

SUM of PRODUCTS

Map

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

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

(0,1,2,3,4,5,6,7)	\overline{A}
(0,1,4,5,8,9,12,13)	\overline{C}
(4,5,6,7,12,13,14,15)	B

$y = A' + C' + B$

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

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



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

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	1
4	0	1	0	0	1
5	0	1	0	1	1
6	0	1	1	0	1
7	0	1	1	1	x
8	1	0	0	0	1
9	1	0	0	1	1
10	1	0	1	0	0
11	1	0	1	1	x
12	1	1	0	0	1
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	1