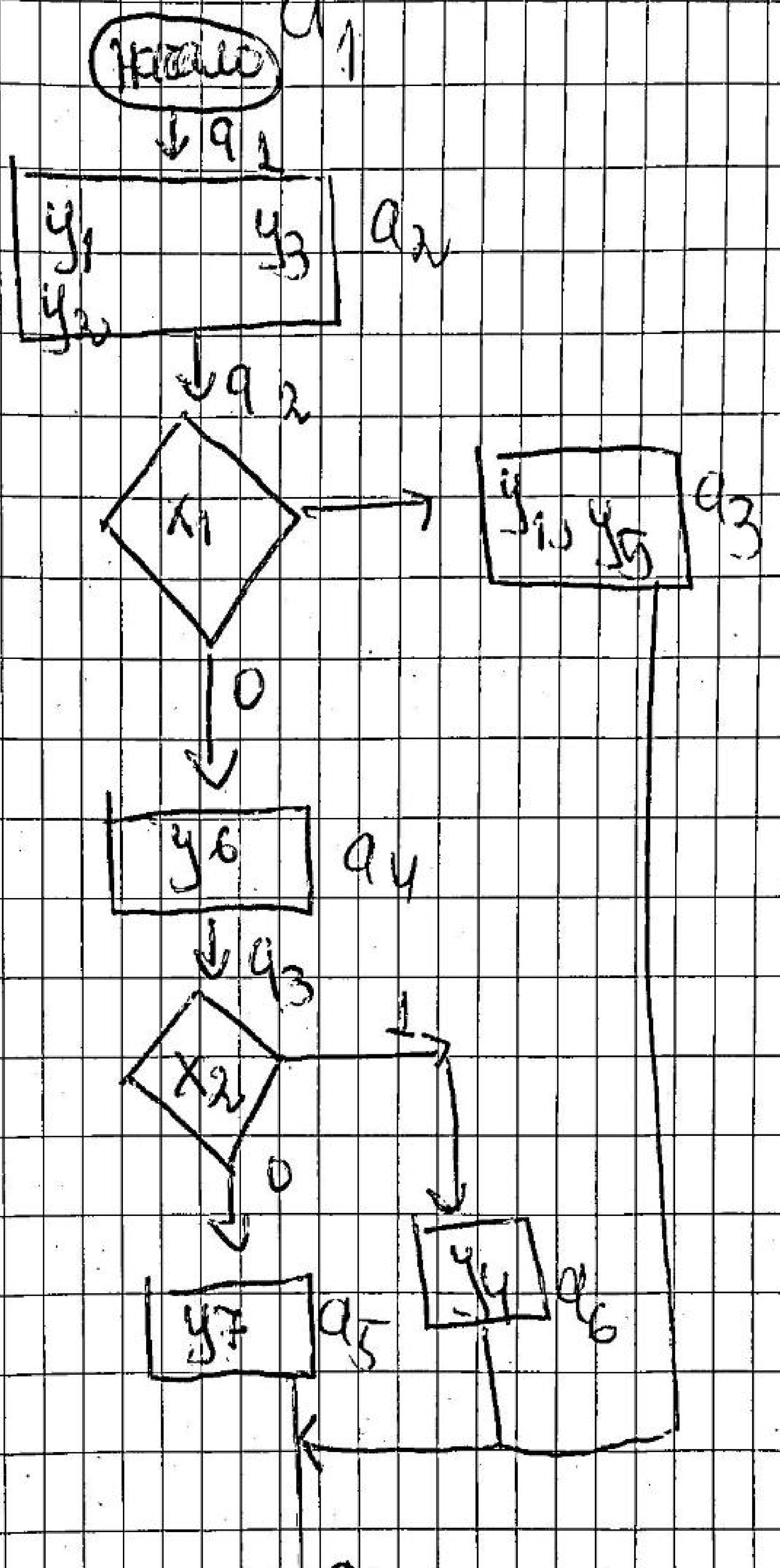
