$$A := \begin{pmatrix} 2 & 2 & -4 & 2 & 6 & -2 \\ 4 & -2 & 2 & 4 & 2 & -6 \\ 2 & 6 & -6 & -2 & 4 & 2 \\ 10 & 4 & -2 & -2 & 4 & 2 \\ -6 & -2 & 4 & 6 & 2 & 6 \\ 8 & 6 & 2 & -12 & -6 & -4 \end{pmatrix}$$

$$B := \begin{pmatrix} 12 \\ 60 \\ -45 \\ -9 \\ 48 \\ -81 \end{pmatrix}$$

$$A^{-1} = \begin{pmatrix} -0.151 & 0.077 & 0.042 & 0.099 & -0.053 & -0.049 \\ -0.275 & 0.272 & 0.406 & -0.108 & 0.117 & 0.054 \\ 0.165 & -0.019 & -0.131 & -1.174 \times 10^{-3} & 0.164 & 0.126 \\ -0.458 & 0.343 & 0.399 & -0.041 & 1.174 \times 10^{-3} & -0.104 \\ 0.546 & -0.268 & -0.373 & 0.046 & 0.092 & 0.102 \\ -0.077 & -0.073 & -9.39 \times 10^{-3} & 0.089 & 0.012 & -0.045 \end{pmatrix}$$

$$\begin{pmatrix} 1.5 \\ -3 \\ 4.5 \end{pmatrix}$$

$$B := \begin{pmatrix} 12 \\ 60 \\ -45 \\ -9 \\ 48 \\ -81 \end{pmatrix}$$

$$A^{-1} = \begin{pmatrix} -0.151 & 0.077 & 0.042 & 0.099 & -0.053 & -0.045 \\ -0.275 & 0.272 & 0.406 & -0.108 & 0.117 & 0.054 \\ 0.165 & -0.019 & -0.131 & -1.174 \times 10^{-3} & 0.164 & 0.126 \\ -0.458 & 0.343 & 0.399 & -0.041 & 1.174 \times 10^{-3} & -0.104 \\ 0.546 & -0.268 & -0.373 & 0.046 & 0.092 & 0.102 \\ -0.077 & -0.073 & -9.39 \times 10^{-3} & 0.089 & 0.012 & -0.045 \end{pmatrix}$$

$$I := A^{-1} \cdot B = \begin{pmatrix} 1.5 \\ -3 \\ 4.5 \\ 6 \\ 3 \\ -1.5 \end{pmatrix}$$

Press F1 for help

$$a := \begin{pmatrix} 2 & 2 & -4 & 2 & 6 & -2 \\ 4 & -2 & 2 & 4 & 2 & -6 \\ 2 & 6 & -6 & -2 & 4 & 2 \\ 10 & 4 & -2 & -2 & 4 & 2 \\ -6 & -2 & 4 & 6 & 2 & 6 \\ 8 & 6 & 2 & -12 & -6 & -4 \end{pmatrix}$$

