

2.2 Минимизация булевой функций системы

Рисуем карты Карно

C_0

$a_1 a_2$ $b_1 b_2$	00	01	11	10
00				
01	1			
11	1	1		1
10	1	1		

$$C_{\min}(C_0) = \left\{ \begin{array}{l} 0x1x \\ 00x1 \\ \cancel{11}x011 \end{array} \right\}$$

$$S^a = 8, S^b = \cancel{11}$$

$$C_0 = \bar{a}_1 b_1 \vee \bar{a}_1 \bar{a}_2 b_2 \vee \bar{a}_2 b_1 b_2$$

C_1

$a_1 a_2$ $b_1 b_2$	00	01	11	10
00				
01	1			
11	1	1		1
10	1	1		

$$C_{\min}(C_1) = \left\{ \begin{array}{l} 0x1x \\ 00x1 \\ x011 \end{array} \right\}$$

$$S^a = 8, S^b = \cancel{11}$$

$$C_1 = \bar{a}_1 b_1 \vee \bar{a}_1 \bar{a}_2 b_2 \vee \bar{a}_2 b_1 b_2$$

C_2

$a_1 a_2$ $b_1 b_2$	00	01	11	10
00				
01	1			
11	1	1		1
10	1	1		

$$C_{\min}(C_2) = \left\{ \begin{array}{l} 0x1x \\ 00x1 \\ x011 \end{array} \right\}$$

$$S^a = 8, S^b = \cancel{11}$$

$$C_2 = \bar{a}_1 b_1 \vee \bar{a}_1 \bar{a}_2 b_2 \vee \bar{a}_2 b_1 b_2$$