

Упрощение СДНФ (4 переменные)

Упростить совершенную дизъюнктивную нормальную форму.

Задача 18.1.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w$$

Задача 18.2.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w$$

Задача 18.3.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w}$$

Задача 18.4.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w}$$

Задача 18.5.

7

$$\bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w$$

Задача 18.6.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}zw \vee \bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}zw$$

Задача 18.7.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w}$$

Задача 18.8.

7

$$\bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}yz\bar{w} \vee \bar{x}yzw \vee x\bar{y}\bar{z}\bar{w} \vee x\bar{y}\bar{z}w \vee xy\bar{z}\bar{w} \vee xyzw$$

Задача 18.9.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}yzw \vee x\bar{y}zw \vee xyzw$$

Задача 18.10.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee x\bar{y}\bar{z}\bar{w} \vee x\bar{y}\bar{z}w \vee x\bar{y}z\bar{w} \vee x\bar{y}zw$$

Задача 18.11.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee x\bar{y}\bar{z}\bar{w} \vee x\bar{y}\bar{z}w \vee xyzw$$

Задача 18.12.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee x\bar{y}\bar{z}w \vee x\bar{y}z\bar{w} \vee x\bar{y}zw \vee xy\bar{z}\bar{w} \vee xyzw$$

Задача 18.13.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}yz\bar{w} \vee x\bar{y}\bar{z}\bar{w} \vee xy\bar{z}\bar{w} \vee xy\bar{z}w \vee xyzw$$

Задача 18.14.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}yz\bar{w} \vee \bar{x}yzw \vee \bar{x}yzw \vee xyz\bar{w} \vee xyzw$$

Задача 18.15.

7

$$\bar{x}\bar{y}\bar{z}\bar{w} \vee \bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee x\bar{y}\bar{z}\bar{w} \vee x\bar{y}\bar{z}w \vee xy\bar{z}\bar{w} \vee xy\bar{z}w \vee xyz\bar{w} \vee xyzw$$

Задача 18.16.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee xyzw$$

Задача 18.17.

7

$$\bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee xyz\bar{w} \vee xyzw$$

Задача 18.18.

7

$$\bar{x}yz\bar{w} \vee \bar{x}yzw \vee x\bar{y}\bar{z}\bar{w} \vee x\bar{y}\bar{z}w \vee xyzw$$

Задача 18.19.

7

$$\bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}yz\bar{w} \vee \bar{x}yzw \vee x\bar{y}\bar{z}\bar{w} \vee x\bar{y}\bar{z}w \vee xyz\bar{w} \vee xyzw$$

Задача 18.20.

7

$$\bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}yz\bar{w} \vee \bar{x}yz\bar{w} \vee xyz\bar{w} \vee xyz\bar{w}$$

Задача 18.21.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}yz\bar{w} \vee \bar{x}yzw \vee \bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}yz\bar{w} \vee \bar{x}yzw$$

Задача 18.22.

7

$$\bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee \bar{x}y\bar{z}\bar{w} \vee \bar{x}y\bar{z}w \vee xyzw$$

Задача 18.23.

7

$$x\bar{y}\bar{z}\bar{w} \vee x\bar{y}\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee xyz\bar{w} \vee xyzw$$

Задача 18.24.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}y\bar{z}w \vee xy\bar{z}\bar{w} \vee xyzw$$

Задача 18.25.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}y\bar{z}w \vee x\bar{y}\bar{z}\bar{w} \vee x\bar{y}z\bar{w} \vee x\bar{y}z\bar{w} \vee x\bar{y}zw \vee xyzw$$

Задача 18.26.

7

$$\bar{x}\bar{y}z\bar{w} \vee \bar{x}yz\bar{w} \vee \bar{x}yzw \vee x\bar{y}\bar{z}\bar{w} \vee x\bar{y}z\bar{w} \vee x\bar{y}z\bar{w} \vee x\bar{y}zw \vee xyzw$$

Задача 18.27.

7

$$\bar{x}y\bar{z}w \vee \bar{x}\bar{y}\bar{z}\bar{w} \vee x\bar{y}\bar{z}w \vee x\bar{y}z\bar{w} \vee xy\bar{z}\bar{w} \vee xyz\bar{w} \vee xyzw$$

Задача 18.28.

7

$$\bar{x}\bar{y}\bar{z}w \vee \bar{x}\bar{y}zw \vee \bar{x}y\bar{z}w \vee \bar{x}yzw \vee x\bar{y}\bar{z}w \vee x\bar{y}z\bar{w} \vee x\bar{y}zw \vee xy\bar{z}w \vee xyzw$$

Задача 18.29.

7

$$\bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee \bar{x}yz\bar{w} \vee \bar{x}yzw \vee x\bar{y}\bar{z}w \vee x\bar{y}z\bar{w} \vee x\bar{y}zw \vee xy\bar{z}w \vee xyzw$$

Задача 18.30.