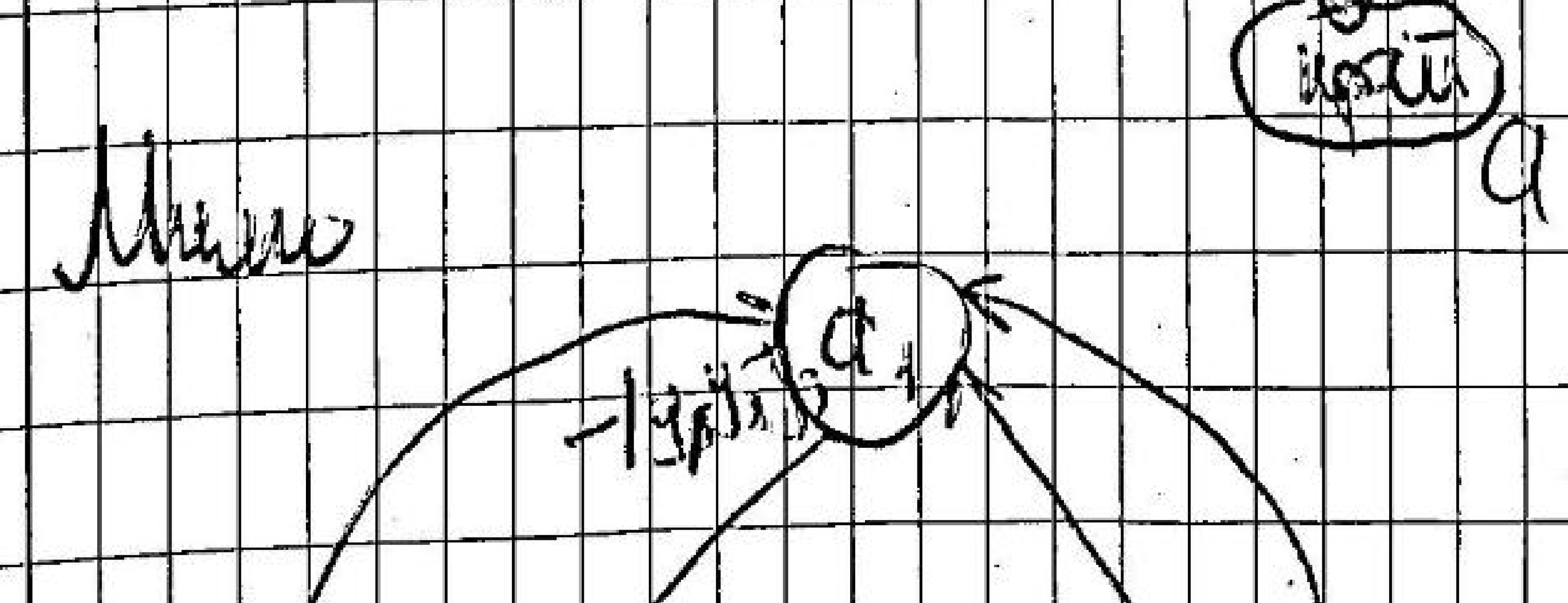
10.05.2022 $\overline{XII}$ сади. С4



