

SUM of PRODUCTS

Map

	$\overline{C.D}$	$\overline{C}.D$	$C.D$	$C.\overline{D}$
$\overline{A}.\overline{B}$	1	1	1	1
$\overline{A}.B$	0	1	0	0
$A.\overline{B}$	1	0	0	1
$A.B$	1	0	1	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
$A.\overline{B}$	12	13	15	14
$A.B$	8	9	11	10

Groups

(0,1,2,3)	$\overline{A}.\overline{B}$
(0,8)	$\overline{B}.\overline{C}.D$
(1,5)	$\overline{A}.\overline{C}.D$
(3,11)	$\overline{B}.C.D$
(12,14)	$A.B.\overline{D}$

$y = A'B' + B'C'D' + A'C'D + B'CD + ABD'$

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

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

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



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

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

Truth Table

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

13	1	1	0	1	0
14	1	1	1	0	1
15	1	1	1	1	0