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SUM of PRODUCTS

Map

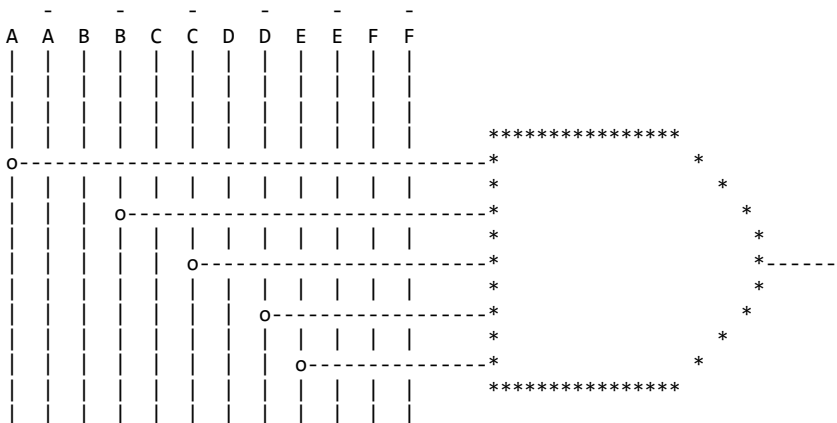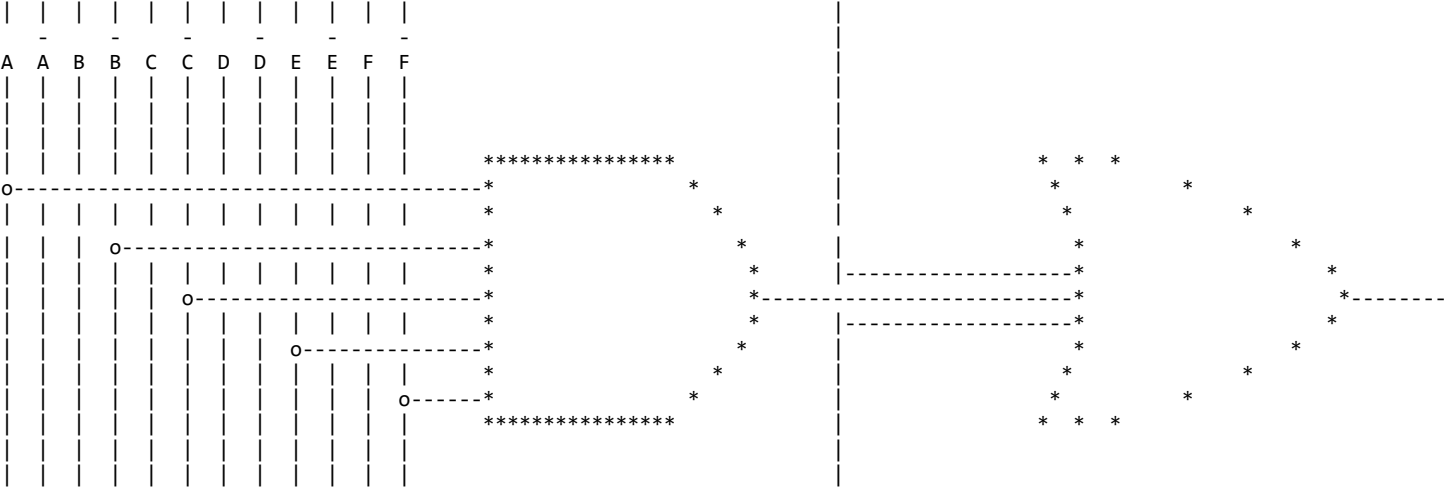|	$\overline{D}.\overline{E}.F$	$\overline{D}.\overline{E}.F$	$\overline{D}.E.F$	$\overline{D}.E.\overline{F}$	$D.\overline{E}.\overline{F}$	$D.\overline{E}.F$	$D.E.F$	$D.E.\overline{F}$
$\overline{A}.\overline{B}.\overline{C}$	0	0	0	0	0	0	0	0
$\overline{A}.\overline{B}.C$	0	0	0	0	0	0	0	0
$\overline{A}.B.C$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

Map Layout

	$\overline{D}.\overline{E}.\overline{F}$	$\overline{D}.\overline{E}.F$	$\overline{D}.E.F$	$\overline{D}.E.\overline{F}$	$D.\overline{E}.\overline{F}$	$D.\overline{E}.F$	$D.E.F$	$D.E.\overline{F}$
$\overline{A}.\overline{B}.\overline{C}$	0	1	3	2	4	5	7	6
$\overline{A}.\overline{B}.C$	8	9	11	10	12	13	15	14
$\overline{A}.B.C$	24	25	27	26	28	29	31	30
$\overline{A}.B.\overline{C}$	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
$A.B.C$	56	57	59	58	60	61	63	62
$A.B.\overline{C}$	48	49	51	50	52	53	55	54

