

Упрощение СДНФ (4 переменные)

Упростить совершенную дизъюнктивную нормальную форму.

Задача 18.1.

5

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

Задача 18.2.

5

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

Задача 18.3.

5

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

Задача 18.4.

5

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

Задача 18.5.

5

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

Задача 18.6.

5

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

Задача 18.7.

5

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

Задача 18.8.

5

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

Задача 18.17.

5

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

Задача 18.18.

5

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

Задача 18.19.

5

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

Задача 18.20.

5

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

Задача 18.21.

5

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

Задача 18.22.

5

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

Задача 18.23.

5

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

Задача 18.24.

5

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

Задача 18.25.

5

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

Задача 18.26.

5

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

Задача 18.27.

5

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

Задача 18.28.

5

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

Задача 18.29.

5

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

Задача 18.30.

5

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

Задача 18.31.

5

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

Упрощение СДНФ (4 переменные)

1	$\bar{x}yz \vee z\bar{w} \vee x\bar{y}$	0 0 1 0 0 0 1 1 1 1 1 1 0 0 1 0
2	$\bar{y}z\bar{w} \vee yzx \vee yz\bar{w} \vee \bar{y}zwx$	0 0 1 0 1 0 0 0 0 1 1 0 1 0 1 1
3	$\bar{z}x\bar{w} \vee zxy \vee z\bar{x}\bar{w} \vee \bar{z}\bar{x}w\bar{y}$	0 1 1 0 0 0 1 0 1 0 0 0 1 0 1 1
4	$\bar{x}\bar{y}z \vee \bar{w}y \vee \bar{w}z$	1 1 1 0 1 0 1 0 0 0 1 0 1 0 1 0
5	$x\bar{y} \vee \bar{x}\bar{w}y\bar{z}$	0 0 0 0 1 0 0 0 1 1 1 1 0 0 0 0
6	$\bar{w}xz \vee \bar{z}w$	0 1 0 0 0 1 0 0 0 1 1 0 0 1 1 0
7	$\bar{x}wy \vee z\bar{x}\bar{y}$	0 0 1 1 0 1 0 1 0 0 0 0 0 0 0 0
8	$xzw \vee xz\bar{w} \vee \bar{x}zwy \vee x\bar{y}$	0 0 0 0 0 1 0 0 1 1 1 1 1 0 0 1
9	$\bar{w}\bar{y}z \vee \bar{x}w\bar{y} \vee xwyz$	1 1 0 1 0 0 0 0 1 0 0 0 0 0 0 1
10	$\bar{y}zw \vee w\bar{x} \vee yz$	0 1 0 1 1 1 0 1 0 0 0 1 1 1 0 0
11	$\bar{y}z\bar{w} \vee \bar{x}y\bar{z} \vee xyzw$	1 0 0 0 1 1 0 0 1 0 0 0 0 0 0 1
12	$zy \vee \bar{x}z$	0 0 1 1 0 0 1 1 0 0 0 0 0 0 1 1
13	$\bar{w}y\bar{x} \vee wyz \vee w\bar{y}\bar{x} \vee \bar{w}\bar{y}x\bar{z}$	0 1 0 1 1 0 1 1 1 0 0 0 0 0 0 1
14	$\bar{z}w\bar{x} \vee zwy \vee z\bar{w}\bar{x} \vee \bar{z}\bar{w}x\bar{y}$	0 1 1 0 0 1 1 1 1 0 0 0 0 0 0 1
15	$zx \vee \bar{w}z$	0 0 1 0 0 0 1 0 0 0 1 1 0 0 1 1
16	$wz \vee x$	0 1 0 0 0 1 0 0 1 1 1 1 1 1 1 1
17	$\bar{y}zx \vee y\bar{x}\bar{w} \vee \bar{x}yz$	0 0 0 0 1 0 1 1 0 0 1 1 0 0 0 0
18	$\bar{w}xz \vee w\bar{z}\bar{y} \vee \bar{z}wx$	0 1 0 0 0 0 0 0 0 1 1 0 0 1 1 0
19	$\bar{y}xz \vee yz\bar{w} \vee \bar{z}yx$	0 0 0 0 1 0 0 0 0 0 1 1 1 1 0 0
20	$\bar{z}yw \vee \bar{w}z$	0 0 1 0 0 1 1 0 0 0 1 0 0 1 1 0
21	$y\bar{w}z\bar{x} \vee zw$	0 0 0 1 0 0 0 1 0 0 0 1 1 0 0 1
22	$\bar{w}\bar{x}\bar{z} \vee \bar{y}w\bar{x} \vee yw\bar{x}z$	1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 1
23	$xzw \vee xz\bar{w} \vee \bar{x}zwy \vee x\bar{y}$	0 0 0 0 0 1 0 0 1 1 1 1 1 0 0 1
24	$\bar{w}\bar{x} \vee \bar{z}w\bar{x} \vee yzwx$	1 1 1 0 1 1 1 0 0 0 0 0 0 0 0 1
25	$\bar{y}z\bar{w} \vee yzx \vee yz\bar{w}$	0 0 1 0 1 0 0 0 0 0 1 0 1 0 1 1
26	$\bar{x}zw \vee y$	0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1
27	$\bar{y}z \vee xw$	1 1 0 0 0 0 0 0 1 1 0 1 0 1 0 1
28	$\bar{z}\bar{y} \vee \bar{x}z\bar{y} \vee wxzy$	1 1 1 1 0 0 0 0 1 1 0 0 0 0 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	$\bar{y}zx \vee yz\bar{x}\bar{w}$	0 0 0 0 0 0 1 0 0 0 1 1 0 0 0 0
31	$\bar{w}\bar{x}\bar{y} \vee \bar{z}w\bar{x} \vee zwx\bar{y}$	1 1 1 0 0 1 0 0 0 0 0 0 0 0 0 1