

3ag 1.

$$\overline{A} \overline{C} \overline{D} + \overline{(B+C)} + \overline{(A+B+D)} + \overline{(A+B \cdot \overline{C})} + \overline{(B+C+D)}$$

$$= \overline{A} \overline{C} \overline{D} + \overline{B} \overline{C} + \overline{A} \overline{B} \overline{D} + \overline{(A+B \cdot \overline{C})} + B \cdot \overline{C} \cdot D$$

II

$$\downarrow$$

$$\overline{A} \cdot B \cdot \overline{C}$$

$$\overline{A} \overline{C} \overline{D} + \overline{B} \overline{C} + \overline{A} \overline{B} \overline{D} + \overline{A} B \overline{C} + B \overline{C} D$$

III

$$\overline{A} (B+B) \overline{C} \overline{D} = \overline{A} B \overline{C} \overline{D} + \overline{A} \overline{B} \overline{C} \overline{D}$$

$$(A+\overline{A}) (\overline{B}) \overline{C} (D+\overline{D}) = \overline{A} \overline{B} \overline{C} D + \overline{A} \overline{B} \overline{C} \overline{D} + A \overline{B} \overline{C} D + A \overline{B} \overline{C} \overline{D}$$

$$\overline{A} B \overline{D} = \overline{A} B (\overline{C}+C) \overline{D} = \overline{A} B \overline{C} \overline{D} + \overline{A} B C \overline{D}$$

$$\overline{A} B \overline{C} (D+\overline{D}) = \overline{A} B \overline{C} D + \overline{A} B \overline{C} \overline{D}$$

$$(A+\overline{A}) (B \overline{C} D) = A B \overline{C} D + \overline{A} B \overline{C} D$$