Groups

(34,35)	$A.\overline{B}.\overline{C}.\overline{D}.E$
(34,38)	$A.\overline{B}.\overline{C}.E.\overline{F}$
(34,42)	$A.\overline{B}.\overline{D}.E.\overline{F}$

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

```
      -       -       -       -       -       -
 A    A   B   B   C   C   D   D   E   E   F   F
 |    |   |   |   |   |   |   |   |   |   |   |
 |    |   |   |   |   |   |   |   |   |   |   |
 |    |   |   |   |   |   |   |   |   |   |   |
 |    |   |   |   |   |   |   |   |   |   |   |        ***************
 o----------------------------------------------*                  *
 |    |   |   |   |   |   |   |   |   |   |   |   *              *
 |    |   |   |   |   |   |   |   |   |   |   |   *            *
 |    |   |   o---------------------------------*          *
 |    |   |   |   |   |   |   |   |   |   |   |   *        *
 |    |   |   |   |   o---------------------------*        *------|
 |    |   |   |   |   |   |   |   |   |   |   |   *        *      |
 |    |   |   |   |   |   o-------------------*          *       |
 |    |   |   |   |   |   |   |   |   |   |   |   *         *      |
 |    |   |   |   |   |   |   o---------------*         *        |
 |    |   |   |   |   |   |   |   |   |   |   |   *               |
 |    |   |   |   |   |   |   |   o-----------*              *    |
 |    |   |   |   |   |   |   |   |   |   |   |   ***************   |
 |    |   |   |   |   |   |   |   |   |   |   |                    |
```

```
 |  |  |  |  |  |  |  |  |  |  |  |                                  |
 |  -  |  -  |  -  |  -  |  -  |  -                                   |
 A  A  B  B  C  C  D  D  E  E  F  F                                  |
 |  |  |  |  |  |  |  |  |  |  |  |                                  |
 |  |  |  |  |  |  |  |  |  |  |  |           ***************             *   *   *
 o--------------------------------------*               *          *       *       *
 |  |  |  |  |  |  |  |  |  |  |  |      *               *        *        *         *
 |  |  |  |  |  |  |  |  |  |  |  |      *             *        *         *           *
 |  |  |  o----------------------------*             *        *          *------------*
 |  |  |  |  |  |  |  |  |  |  |  |      *             o--------*-----------*           *------
 |  |  |  |  o-------------------------*            o--------*-----------*            *
 |  |  |  |  |  |  |  |  |  |  |  |      *             o--------*-----------*           *
 |  |  |  |  |  |  |  |  |  |  |  |      *             *        *          *           *
 |  |  |  |  |  |  o-------------------*             *        *         *           *
 |  |  |  |  |  |  |  |  |  |  |  |      *             *        *        *          *
 |  |  |  |  |  |  |  |  |  o----------*               *          *       *       *
 |  |  |  |  |  |  |  |  |  |  |  |           ***************             *   *   *
 |  |  |  |  |  |  |  |  |  |  |  |
 |  -  |  -  |  -  |  -  |  -  |  -
 A  A  B  B  C  C  D  D  E  E  F  F
 |  |  |  |  |  |  |  |  |  |  |  |                                  |
 |  |  |  |  |  |  |  |  |  |  |  |           ***************             |
 o--------------------------------------*               *
 |  |  |  |  |  |  |  |  |  |  |  |      *             *
 |  |  o----------------------------*               *
 |  |  |  |  |  |  |  |  |  |  |      *             *
 |  |  |  |  |  |  o-------------------*             *-------
 Truth Table o---------------------*             *
 |  |  |  |  |  |  |  |  |  |      *             *
 |  |  |  |  |  |  |  |  |  o----------*               *
 |  |  |  |  |  |  |  |  |  |           ***************
```

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	0
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
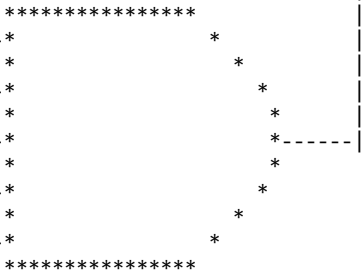
27	0	1	1	0	1	1	0
28	0	1	1	1	0	0	0
29	0	1	1	1	0	1	0
30	0	1	1	1	1	0	0
31	0	1	1	1	1	1	0
32	1	0	0	0	0	0	0
33	1	0	0	0	0	1	0
34	1	0	0	0	1	0	1
35	1	0	0	0	1	1	1
36	1	0	0	1	0	0	0
37	1	0	0	1	0	1	0
38	1	0	0	1	1	0	1
39	1	0	0	1	1	1	0
40	1	0	1	0	0	0	0
41	1	0	1	0	0	1	0
42	1	0	1	0	1	0	1
43	1	0	1	0	1	1	0
44	1	0	1	1	0	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