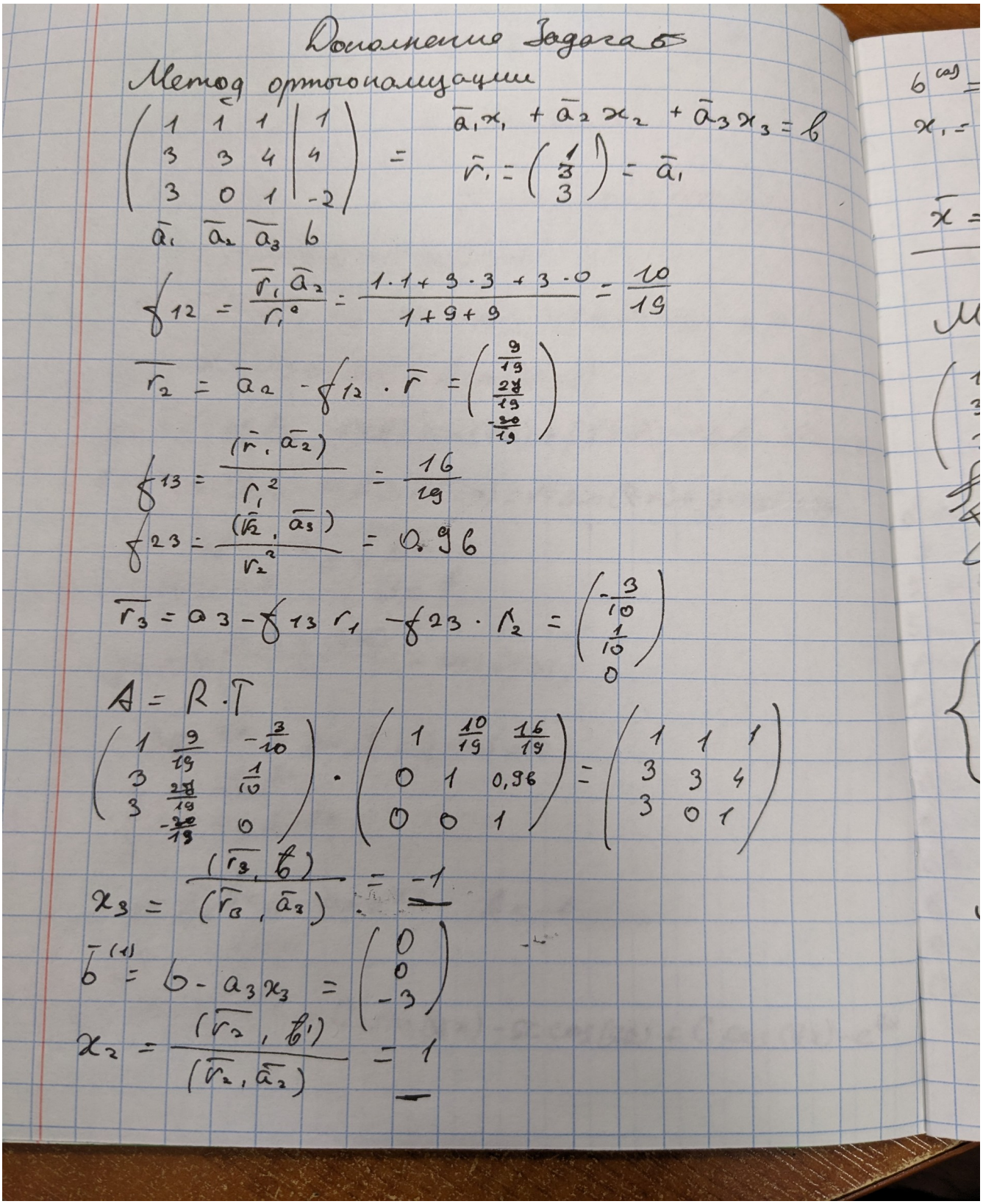
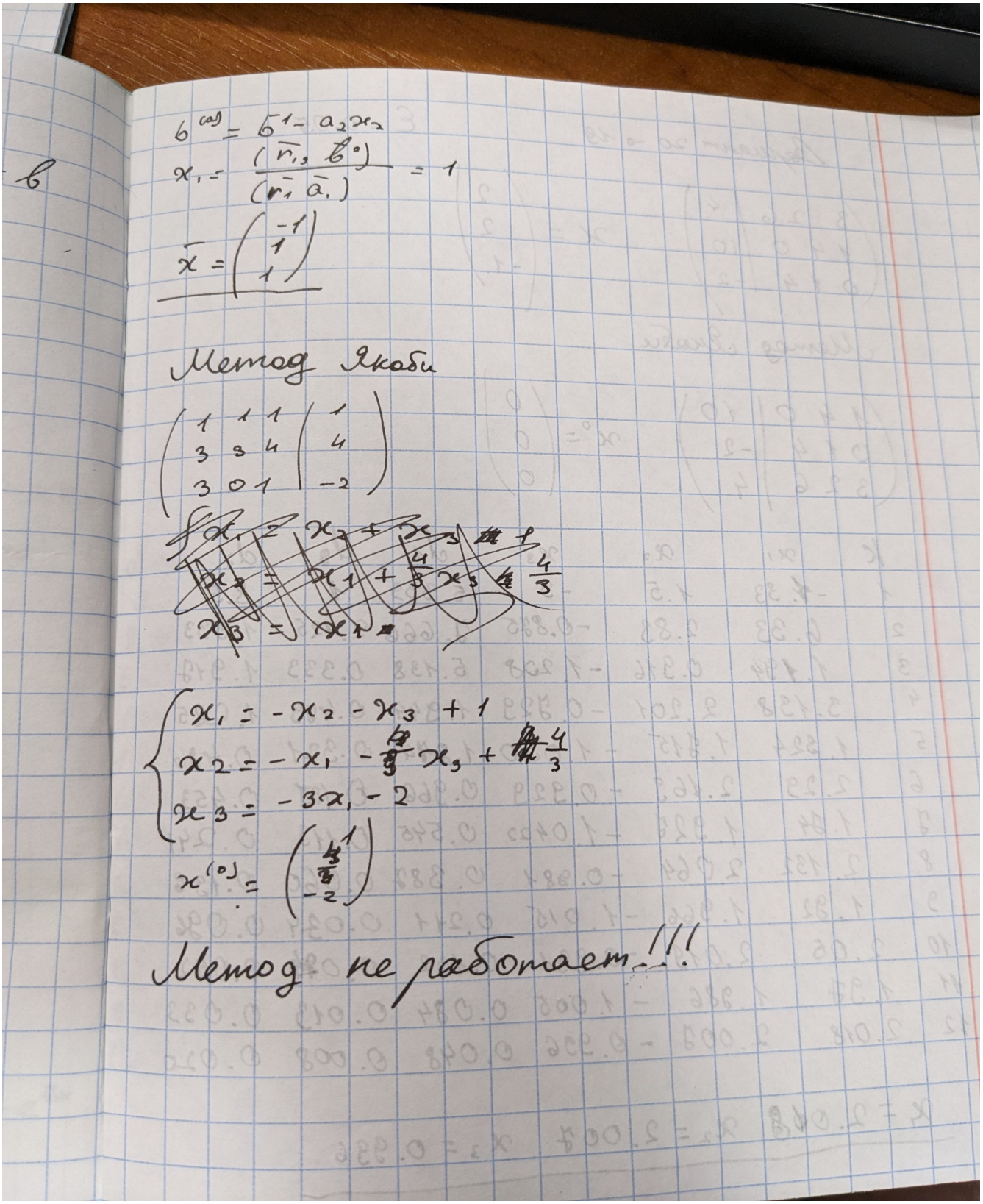
Дополнение к работа 5





