

Упрощение СДНФ (4 переменные)

Упростить совершенную дизъюнктивную нормальную форму.

Задача 18.1.

3

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

Задача 18.2.

3

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

Задача 18.3.

3

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

Задача 18.4.

3

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

Задача 18.5.

3

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

Задача 18.6.

3

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

Задача 18.7.

3

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

Задача 18.8.

3

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

Задача 18.9.

3

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

Задача 18.10.

3

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

Задача 18.11.

3

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

Задача 18.12.

3

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

Задача 18.13.

3

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

Задача 18.14.

3

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

Задача 18.15.

3

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

Задача 18.16.

3

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

Задача 18.17.

3

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

Задача 18.18.

3

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

Задача 18.19.

3

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

Задача 18.20.

3

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

Задача 18.21.

3

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

Задача 18.22.

3

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

Задача 18.23.

3

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

Задача 18.24.

3

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

Задача 18.25.

3

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

Задача 18.26.

3

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

Задача 18.27.

3

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

Задача 18.28.

3

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

Задача 18.29.

3

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

Задача 18.30.

3

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

Задача 18.31.

3

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

Упрощение СДНФ (4 переменные)

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