

# SUM of PRODUCTS

## Map

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

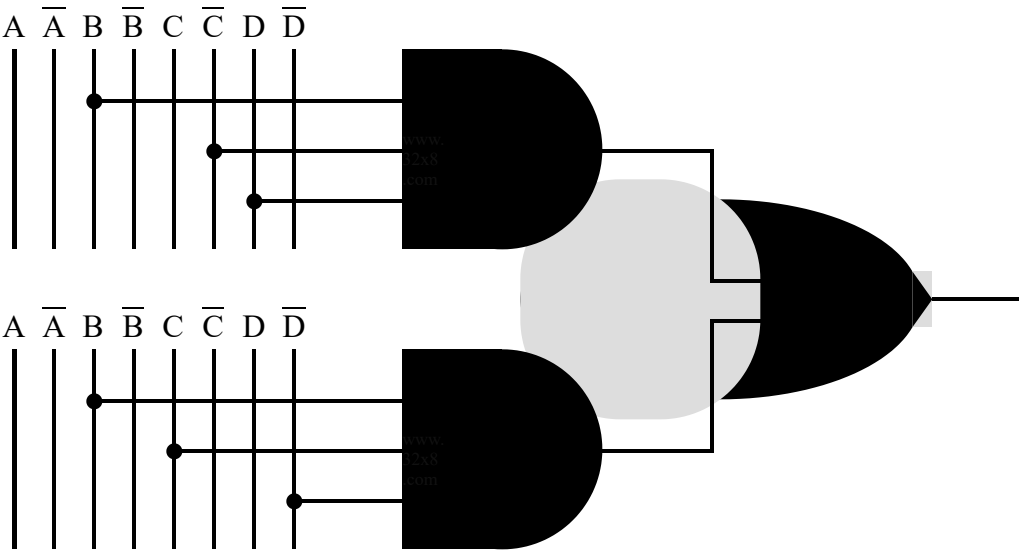
## Map Layout

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

(5,13)	$B. \overline{C}.D$
(6,14)	$B.C. \overline{D}$

$y = BC'D + BCD'$



## Truth Table

	A	B	C	D	Y
0	0	0	0	0	0
1	0	0	0	1	0
2	0	0	1	0	0
3	0	0	1	1	0
4	0	1	0	0	0

5	0	1	0	1	1
6	0	1	1	0	1
7	0	1	1	1	0
8	1	0	0	0	0
9	1	0	0	1	0
10	1	0	1	0	0
11	1	0	1	1	0
12	1	1	0	0	0
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	0

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