2 онлайн калькулятора и 2 самописных скрипта уходят в INF для данной матрицы

$\delta_{23} = \frac{(r_2, a_3)}{r_2} = \frac{\frac{8}{19} + \frac{108}{19} - \frac{20}{19}}{\frac{81}{361} + \frac{829}{361} + \frac{900}{361}} = \frac{\frac{97}{19}}{\frac{1810}{361}} = \frac{97}{95}$

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Вариант 20 - 19 $\varepsilon = 0.05$

$$\left(\begin{array}{ccc|c} 3 & 26 & & 4 \\ 1 & 4 & 0 & 10 \\ 0 & 1 & 4 & -2 \end{array}\right) \qquad x = \begin{pmatrix} 2 \\ 2 \\ -1. \end{pmatrix}$$

Метод Якоби

$$\left(\begin{array}{ccc|c} 1 & 4 & 0 & 10 \\ 0 & 1 & 4 & -2 \\ 3 & 2 & 6 & 4 \end{array}\right) \qquad x^0 = \begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix}$$

K	x_1	x_2	x_3	d_1	d_2	d_3	dmax
1	-1.33	1.5	-3	5.333	1	8.5	8.5
2	6.33	2.83	-0.875	7.666	2.125	1.333	7.666
3	1.194	0.916	-1.208	5.138	0.333	1.917	5.139
4	3.138	2.201	-0.929	1.944	0.429	1.285	1.944
5	1.324	1.715	-1.050	1.814	0.321	0.486	1.815
6	2.29	2.169	-0.929	0.966	0.127	0.453	0.966
7	1.84	1.927	-1.022	0.545	0.113	0.241	0.545
8	2.132	2.064	-0.981	0.387	0.060	0.136	0.387
9	1.92	1.966	-1.015	0.211	0.034	0.096	0.211
10	2.06	2.019	-0.991	0.132	0.028	0.052	0.132
11	1.97	1.986	-1.005	0.084	0.013	0.033	0.083
12	2.018	2.007	-0.996	0.048	0.008	0.020	0.048

$x_1 = 2.018$ $x_2 = 2.007$ $x_3 = 0.996$

Мет

K	
1	-1
2	1
3	1.
4	1.

$x_1 =$

Метод Зейделя

k	x_1	x_2	x_3	d_1	d_2	d_3	dmax
1	-1.3	2.833	-1.208	6.833	7.166	0.791	7.166
2	1.861	2.084	-1.008	3.194	0.738	0.199	3.194
3	1.994	2.001	-1.000	0.133	0.083	0.008	0.133
4	1.999	2.000	-1.000	0.005	0.001	0.000	0.005

$x_1 = 1.999 \quad x_2 = 2.000 \quad x_3 = -1.000$

dmax
8.5
7,666
5.139
1.944
1.815
0.966
0,545
0.388
0.211
0.132
0.083
0.048