

SUM of PRODUCTS

Map

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

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

Groups

(0,1)	$\overline{A}.\overline{B}.\overline{C}$
(1,3)	$\overline{A}.\overline{B}.D$
(5,13)	$B.\overline{C}.D$
(6,14)	$B.C.\overline{D}$
(10,11)	$A.\overline{B}.C$

$$y = A'B'C' + A'B'D + BC'D + BCD' + AB'C$$

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

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

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



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

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

Truth Table

	A	B	C	D	Y
0	0	0	0	0	1
1	0	0	0	1	1
2	0	0	1	0	0
3	0	0	1	1	1
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	1
11	1	0	1	1	1
12	1	1	0	0	0

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