



$$U_1: 18 - 820 \cdot I_1 - 1k(I_1 - I_2) = 0$$

$$U_2: -1k(I_2 - I_1) - 1,2k(I_2) - 2,2k(I_2 - I_3) = 0$$

$$U_3: -390 I_3 - 5V - 2,2k(I_3 - I_2) = 0$$

$$M_1: -1820 I_1 + 1k I_2 = -18$$

$$M_2: +1k I_1 - 4,4k I_2 + 2,2k I_3 = 0$$

$$M_3: +2,2k I_2 - 2590 I_3 = 5$$

	I_1	I_2	I_3	TI
I_1	-1820	1k	0	-18
I_2	1k	-4,4k	2,2k	0
I_3	0	2,2k	-2590	5



$$I_1 = 0,0114546 \text{ A} \approx 11,455 \text{ mA}$$

$$I_2 = 2,8473 \times 10^{-3} \text{ A} \approx 2,847 \text{ mA}$$

$$I_3 = 4,8812 \times 10^{-4} \text{ A} \approx 0,488 \text{ mA} \approx 488 \mu\text{A}$$

$$F_1 \div -1820$$

I_1	I_2	I_3	TI
1	$-(91/50)$	0	$(9/910)$
1000	$-4,4k$	$2,2k$	0
0	$2,2k$	-2590	5

$$F_2 - 100 F_1$$

I_1	I_2	I_3	TI
1	$-(91/50)$	0	$(9/910)$
0	$-3850,55$	2200	$-9,89$
0	2200	-2590	5

$$F_2 \div -3850,55$$

I_1	I_2	I_3	TI
1	$-(91/50)$	0	$(9/910)$
0	1	$-(4000/7004)$	$(0,002568)$
0	2200	-2590	5

$$(F_3 - 2200 F_2) \wedge (F_1 - (91/50) F_2)$$

I_1	I_2	I_3	TI
1	0	$(-0,3139)$	$0,011301$
0	1	$(-0,57134)$	$0,002568$
0	0	$-1833,076$	$-0,650684$

$$F_3 \div (-1833,076)$$

I_1	I_2	I_3	TI
1	0	$-0,3139$	$0,011301$
0	1	$-0,57134$	$0,002568$
0	0	1	$-0,000488$

$$(F_1 + 0,3139 F_3) \wedge (F_2 + 0,57134 F_3)$$

I_1	I_2	I_3	TI
1	0	0	$0,0114546$
0	1	0	$2,8473 \times 10^{-3}$
0	0	1	$4,8812 \times 10^{-4}$