$$b := \begin{pmatrix} 12 \\ 60 \\ -45 \\ -9 \\ 48 \\ -81 \end{pmatrix}$$

$$a1 := \begin{bmatrix} 2 & 2 & -4 & 2 & 6 & -2 \\ a_{1,0} - \left(\frac{a_{1,0}}{a_{0,0}}\right)\cdot a_{0,0} & a_{1,1} - \left(\frac{a_{1,0}}{a_{0,0}}\right)\cdot a_{0,1} & a_{1,2} - \left(\frac{a_{1,0}}{a_{0,0}}\right)\cdot a_{0,2} & a_{1,3} - \left(\frac{a_{1,0}}{a_{0,0}}\right)\cdot a_{0,3} & a_{1,4} - \left(\frac{a_{1,0}}{a_{0,0}}\right)\cdot a_{0,4} & a_{1,5} - \left(\frac{a_{1,0}}{a_{0,0}}\right)\cdot a_{0,5} \\ a_{2,0} - \left(\frac{a_{2,0}}{a_{0,0}}\right)\cdot a_{0,0} & a_{2,1} - \left(\frac{a_{2,0}}{a_{0,0}}\right)\cdot a_{0,1} & a_{2,2} - \left(\frac{a_{2,0}}{a_{0,0}}\right)\cdot a_{0,2} & a_{2,3} - \left(\frac{a_{2,0}}{a_{0,0}}\right)\cdot a_{0,3} & a_{2,4} - \left(\frac{a_{2,0}}{a_{0,0}}\right)\cdot a_{0,4} & a_{2,5} - \left(\frac{a_{2,0}}{a_{0,0}}\right)\cdot a_{0,5} \\ a_{3,0} - \left(\frac{a_{3,0}}{a_{0,0}}\right)\cdot a_{0,0} & a_{3,1} - \left(\frac{a_{3,0}}{a_{0,0}}\right)\cdot a_{0,1} & a_{3,2} - \left(\frac{a_{3,0}}{a_{0,0}}\right)\cdot a_{0,2} & a_{3,3} - \left(\frac{a_{3,0}}{a_{0,0}}\right)\cdot a_{0,3} & a_{3,4} - \left(\frac{a_{3,0}}{a_{0,0}}\right)\cdot a_{0,4} & a_{3,5} - \left(\frac{a_{3,0}}{a_{0,0}}\right)\cdot a_{0,5} \end{bmatrix} = \begin{pmatrix} 2 & 2 & -4 & 2 & 6 & -2 \\ 0 & -4 & 10 & 0 & -10 & -2 \\ 0 & 4 & -2 & -4 & -2 & 4 \\ 0 & -6 & 14 & -12 & -24 & 12 \\ \cdots & \cdots & \cdots & \cdots & \cdots & \cdots \end{pmatrix}$$

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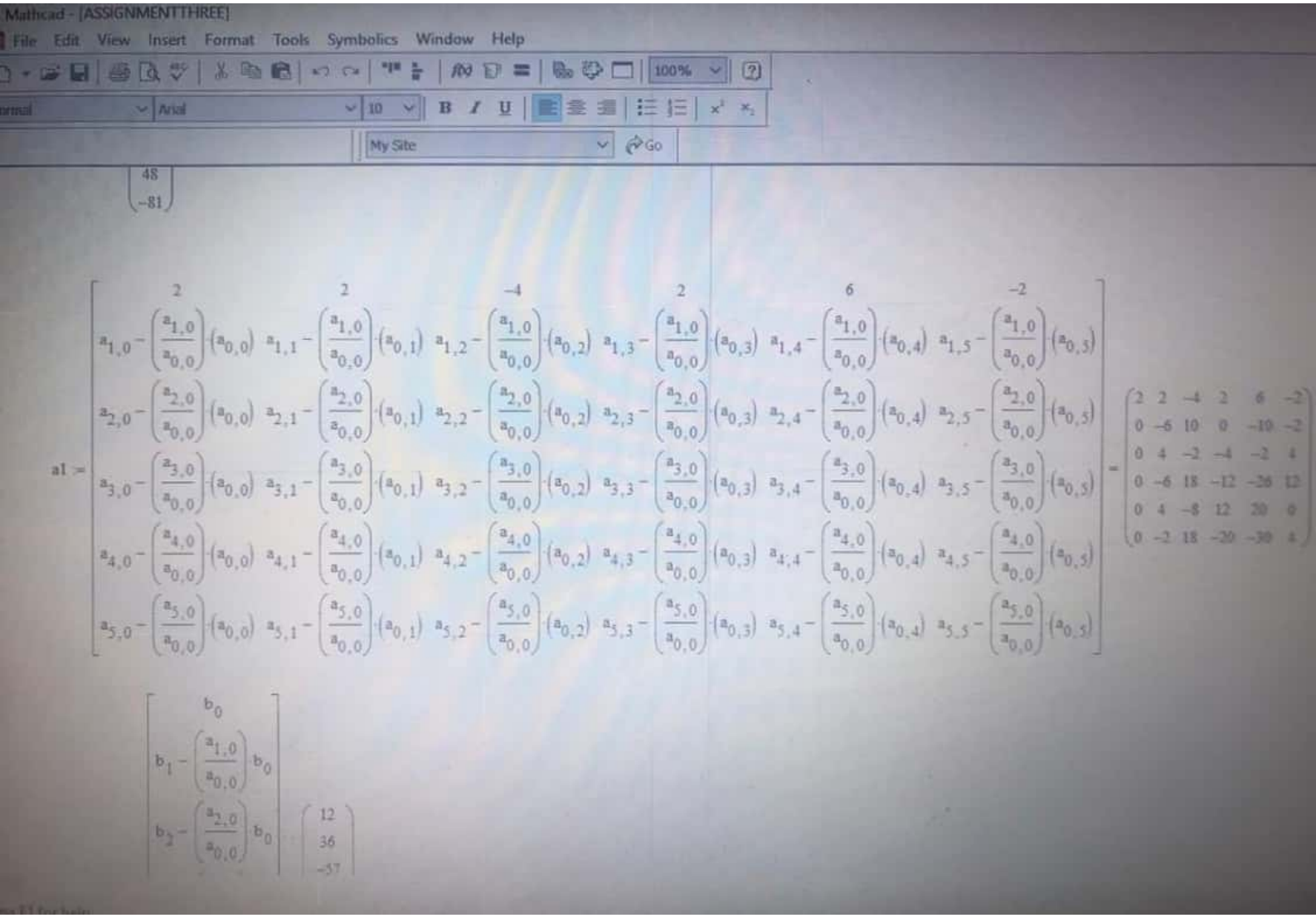

