

SUM of PRODUCTS

Map

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

Map Layout

	$\overline{C}.D$	$\overline{C}.D$	$C.D$	$C.D$
$\overline{A}.\overline{B}$	0	1	3	2
$\overline{A}.B$	4	5	7	6
$A.B$	12	13	15	14
$A.\overline{B}$	8	9	11	10

Groups

(1,5,9,13)	$\overline{C}.D$
(5,7,13,15)	$B.D$
(8,9,10,11)	$A.\overline{B}$
(0,2,8,10)	$\overline{B}.\overline{D}$

y = C'D + BD + AB' + B'D'

A A B B C C D D

A A B B C C D D

A A̅ B B̅ C C̅ D D̅



www.
32x8
.com

A A̅ B B̅ C C̅ D D̅

www.
32x8
.com

Truth Table

	A	B	C	D	Y
0	0	0	0	0	x
1	0	0	0	1	1
2	0	0	1	0	1
3	0	0	1	1	0
4	0	1	0	0	0
5	0	1	0	1	1
6	0	1	1	0	0
7	0	1	1	1	1
8	1	0	0	0	1
9	1	0	0	1	1
10	1	0	1	0	1
11	1	0	1	1	1
12	1	1	0	0	x
13	1	1	0	1	1
14	1	1	1	0	0
15	1	1	1	1	1