Мілі



$Q \geq \log_2 3 \approx 2$ бр. $\rightarrow Q_1 Q_2$ JK RS

	Q_1	Q_2
a_1	0	0
a_2	0	1
a_3	1	0

Q_t	Q_{t+1}	JK	RS
0	0	0*	*0
0	1	1*	01
1	0	*1	10
1	1	*0	0*

a_t	Q_1	Q_2	x	y	a_{t+1}	Q_1	Q_2	RS	JK
a_1	0	0	–	$y_1 y_2 y_3$	a_2	0	1	01	0*
a_2	0	1	x_1	$y_4 y_5$	a_1	0	0	10	0*
			$\overline{x_1}$	y_6	a_3	1	0	10	1*
a_3	1	0	x_2	y_4	a_1	0	0	*0	*1
			$\overline{x_2}$	y_7	a_1	0	0	*0	*1

повтарящи се събират у-и примерно

$y_1 = \overline{Q_1}\,\overline{Q_2}$

$y_2 = \overline{Q_1}\,\overline{Q_2}$

$y_3 = \overline{Q_1}\,\overline{Q_2}$

$y_4 = \overline{Q_1} Q_2 x_1 + Q_1 \overline{Q_2} x_2$

$y_5 = \overline{Q_1} Q_2 x_1$

$y_6 = \overline{Q_1} Q_2 \overline{x_1}$

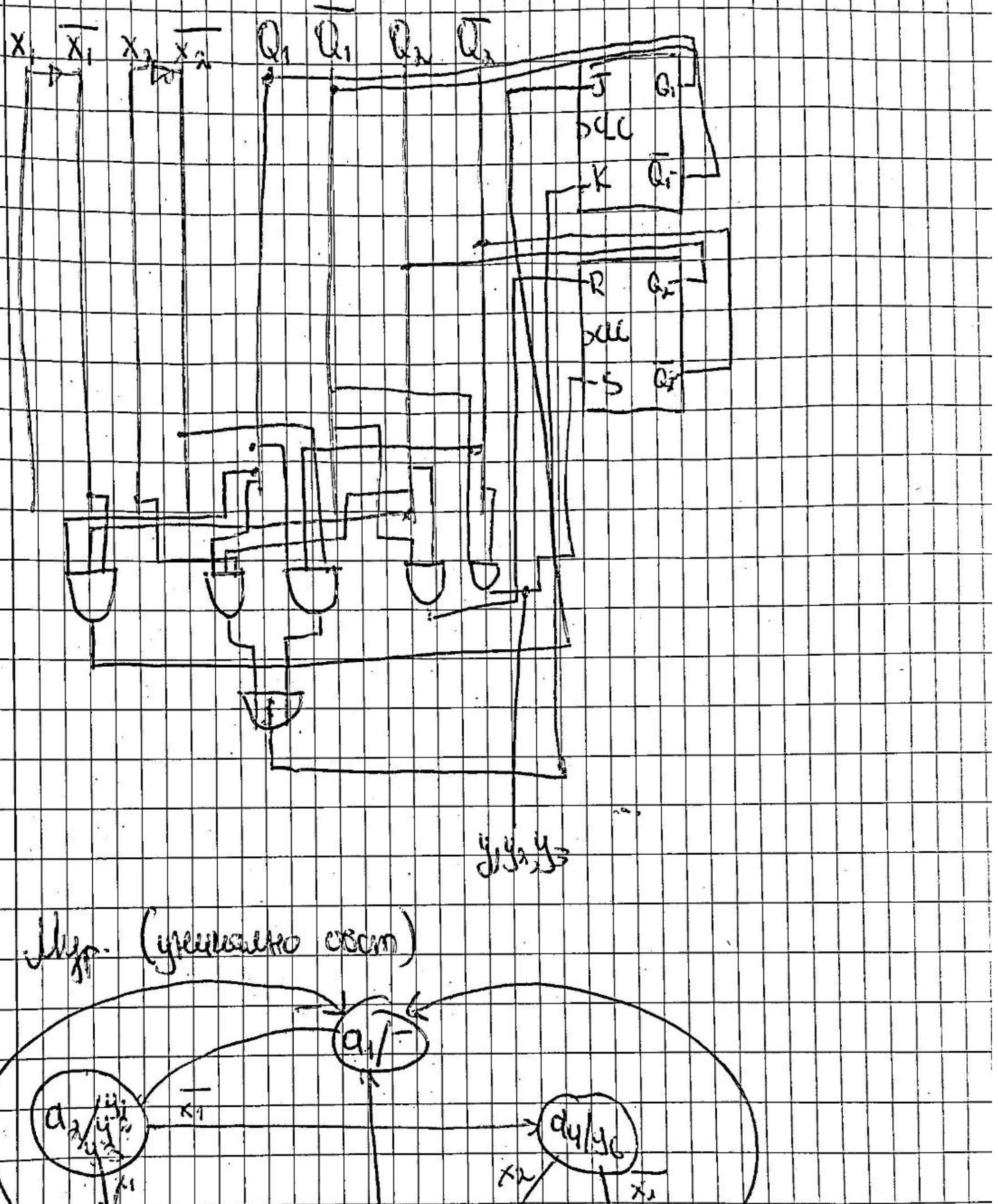
$y_7 = Q_1 \overline{Q_2}\,\overline{x_2}$