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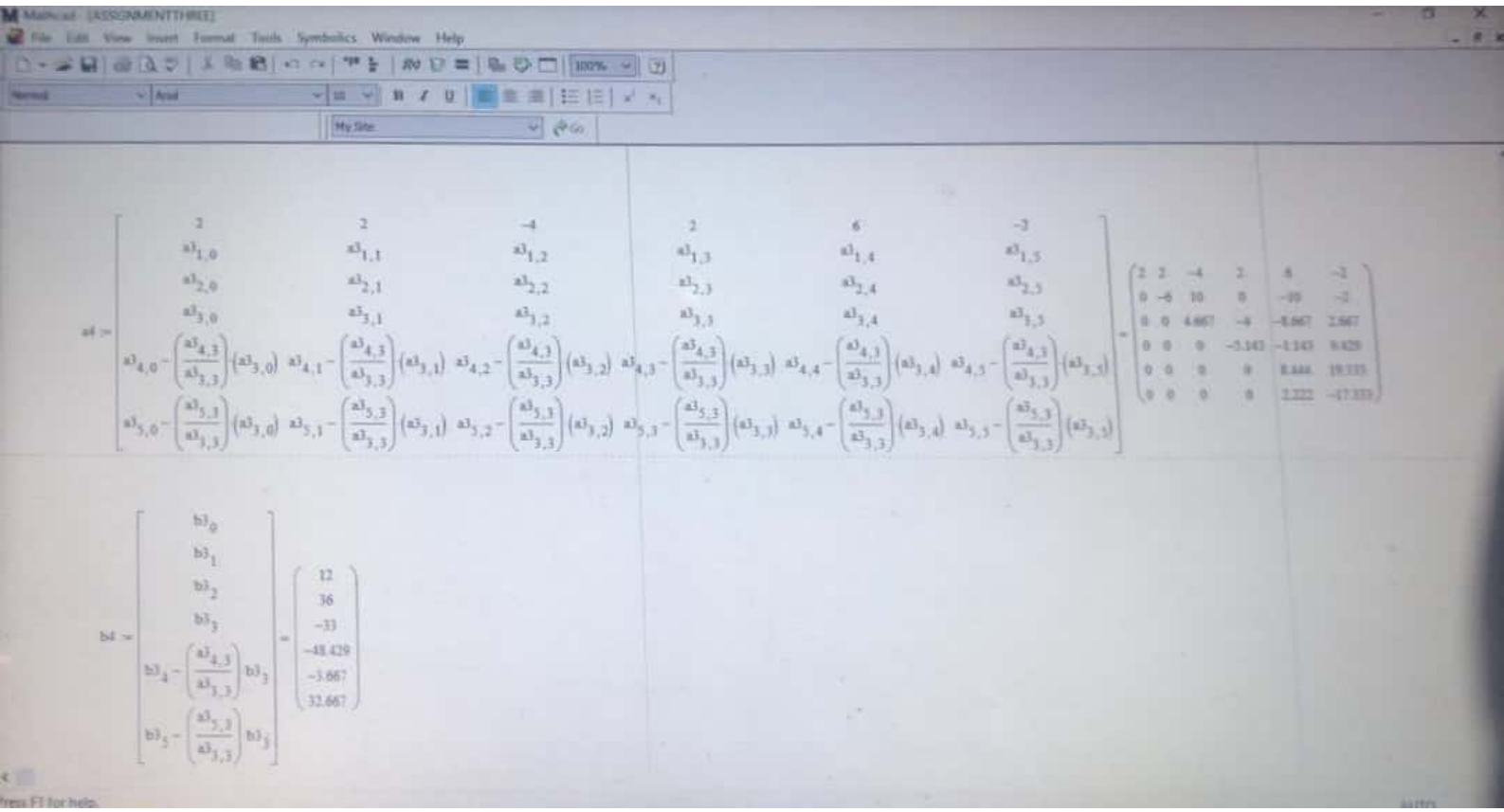
$$b2 := \begin{bmatrix} b1_0 \\ b1_1 \\ b1_2 - \left(\frac{a1_{2,1}}{a1_{1,1}}\right) \cdot b1_1 \\ b1_3 - \left(\frac{a1_{3,1}}{a1_{1,1}}\right) \cdot b1_1 \\ b1_4 - \left(\frac{a1_{4,1}}{a1_{1,1}}\right) \cdot b1_1 \\ b1_5 - \left(\frac{a1_{5,1}}{a1_{1,1}}\right) \cdot b1_1 \end{bmatrix} = \begin{pmatrix} 12 \\ 36 \\ -33 \\ -105 \\ 108 \\ -141 \end{pmatrix}$$

