

Упрощение СДНФ (4 переменные)

Упростить совершенную дизъюнктивную нормальную форму.

Задача 18.1.

1

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

Задача 18.2.

1

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

Задача 18.3.

1

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

Задача 18.4.

1

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

Задача 18.5.

1

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

Задача 18.6.

1

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

Задача 18.7.

1

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

Задача 18.8.

1

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

Задача 18.9.

1

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

Задача 18.10.

1

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

Задача 18.11.

1

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

Задача 18.12.

1

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

Задача 18.13.

1

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

Задача 18.14.

1

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

Задача 18.15.

1

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

Задача 18.16.

1

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

Задача 18.17.

1

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

Задача 18.18.

1

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

Задача 18.19.

1

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

Задача 18.20.

1

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

Задача 18.21.

1

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

Задача 18.22.

1

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

Задача 18.23.

1

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

Задача 18.24.

1

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

Задача 18.25.

1

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

Задача 18.26.

1

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

Задача 18.27.

1

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

Задача 18.28.

1

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

Задача 18.29.

1

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

Задача 18.30.

1

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

Задача 18.31.

1

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

Упрощение СДНФ (4 переменные)

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