7

$$\bar{x}y\bar{z}w \vee \bar{x}\bar{y}z\bar{w} \vee \bar{x}\bar{y}zw \vee x\bar{y}z\bar{w} \vee x\bar{y}zw \vee xy\bar{z}\bar{w} \vee xy\bar{z}w$$

Задача 18.31.

7

$$\bar{x}y\bar{z}\bar{w} \vee \bar{x}yz\bar{w} \vee x\bar{y}zw \vee xy\bar{z}\bar{w} \vee xyz\bar{w}$$

Упрощение СДНФ (4 переменные)

1	$\bar{z}\bar{w} \vee \bar{y}z\bar{w} \vee xyzw$	1 0 1 0 1 0 0 0 1 0 1 0 1 0 0 1
2	$w\bar{y} \vee z$	0 1 1 1 0 0 1 1 0 1 1 1 0 0 1 1
3	$\bar{y}w\bar{z} \vee ywx \vee y\bar{w}\bar{z} \vee \bar{y}\bar{w}z\bar{x}$	0 1 1 0 1 0 0 0 0 1 0 0 1 1 0 1
4	$\bar{y}x \vee z\bar{w}$	0 0 1 0 0 0 1 0 1 1 1 1 0 0 1 0
5	$\bar{y}x \vee yz$	0 0 0 0 0 0 1 1 1 1 1 1 0 0 1 1
6	$yw \vee \bar{y}\bar{z}\bar{x}\bar{w}$	1 0 0 0 0 1 0 1 0 0 0 0 0 1 0 1
7	\bar{w}	1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0
8	$\bar{z}wx \vee y$	0 0 0 0 1 1 1 1 0 1 0 0 1 1 1 1
9	$zw \vee \bar{z}\bar{x}\bar{y}\bar{w}$	1 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1
10	\bar{y}	1 1 1 1 0 0 0 0 1 1 1 1 0 0 0 0
11	$\bar{y}\bar{z} \vee \bar{x}y\bar{z} \vee wxyz$	1 1 0 0 1 1 0 0 1 1 0 0 0 0 0 1
12	$\bar{z}w\bar{y} \vee zwx \vee z\bar{w}\bar{y} \vee \bar{z}\bar{w}yx$	0 1 1 0 0 0 0 0 0 1 1 1 1 0 0 1
13	$\bar{w}x\bar{z} \vee wxy \vee w\bar{x}\bar{z} \vee \bar{w}\bar{x}z\bar{y}$	0 1 1 0 0 1 0 0 1 0 0 0 1 1 0 1
14	$\bar{w}\bar{x} \vee zy$	1 0 1 0 1 0 1 1 0 0 0 0 0 0 1 1
15	$x\bar{z} \vee y$	0 0 0 0 1 1 1 1 1 1 0 0 1 1 1 1
16	$\bar{w}x\bar{y} \vee wxz \vee w\bar{x}\bar{y} \vee \bar{w}\bar{x}y\bar{z}$	0 1 0 1 1 0 0 0 1 0 1 1 0 0 0 1
17	$\bar{x}yw \vee z$	0 0 1 1 0 1 1 1 0 0 1 1 0 0 1 1
18	$x\bar{y}\bar{z}w \vee zy$	0 0 0 0 0 0 1 1 0 1 0 0 0 0 1 1
19	$\bar{w}z \vee wy$	0 0 1 0 0 1 1 1 0 0 1 0 0 1 1 1
20	$\bar{x}\bar{y}\bar{z} \vee \bar{w}y \vee \bar{w}z$	1 1 1 0 1 0 1 0 0 0 1 0 1 0 1 0
21	$\bar{x}yz \vee w$	0 1 0 1 0 1 1 1 0 1 0 1 0 1 0 1
22	$\bar{z}x\bar{y} \vee zxw \vee z\bar{x}\bar{y}$	0 0 1 1 0 0 0 0 1 1 0 1 0 0 0 1
23	$xz \vee \bar{y}x$	0 0 0 0 0 0 0 0 1 1 1 1 0 0 1 1
24	$\bar{z}yx \vee w\bar{z}\bar{x}$	0 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 0
25	$\bar{y}x \vee w\bar{z}$	0 1 0 0 0 1 0 0 1 1 1 1 0 1 0 0
26	$\bar{x}yz \vee z\bar{w} \vee x\bar{y}$	0 0 1 0 0 0 1 1 1 1 1 1 0 0 1 0
27	$xzy \vee x\bar{z}\bar{y} \vee \bar{x}\bar{z}yw \vee x\bar{w}$	0 0 0 0 0 1 0 0 1 1 1 0 1 0 1 1
28	$\bar{y}zx \vee w$	0 1 0 1 0 1 0 1 0 1 1 1 0 1 0 1
29	$\bar{x}z \vee xw$	0 0 1 1 0 0 1 1 0 1 0 1 0 1 0 1
30	$\bar{y}z \vee y\bar{z}x \vee \bar{y}w\bar{x}$	0 1 1 1 0 0 0 0 0 0 1 1 1 1 0 0
31	$y\bar{w} \vee wxz\bar{y}$	0 0 0 0 1 0 1 0 0 0 0 1 1 0 1 0