

C_2

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

$$C_{min}(C_2) = \begin{Bmatrix} 0x11 \\ 001x \\ 1100 \end{Bmatrix}$$

$$S^a = 10, S^b = 13$$

$$C_2 = \bar{a}_1 b_1 b_2 \vee \bar{a}_1 \bar{a}_2 \bar{a}_2 b_1 \vee a_1 a_2 \bar{b}_1 \bar{b}_2$$

C_3

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

$$C_{min}(C_3) = \begin{Bmatrix} 100x \\ 1x01 \\ 0x11 \\ 001x \\ 0100 \\ 1110 \end{Bmatrix}$$

$$S^a = 20, S^b = 26$$

$$C_3 = a_1 \bar{a}_2 \bar{b}_1 \vee a_1 \bar{a}_2 b_1 \vee a_1 b_1 \bar{b}_2 \vee \bar{a}_1 b_1 b_2 \vee \bar{a}_1 \bar{a}_2 b_1 \vee \bar{a}_1 b_2 \bar{b}_1 \bar{b}_2 \vee a_1 a_2 b_1 \bar{b}_2$$

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

$$C_{min}(C_4) = \begin{Bmatrix} x1x1 \\ x0x0 \\ x0x0 \end{Bmatrix}$$

$$S^a = 4, S^b = 6$$

$$C_4 = a_2 b_2 \vee \bar{a}_2 \bar{b}_2$$