$J = \overline{Q_1} Q_2 \overline{x_1}$

$K = Q_1 \overline{Q_2} x_2 + Q_1 \overline{Q_2}\,\overline{x_2} = Q_1 \overline{Q_2}$

$R = \overline{Q_1} Q_2 x_1 + \overline{Q_1} Q_2 \overline{x_1} = \overline{Q_1} Q_2$

$S = \overline{Q_1}\,\overline{Q_2}$



Алг. (умножение свом)

$\log_2 6 \approx 3 \Rightarrow Q_1, Q_2, Q_3$

	Q_1	Q_2	Q_3
a_1	0	0	0
a_2	0	0	1
a_3	0	1	0
a_4	0	1	1
a_5	1	0	0
a_6	1	0	1

at	Q_1	Q_2	Q_3	x	y	a^{t+1}	Q_1	Q_2	Q_3	T	D	J	K
a_1	0	0	0	—	—	a_2	0	0	1	0	0	1	*
a_2	0	0	1	$\frac{x_1}{x_2}$	$y_1 y_2$ y_3	a_3 a_4	0	1	0	0	1	*	0
a_3	0	1	0	—	$y_4 y_5$	a_1	0	0	0	0	0	0	*
a_4	0	1	1	x_2	y_6	a_6	1	0	1	1	1	*	0
				$\overline{x_2}$		a_5	1	0	0	1	1	*	1
a_5	1	0	0	—	y_7	a_1	0	0	0	1	0	0	*
a_6	1	0	1	—	y_4	a_1	0	0	0	1	0	*	1

Ot	Q^{t+1}	T	D	J	K
0	0	0	0	0	*
0	1	1	1	1	*
1	0	1	0	*	1
1	1	0	1	*	0

$$y_1 = y_2 = y_3 = \overline{Q_1}\,\overline{Q_2}\,Q_3$$

$$y_4 = \overline{Q_1}\,Q_2\,\overline{Q_3} + Q_1\,\overline{Q_2}\,Q_3$$

$$y_5 = \overline{Q_1}\,Q_2\,\overline{Q_3}$$

$$y_6 = \overline{Q_1}\,Q_2\,Q_3$$

$$y_7 = Q_1\,\overline{Q_2}\,\overline{Q_3}$$

$$T = \overline{Q_1}\,Q_2\,Q_3\,(x_2 + \overline{x_2}) + Q_1\,\overline{Q_2}\,Q_3 + Q_1 Q_2\,\overline{Q_3} = \overline{Q_1}\,Q_2\,Q_3 + \ldots$$

$$Q_1 \overline{Q_2}$$

$$D = \overline{Q_1}\,\overline{Q_2}\,Q_3\,(x_1 + \overline{x_1})$$

$$T = \overline{Q_1}\,\overline{Q_2}\,\overline{Q_3}$$

$$K = \overline{Q_1}\,\overline{Q_2}\,Q_3\,(x_1 + \overline{x_1}) + \overline{Q_1}\,Q_2\,Q_2\,\overline{x_2} + Q_1\,\overline{Q_2}\,Q_3$$