① 0110, 0010, 1001, 1000,
0001, 0000, 0100, 1101, 0101

	CD			
AB	00	01	11	10
00	1	1	0	1
01	1	1	0	1
11	0	1	0	0
10	1	1	0	0

$$1100 \rightarrow \overline{A} B \overline{C} D$$

$$A B \overline{C} \overline{D}$$

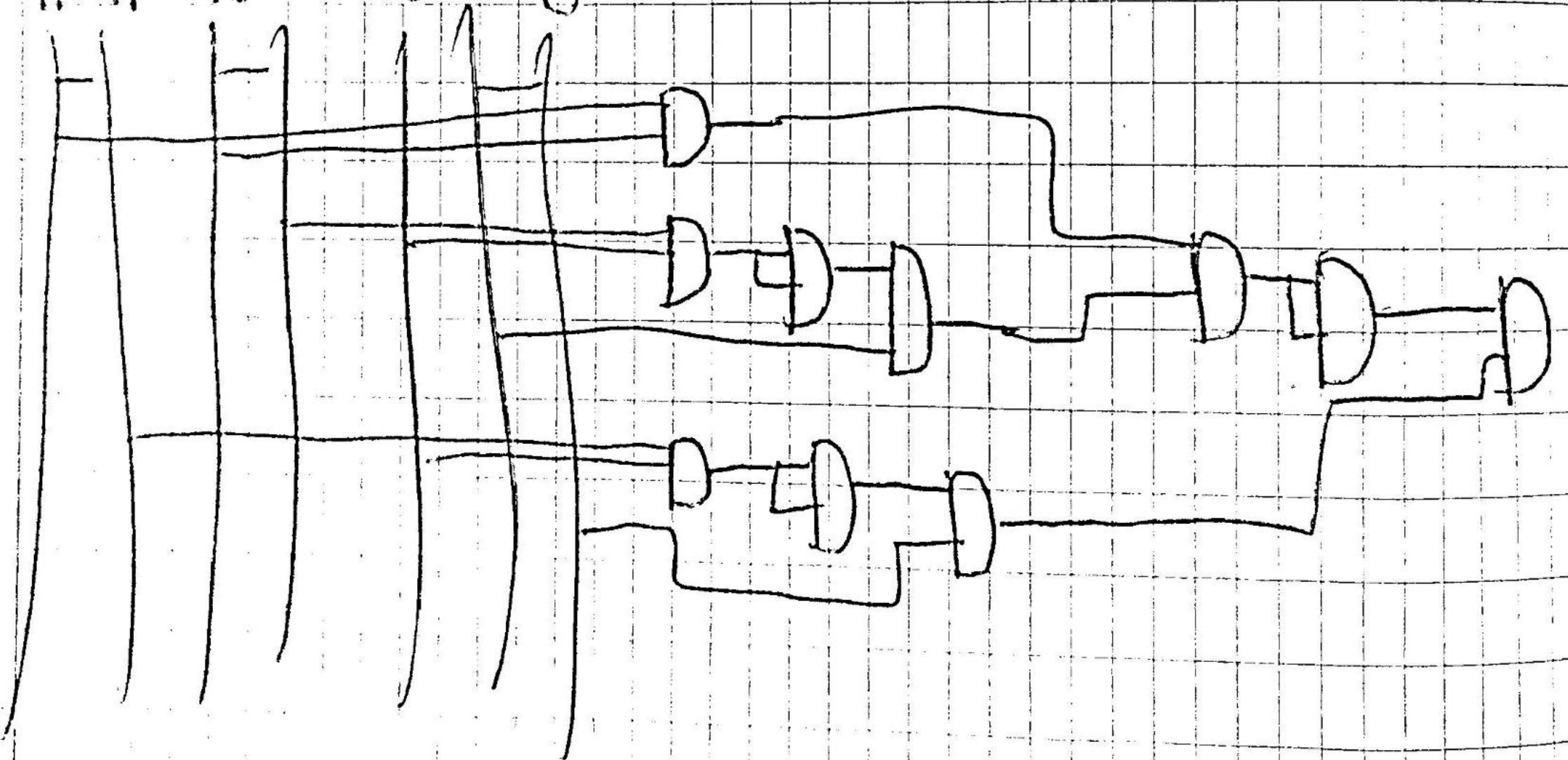
$$A B \overline{C} D$$

3ag 2

$$f = AB + \overline{B}CD + A\overline{C}\overline{D}$$

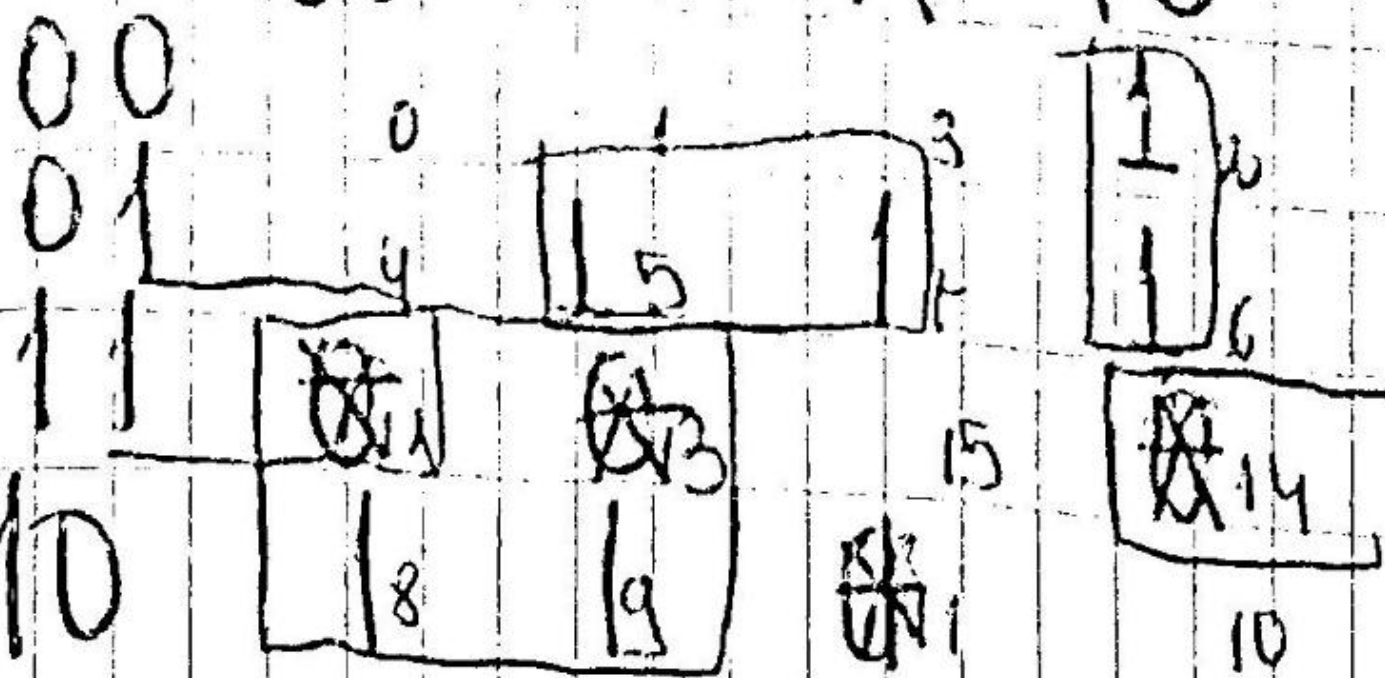
$$\overline{AB} \cdot \overline{BCD} \cdot A\overline{C}\overline{D}$$

A \overline{A} B \overline{B} C \overline{C} D \overline{D}



3ag 3

AB 00 01 11 10



$$A\overline{C} + \overline{A}BD + \overline{A}\overline{C}\overline{D}$$

Заг 4.

$$f = \overline{A}BD + B\overline{C}\overline{D} + \overline{A}\overline{D}$$

$$\overline{A}BD, B\overline{C}\overline{D}, \overline{A}\overline{D}$$

Заг 5

$f(A, B, C, D)$

AB \ CD	00	01	11	10
00	0 ₀	0 ₁	0 ₃	0 ₂
01	0 ₄	0 ₅	0 ₇	0 ₆
11	0 ₁₂	1 ₃	1 ₁₅	0 ₁₄
10	0 ₈	1 ₉	1 ₁₁	0 ₁₀

A, B, D - ақпараттар

A_1	A_2	A_3
A	B	D
0	0	0
0	0	1
0	1	0
0	1	1
1	0	0
1	0	1
1	1	0
1	1	1

жана
декод

$$\begin{aligned} D_0 &= 0 \\ D_1 &= 0 \\ D_2 &= 0 \\ D_3 &= 0 \\ D_4 &= 0 \\ D_5 &= 1 \\ D_6 &= 0 \\ D_7 &= 1 \end{aligned}$$

$$\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 1 \end{array}$$