

SUM of PRODUCTS

Map

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

Map Layout

	$\overline{C.D}$	$\overline{C}.D$	$C.D$	$C.\overline{D}$
$\overline{A}.\overline{B}$	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

(0,2,8,10)	$\overline{B}.\overline{D}$
(1,5,9,13)	$\overline{C}.D$
(8,9,12,13)	$A.\overline{C}$
(9,11,13,15)	$A.D$

y = B'D' + C'D + AC' + AD

A \overline{A} B \overline{B} C \overline{C} D \overline{D}

A \overline{A} B \overline{B} C \overline{C} D \overline{D}

A A̅ B B̅ C C̅ D D̅



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A A̅ B B̅ C C̅ D D̅

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Truth Table

	A	B	C	D	Y
0	0	0	0	0	1
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	x
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	1
13	1	1	0	1	1
14	1	1	1	0	0
15	1	1	1	1	1