$$\begin{bmatrix} 2 \\ a2_{1,0} & 2 \end{bmatrix}$$

$$\begin{matrix} 2 & 2 & -4 & 2 & 6 & -2 \end{matrix}$$

$$\begin{pmatrix} a4_{1,0} & a4_{1,1} & a4_{1,2} & a4_{1,3} & a4_{1,4} & a4_{1,5} \\ a4_{2,0} & a4_{2,1} & a4_{2,2} & a4_{2,3} & a4_{2,4} & a4_{2,5} \\ a4_{3,0} & a4_{3,1} & a4_{3,2} & a4_{3,3} & a4_{3,4} & a4_{3,5} \\ a4_{4,0} & a4_{4,1} & a4_{4,2} & a4_{4,3} & a4_{4,4} & a4_{4,5} \\ a4_{5,0} - \left(\frac{a4_{5,4}}{a4_{4,4}}\right)(a4_{4,0}) & a4_{5,1} - \left(\frac{a4_{5,4}}{a4_{4,4}}\right)(a4_{4,1}) & a4_{5,2} - \left(\frac{a4_{5,4}}{a4_{4,4}}\right)(a4_{4,2}) & a4_{5,3} - \left(\frac{a4_{5,4}}{a4_{4,4}}\right)(a4_{4,3}) & a4_{5,4} - \left(\frac{a4_{5,4}}{a4_{4,4}}\right)(a4_{4,4}) & a4_{5,5} - \left(\frac{a4_{5,4}}{a4_{4,4}}\right)(a4_{4,5}) \end{pmatrix}$$

$$\begin{pmatrix} b4_0 \\ b4_1 \\ b4_2 \\ b4_3 \\ b4_4 \\ b4_5 - \left(\frac{a4_{5,4}}{a4_{4,4}}\right) b4_4 \end{pmatrix} = \begin{pmatrix} 12 \\ 36 \\ -33 \\ -48.429 \\ -3.667 \\ 33.632 \end{pmatrix}$$



