

SUM of PRODUCTS**Map**

	$\overline{D}\overline{E}\overline{F}$	$\overline{D}\overline{E}F$	$\overline{D}E\overline{F}$	$\overline{D}EF$	$D\overline{E}\overline{F}$	$D\overline{E}F$	$DE\overline{F}$	DEF
$\overline{A}\overline{B}\overline{C}$	0	0	0	0	0	0	0	0
$\overline{A}\overline{B}C$	x	0	0	0	0	0	0	0
$\overline{A}B\overline{C}$	0	0	0	0	0	0	0	0
$\overline{A}BC$	0	0	0	0	0	0	0	0
$A\overline{B}\overline{C}$	0	0	0	0	0	0	1	1
$A\overline{B}C$	0	0	1	1	0	0	0	0
$AB\overline{C}$	0	0	0	0	0	0	0	0
ABC	0	0	0	0	0	0	0	0

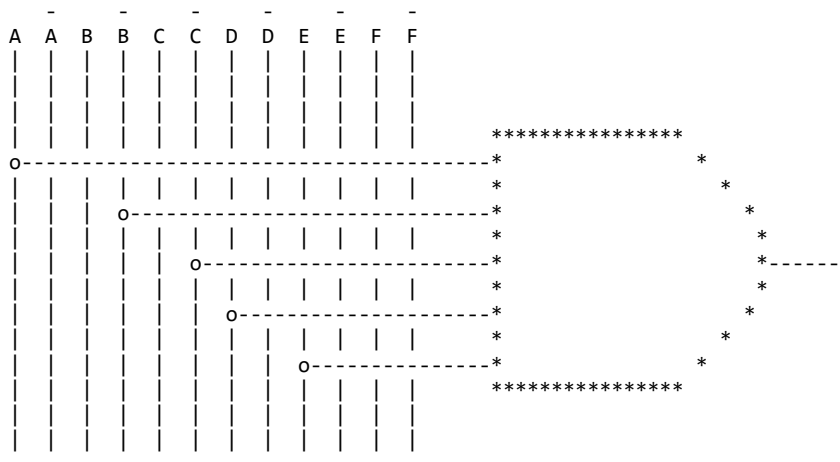
Map Layout

	$\overline{D}\overline{E}\overline{F}$	$\overline{D}\overline{E}F$	$\overline{D}E\overline{F}$	$\overline{D}EF$	$D\overline{E}\overline{F}$	$D\overline{E}F$	$DE\overline{F}$	DEF
$\overline{A}\overline{B}\overline{C}$	0	1	3	2	4	5	7	6
$\overline{A}\overline{B}C$	8	9	11	10	12	13	15	14
$\overline{A}B\overline{C}$	24	25	27	26	28	29	31	30
$\overline{A}BC$	16	17	19	18	20	21	23	22
$A\overline{B}\overline{C}$	32	33	35	34	36	37	39	38
$A\overline{B}C$	40	41	43	42	44	45	47	46
$AB\overline{C}$	56	57	59	58	60	61	63	62
ABC	48	49	51	50	52	53	55	54

Groups

(38,39)	$A\overline{B}\overline{C}D.E$
(42,43)	$A\overline{B}C.\overline{D}E$

$$y = A\overline{B}\overline{C}D.E + A\overline{B}C.\overline{D}E$$



The diagram illustrates a 12-bit bus system. It features a central horizontal dashed line representing the 12-bit bus. Above this line, there are 12 vertical dashed lines, each labeled with a letter from A to F, with a bar over each letter (Ā, Ā, B̄, B̄, C̄, C̄, D̄, D̄, Ē, Ē, F̄, F̄). Below the central line, there are two horizontal dashed lines. The top one is labeled 'O' at its left end. The bottom one is labeled 'O' at its left end and has a vertical dashed line at its right end.

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Truth Table-----
 1-----

Truth Table

	A	B	C	D	E	F	Y
0	0	0	0	0	0	0	0
1	0	0	0	0	0	1	0
2	0	0	0	0	1	0	0
3	0	0	0	0	1	1	0
4	0	0	0	1	0	0	0
5	0	0	0	1	0	1	0
6	0	0	0	1	1	0	0
7	0	0	0	1	1	1	0
8	0	0	1	0	0	0	x
9	0	0	1	0	0	1	0
10	0	0	1	0	1	0	0
11	0	0	1	0	1	1	0
12	0	0	1	1	0	0	0
13	0	0	1	1	0	1	0
14	0	0	1	1	1	0	0
15	0	0	1	1	1	1	0
16	0	1	0	0	0	0	0
17	0	1	0	0	0	1	0
18	0	1	0	0	1	0	0
19	0	1	0	0	1	1	0
20	0	1	0	1	0	0	0
21	0	1	0	1	0	1	0
22	0	1	0	1	1	0	0
23	0	1	0	1	1	1	0
24	0	1	1	0	0	0	0
25	0	1	1	0	0	1	0
26	0	1	1	0	1	0	0
27	0	1	1	0	1	1	0
28	0	1	1	1	0	0	0
29	0	1	1	1	0	1	0
30	0	1	1	1	1	0	0
31	0	1	1	1	1	1	0
32	1	0	0	0	0	0	0
33	1	0	0	0	0	1	0
34	1	0	0	0	1	0	0
35	1	0	0	0	1	1	0
36	1	0	0	1	0	0	0
37	1	0	0	1	0	1	0
38	1	0	0	1	1	0	1

39	1	0	0	1	1	1	1
40	1	0	1	0	0	0	0
41	1	0	1	0	0	1	0
42	1	0	1	0	1	0	1
43	1	0	1	0	1	1	1
44	1	0	1	1	0	0	0
45	1	0	1	1	0	1	0
46	1	0	1	1	1	0	0
47	1	0	1	1	1	1	0
48	1	1	0	0	0	0	0
49	1	1	0	0	0	1	0
50	1	1	0	0	1	0	0
51	1	1	0	0	1	1	0
52	1	1	0	1	0	0	0
53	1	1	0	1	0	1	0
54	1	1	0	1	1	0	0
55	1	1	0	1	1	1	0
56	1	1	1	0	0	0	0
57	1	1	1	0	0	1	0
58	1	1	1	0	1	0	0
59	1	1	1	0	1	1	0
60	1	1	1	1	0	0	0
61	1	1	1	1	0	1	0
62	1	1	1	1	1	0	0
63	1	1	1	1	1	1	0