	1	0	0	0	0	0	0
33	1	0	0	0	0	1	0
34	1	0	0	0	1	0	0
35	1	0	0	0	1	1	1
36	1	0	0	1	0	0	0
37	1	0	0	1	0	1	0
38	1	0	0	1	1	0	0
39	1	0	0	1	1	1	0
40	1	0	1	0	0	0	x
41	1	0	1	0	0	1	x
42	1	0	1	0	1	0	x
43	1	0	1	0	1	1	x
44	1	0	1	1	0	0	x
45	1	0	1	1	0	1	x
46	1	0	1	1	1	0	x
47	1	0	1	1	1	1	x
48	1	1	0	0	0	0	x
49	1	1	0	0	0	1	x
50	1	1	0	0	1	0	x
51	1	1	0	0	1	1	x
52	1	1	0	1	0	0	x
53	1	1	0	1	0	1	x
54	1	1	0	1	1	0	x
55	1	1	0	1	1	1	x
56	1	1	1	0	0	0	x
57	1	1	1	0	0	1	x
58	1	1	1	0	1	0	x
59	1	1	1	0	1	1	x
60	1	1	1	1	0	0	x
61	1	1	1	1	0	1	x
62	1	1	1	1	1	0	x
63	1	1	1	1	1	1	x

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