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SUM of PRODUCTS

Map

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

Map Layout

	$\overline{D}.\overline{E}$	$\overline{D}.E$	$D.E$	$D.\overline{E}$
$\overline{A}.\overline{B}.\overline{C}$	0	1	3	2
$\overline{A}.\overline{B}.C$	4	5	7	6
$\overline{A}.B.C$	12	13	15	14
$\overline{A}.B.\overline{C}$	8	9	11	10
$A.\overline{B}.\overline{C}$	16	17	19	18
$A.\overline{B}.C$	20	21	23	22
$A.B.C$	28	29	31	30
$A.B.\overline{C}$	24	25	27	26

Groups

(2,3,6,7,10,11,14,15,18,19,22,23,26,27,30,31)	D
(5,7,13,15,21,23,29,31)	C.E
(16,18,20,22,24,26,28,30)	$A.\overline{E}$

y = D + CE + AE'

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

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

A $\overline{A}$ B $\overline{B}$ C $\overline{C}$ D $\overline{D}$ E $\overline{E}$
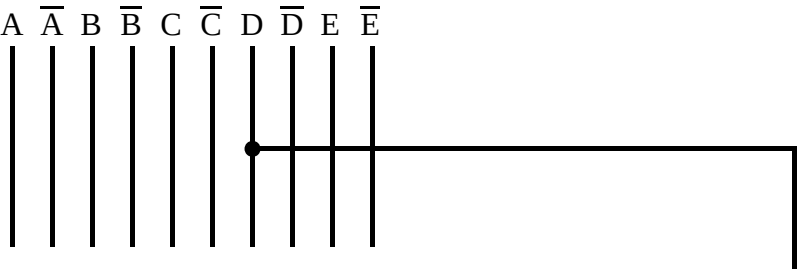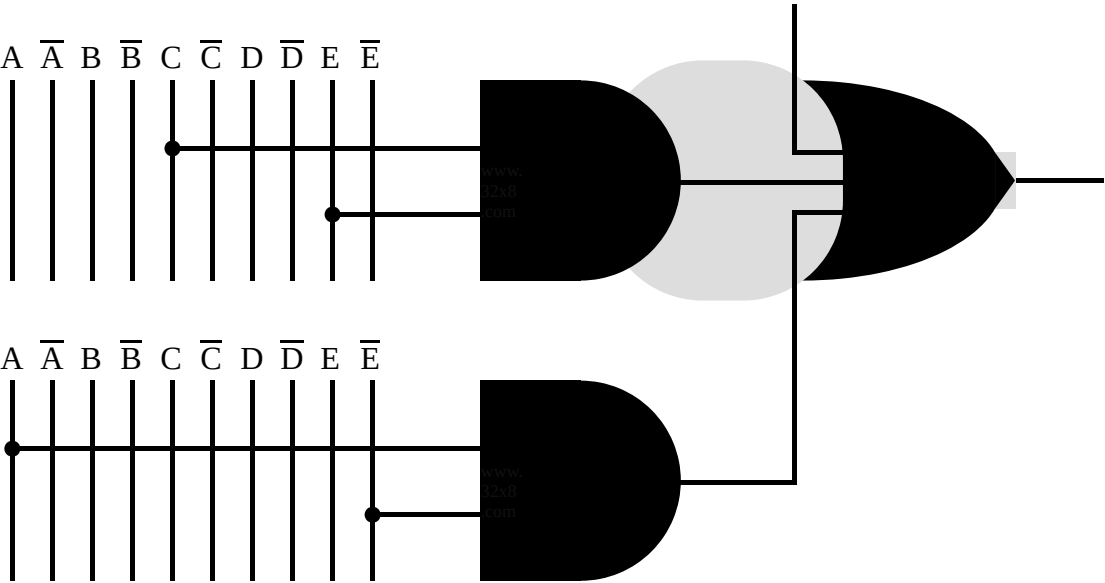
Truth Table

	A	B	C	D	E	Y
0	0	0	0	0	0	x
1	0	0	0	0	1	x
2	0	0	0	1	0	1
3	0	0	0	1	1	1
4	0	0	1	0	0	0
5	0	0	1	0	1	1
6	0	0	1	1	0	x
7	0	0	1	1	1	x
8	0	1	0	0	0	0
9	0	1	0	0	1	0
10	0	1	0	1	0	x
11	0	1	0	1	1	x
12	0	1	1	0	0	x
13	0	1	1	0	1	x
14	0	1	1	1	0	x
15	0	1	1	1	1	x
16	1	0	0	0	0	1
17	1	0	0	0	1	0
18	1	0	0	1	0	x
19	1	0	0	1	1	x
20	1	0	1	0	0	x
21	1	0	1	0	1	x
22	1	0	1	1	0	x
23	1	0	1	1	1	x
24	1	1	0	0	0	x

25	1	1	0	0	1	x
26	1	1	0	1	0	x
27	1	1	0	1	1	x
28	1	1	1	0	0	x
29	1	1	1	0	1	x
30	1	1	1	1	0	x
31	1	1	1	1	1	x

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