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$$T_5 := \frac{b5_5}{a5_{5,5}} = -1.5$$

$$T_4 := \frac{b5_4 - (a5_{4,5} \cdot T_5)}{a5_{4,4}} = 3$$

$$T_3 := \frac{b5_3 - (a5_{3,5} \cdot T_5) - (a5_{3,4} \cdot T_4)}{a5_{3,3}} = 6$$

$$T_2 := \frac{b5_2 - (a5_{2,5} \cdot T_5) - (a5_{2,4} \cdot T_4) - (a5_{2,3} \cdot T_3)}{a5_{2,2}} = 4.5$$

$$T_1 := \frac{b5_1 - (a5_{1,5} \cdot T_5) - (a5_{1,4} \cdot T_4) - (a5_{1,3} \cdot T_3) - (a5_{1,2} \cdot T_2)}{a5_{1,1}} = -3$$

$$T_0 := \frac{b5_0 - (a5_{0,5} \cdot T_5) - (a5_{0,4} \cdot T_4) - (a5_{0,3} \cdot T_3) - (a5_{0,2} \cdot T_2) - (a5_{0,1} \cdot T_1)}{a5_{0,0}} = 1.5$$

For Help, press F1

$$b3 := \begin{bmatrix} b2_0 \\ b2_1 \\ b2_2 \\ b2_3 - \left(\frac{a2_{3,2}}{a2_{2,2}}\right) \cdot b2_2 \\ b2_4 - \left(\frac{a2_{4,2}}{a2_{2,2}}\right) \cdot b2_2 \\ b2_5 - \left(\frac{a2_{5,2}}{a2_{2,2}}\right) \cdot b2_2 \end{bmatrix} = \begin{pmatrix} 12 \\ 36 \\ -33 \\ -48.429 \\ 98.571 \\ -37.286 \end{pmatrix}$$

$$a4 := \begin{bmatrix} 2 & 2 \\ a3_{1,0} & a3_{1,1} \\ a3_{2,0} & a3_{2,1} \\ a3_{3,0} & a3_{3,1} \\ a3_{4,0} - \left(\frac{a3_{4,3}}{a3_{3,0}}\right)(a3_{3,0}) & a3_{4,1} - \left(\frac{a3_{4,3}}{a3_{3,1}}\right)(a3_{3,1}) \quad a3_{4} \end{bmatrix}$$

$$\begin{bmatrix} \\ b_5 - \left(\frac{a_{5,0}}{a_{0,0}}\right) b_0 \end{bmatrix}$$

$$\begin{matrix} & & & & & & & & & \\ & al_{1,0}^{2} & & al_{1,1}^{2} & & al_{1,2}^{-4} & & al_{1,3}^{2} & & al_{1,4}^{6} & & al_{1,5}^{-2} \end{matrix}$$

$$\begin{bmatrix} al_{2,0} - \left(\frac{al_{2,1}}{al_{1,1}}\right)\cdot(al_{1,0}) & al_{2,1} - \left(\frac{al_{2,1}}{al_{1,1}}\right)\cdot(al_{1,1}) & al_{2,2} - \left(\frac{al_{2,1}}{al_{1,1}}\right)\cdot(al_{1,2}) & al_{2,3} - \left(\frac{al_{2,1}}{al_{1,1}}\right)\cdot(al_{1,3}) & al_{2,4} - \left(\frac{al_{2,1}}{al_{1,1}}\right)\cdot(al_{1,4}) & al_{2,5} - \left(\frac{al_{2,1}}{al_{1,1}}\right)\cdot(al_{1,5}) \\ al_{3,0} - \left(\frac{al_{3,1}}{al_{1,1}}\right)\cdot(al_{1,0}) & al_{3,1} - \left(\frac{al_{3,1}}{al_{1,1}}\right)\cdot(al_{1,1}) & al_{3,2} - \left(\frac{al_{3,1}}{al_{1,1}}\right)\cdot(al_{1,2}) & al_{3,3} - \left(\frac{al_{3,1}}{al_{1,1}}\right)\cdot(al_{1,3}) & al_{3,4} - \left(\frac{al_{3,1}}{al_{1,1}}\right)\cdot(al_{1,4}) & al_{3,5} - \left(\frac{al_{3,1}}{al_{1,1}}\right)\cdot(al_{1,5}) \\ al_{4,0} - \left(\frac{al_{4,1}}{al_{1,1}}\right)\cdot(al_{1,0}) & al_{4,1} - \left(\frac{al_{4,1}}{al_{1,1}}\right)\cdot(al_{1,1}) & al_{4,2} - \left(\frac{al_{4,1}}{al_{1,1}}\right)\cdot(al_{1,2}) & al_{4,3} - \left(\frac{al_{4,1}}{al_{1,1}}\right)\cdot(al_{1,3}) & al_{4,4} - \left(\frac{al_{4,1}}{al_{1,1}}\right)\cdot(al_{1,4}) & al_{4,5} - \left(\frac{al_{4,1}}{al_{1,1}}\right)\cdot(al_{1,5}) \\ al_{5,0} - \left(\frac{al_{5,1}}{al_{1,1}}\right)\cdot(al_{1,0}) & al_{5,1} - \left(\frac{al_{5,1}}{al_{1,1}}\right)\cdot(al_{1,1}) & al_{5,2} - \left(\frac{al_{5,1}}{al_{1,1}}\right)\cdot(al_{1,2}) & al_{5,3} - \left(\frac{al_{5,1}}{al_{1,1}}\right)\cdot(al_{1,3}) & al_{5,4} - \left(\frac{al_{5,1}}{al_{1,1}}\right)\cdot(al_{1,4}) & al_{5,5} - \left(\frac{al_{5,1}}{al_{1,1}}\right)\cdot(al_{1,5}) \end{bmatrix} = \begin{pmatrix} 2 & 2 & -4 & 2 \\ 0 & -6 & 10 & 0 \\ 0 & 0 & 4.667 & -4 \\ 0 & 0 & 8 & -12 \\ 0 & 0 & -1.333 & 12 \\ 0 & 0 & 14.667 & -28 \end{pmatrix}$$

$$\begin{bmatrix} bl_0 \\ bl_1 \\ bl_2 - \left(\frac{al_{2,1}}{\quad}\right)\cdot bl_1 \end{bmatrix} \quad \begin{pmatrix} 12 \end{pmatrix}$$

$$\left[a_{5,0} - \left(\frac{a_{5,0}}{a_{0,0}} \right) \cdot (a_{0,0}) \quad a_{5,1} - \left(\frac{a_{5,0}}{a_{0,0}} \right) \cdot (a_{0,1}) \quad a_{5,2} - \left(\frac{a_{5,0}}{a_{0,0}} \right. \right.$$

$$b1 := \begin{bmatrix} b_0 \\ b_1 - \left(\frac{a_{1,0}}{a_{0,0}} \right) \cdot b_0 \\ b_2 - \left(\frac{a_{2,0}}{a_{0,0}} \right) \cdot b_0 \\ b_3 - \left(\frac{a_{3,0}}{a_{0,0}} \right) \cdot b_0 \\ b_4 - \left(\frac{a_{4,0}}{a_{0,0}} \right) \cdot b_0 \\ b_5 - \left(\frac{a_{5,0}}{a_{0,0}} \right) \cdot b_0 \end{bmatrix} = \begin{pmatrix} 12 \\ 36 \\ -57 \\ -69 \\ 84 \\ -129 \end{pmatrix}$$

$$\left[\begin{matrix} 2 \\ a1_{1,0} \\ a1_{2,0} - \left(\frac{a1_{2,1}}{a1_{1,1}} \right) \cdot (a1_{1,0}) \\ (a1_{\cdot,\cdot}) \end{matrix} \right. \quad \begin{matrix} 2 \\ a1_{1,1} \\ a1_{2,1} - \left(\frac{a1_{2,1}}{a1_{1,1}} \right) \cdot (a1_{1,1}) \\ (a1_{\cdot,\cdot}) \end{matrix} \quad \begin{matrix} - \\ a1_{1} \\ a1_{2,2} - \left(\frac{a1_{2}}{a1_{1,} \right. \\ (a1_{\cdot,\cdot}) \end{matrix}$$

			A				T	B	
2	2	-4	2	6	-2	T1	12		
4	-2	2	4	2	-6	T2	60		
2	6	-6	-2	4	2	T3	-45		
10	4	-2	-2	4	2	T4	-9		
-6	-2	4	6	2	6	T5	48		
8	6	2	-12	-6	-4	T6	-81		

			A				T	B	
2	2	-4	2	6	-2	T1	12		
0	-6	10	0	-10	-2	T2	36	2	
0	4	-2	-4	-2	4	T3	-57	1	
0	-6	18	-12	-26	12	T4	-69	5	
0	4	-8	12	20	0	T5	84	-3	
0	-2	18	-20	-30	4	T6	-129	4	

			A				T	B	
2	2	-4	2	6	-2	T1	12		
0	-6	10	0	-10	-2	T2	36		
0	0	4.66667	-4	-8.6667	2.66667	T3	-33	-0.6667	
0	0	8	-12	-16	14	T4	-105	1	
0	0	-1.3333	12	13.3333	-1.3333	T5	108	-0.6667	
0	0	14.6667	-20	-26.667	4.66667	T6	-141	0.33333	

			A				X	B	
2	2	-4	2	6	-2	T1	12		
0	-6	10	0	-10	-2	T2	36		
0	0	4.66667	-4	-8.6667	2.66667	T3	-33		
0	0	0	-5.1429	-1.1429	9.42857	X4	-48.429	1.71429	
0	0	0	10.8571	10.8571	-0.5714	X5	98.5714	-0.2857	
0	0	0	-7.4286	0.57143	-3.7143	X6	-37.286	3.14286	

			A				T	B	
2	2	-4	2	6	-2	T1	12		
0	-6	10	0	-10	-2	T2	36		
0	0	4.66667	-4	-8.6667	2.66667	T3	-33		
0	0	0	-5.1429	-1.1429	9.42857	T4	-48.429		
0	0	0	0	8.44444	19.3333	T5	-3.6667	-2.1111	
0	0	0	0	2.22222	-17.333	T6	32.6667	1.44444	

			A				X	B	
2	2	-4	2	6	-2	T1	12		
0	-6	10	0	-10	-2	T2	36		
0	0	4.66667	-4	-8.6667	2.66667	T3	-33		
0	0	0	-5.1429	-1.1429	9.42857	T4	-48.429		
0	0	0	0	8.44444	19.3333	T5	-3.6667		
0	0	0	0	0	-22.421	T6	33.6316	0.26316	

T1	1.5
T2	-3

		0	-6	10	0	-10	-2	T2	36		
		0	0	4.66667	-4	-8.6667	2.66667	T3	-33	-0.6667	
		0	0	8	-12	-16	14	T4	-105	1	
		0	0	-1.3333	12	13.3333	-1.3333	T5	108	-0.6667	
		0	0	14.6667	-20	-26.667	4.66667	T6	-141	0.33333	

			A				X	B	
	2	2	-4	2	6	-2	T1	12	
	0	-6	10	0	-10	-2	T2	36	
	0	0	4.66667	-4	-8.6667	2.66667	T3	-33	
	0	0	0	-5.1429	-1.1429	9.42857	X4	-48.429	1.71429
	0	0	0	10.8571	10.8571	-0.5714	X5	98.5714	-0.2857
	0	0	0	-7.4286	0.57143	-3.7143	X6	-37.286	3.14286

			A				T	B	
	2	2	-4	2	6	-2	T1	12	
	0	-6	10	0	-10	-2	T2	36	
	0	0	4.66667	-4	-8.6667	2.66667	T3	-33	
	0	0	0	-5.1429	-1.1429	9.42857	T4	-48.429	
	0	0	0	0	8.44444	19.3333	T5	-3.6667	-2.1111
	0	0	0	0	2.22222	-17.333	T6	32.6667	1.44444

			A				X	B	
	2	2	-4	2	6	-2	T1	12	
	0	-6	10	0	-10	-2	T2	36	
	0	0	4.66667	-4	-8.6667	2.66667	T3	-33	
	0	0	0	-5.1429	-1.1429	9.42857	T4	-48.429	
	0	0	0	0	8.44444	19.3333	T5	-3.6667	
	0	0	0	0	0	-22.421	T6	33.6316	0.26316

T1	1.5
T2	-3
T3	4.5
T4	6
T5	3
T6	-1.5