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$$1) T_1 + T_2 - 2T_3 + T_4 + 3T_5 - T_6 = 4$$

$$2T_1 - T_2 + T_3 + 2T_4 + T_5 - 3T_6 = 20$$

$$T_1 + 3T_2 - 3T_3 - T_4 + 2T_5 + T_6 = -15$$

$$5T_1 + 2T_2 - T_3 - T_4 + 2T_5 + T_6 = -3$$

$$-3T_1 - T_2 + 2T_3 + 3T_4 + T_5 + 3T_6 = 16$$

$$4T_1 + 3T_2 + T_3 - 6T_4 - 3T_5 - 2T_6 = -27$$

$\begin{bmatrix} 1 & 1 & -2 & 1 & 3 & -1 \\ 2 & -1 & 1 & 2 & 1 & -3 \\ 1 & 3 & -3 & -1 & 2 & 1 \\ 5 & 2 & -1 & -1 & 2 & 1 \\ -3 & -1 & 2 & 3 & 1 & 3 \\ 4 & 3 & 1 & -6 & -3 & -2 \end{bmatrix}$	$\begin{bmatrix} T_1 \\ T_2 \\ T_3 \\ T_4 \\ T_5 \\ T_6 \end{bmatrix}$	$=$	$\begin{bmatrix} 4 \\ 20 \\ -15 \\ -3 \\ 16 \\ -27 \end{bmatrix}$
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1	1	-2	1	3	-1	T_1	4
$2 - \frac{2}{1}x_1$	$-1 - \frac{2}{1}x_1$	$1 - \frac{2}{1}x_1 - 2$	$2 - \frac{2}{1}x_1$	$1 - \frac{2}{1}x_3$	$-3 - \frac{2}{1}x_1$	T_2	$20 - \frac{2}{1}x_4$
$1 - \frac{1}{1}x_1$	$3 - \frac{1}{1}x_1$	$-3 - \frac{1}{1}x_1 - 2$	$-1 - \frac{1}{1}x_1$	$2 - \frac{1}{1}x_3$	$1 - \frac{1}{1}x_1$	T_3	$-15 - \frac{1}{1}x_1$
$5 - \frac{5}{1}x_1$	$2 - \frac{5}{1}x_1$	$-17 - \frac{5}{1}x_1 - 2$	$-1 - \frac{5}{1}x_1$	$2 - \frac{5}{1}x_3$	$1 - \frac{5}{1}x_1$	T_4	$-3 - \frac{5}{1}x_4$
$-3 - \frac{3}{1}x_1$	$-1 - \frac{3}{1}x_1$	$2 - \frac{3}{1}x_1 - 2$	$3 - \frac{3}{1}x_1$	$1 - \frac{3}{1}x_3$	$3 - \frac{3}{1}x_1$	T_5	$16 - \frac{3}{1}x_4$
$4 - \frac{4}{1}x_1$	$3 - \frac{4}{1}x_1$	$1 - \frac{4}{1}x_1 - 2$	$-6 - \frac{4}{1}x_1$	$-3 - \frac{4}{1}x_3$	$-2 - \frac{4}{1}x_1$	T_6	$-21 - \frac{4}{1}x_4$

1	1	-2	1	3	1	T_1	4
0	-3	5	0	-5	-1	T_2	12
0	2	-1	-2	-1	2	T_3	-19
0	-3	-9	-6	-13	6	T_4	-23
0	2	-3	6	10	0	T_5	28
0	-1	9	-10	-15	2	T_6	-43

1	1	-2	1	3	-1	T_1	4
0	-3	5	0	-5	-1	T_2	12
0	0	2.33	-2	-4.33	1.33	T_3	-11
0	0	4	-6	-8	6	T_4	-35
0	0	-0.67	6	6.67	-0.67	T_5	36
0	0	7.33	-10	-13.33	2.33	T_6	-47

$$\begin{bmatrix} 1 & 1 & -2 & 1 & 3 & 1 \\ 0 & -3 & 5 & 0 & -5 & -1 \\ 0 & 0 & 2.33 & -2 & -4.33 & 1.33 \\ 0 & 0 & 0 & -2.57 & -0.57 & 4.71 \\ 0 & 0 & 0 & 5.43 & 3.43 & -0.29 \\ 0 & 0 & 0 & -3.71 & 0.29 & -1.85 \end{bmatrix} \begin{bmatrix} T_1 \\ T_2 \\ T_3 \\ T_4 \\ T_5 \\ T_6 \end{bmatrix} = \begin{bmatrix} 4 \\ 12 \\ -11 \\ -16.14 \\ 32.86 \\ -12.43 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 1 & -2 & 1 & 3 & 1 \\ 0 & -3 & 5 & 0 & -5 & -1 \\ 0 & 0 & 2.33 & -2 & -4.33 & 1.33 \\ 0 & 0 & 0 & -2.57 & -0.57 & 4.71 \\ 0 & 0 & 0 & 0 & 4.22 & 9.67 \\ 0 & 0 & 0 & 0 & 1.11 & -8.67 \end{bmatrix} \begin{bmatrix} T_1 \\ T_2 \\ T_3 \\ T_4 \\ T_5 \\ T_6 \end{bmatrix} = \begin{bmatrix} 4 \\ 12 \\ -11 \\ -16.14 \\ -1.22 \\ 16.89 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 1 & -2 & 1 & 3 & 1 \\ 0 & -3 & 5 & 0 & -5 & -1 \\ 0 & 0 & 2.33 & -2 & -4.33 & 1.33 \\ 0 & 0 & 0 & -2.57 & 0.57 & 4.71 \\ 0 & 0 & 0 & 0 & 4.22 & 9.67 \\ 0 & 0 & 0 & 0 & 0 & -11.21 \end{bmatrix} \begin{bmatrix} T_1 \\ T_2 \\ T_3 \\ T_4 \\ T_5 \\ T_6 \end{bmatrix} = \begin{bmatrix} 4 \\ 12 \\ -11 \\ -16.14 \\ -1.22 \\ 11.21 \end{bmatrix}$$

$$-11 - 21T_6 = 11.21 \quad , \quad T_6 = \frac{11.21}{-11.21} = -1$$

$$4.22T_5 + 9.67T_6 = -1.22$$

$$4.22T_5 + 9.67(-1) = -1.22$$

$$T_5 = \frac{8.45}{4.22} ; T_5 = 2.002 \approx 2$$

$$-2.57T_4 + 0.529T_5 + 4.71T_6 = -16.19$$

$$-2.57T_4 + 1.14 - 4.71 = -16.19$$

$$-2.57T_4 = -16.19 - 1.14 + 4.71$$

$$T_4 = 4.89$$

$$2.33T_3 = 2T_4 + 4.33T_5 + 1.33T_6 = -11$$

$$2.33T_3 - 2(4.89) - 4.33(2) + 1.33(-1)$$

$$2.33T_3 - 9.78 - 8.66 - 1.33 = -11 \quad \therefore T_3 = 3.76$$

$$-3T_2 + 5T_3 - 5T_5 - T_6 = 12$$

$$-3T_2 + 18.8 - 10 + 1 = 12$$

$$T_2 = -0.73$$

$$T_1 + T_6 - 2T_3 + T_4 + 3T_5 - T_6 = 4$$

$$T_1 - 0.73 - 7.52 + 4.89 + 6 + 1 = 4$$

$$T_1 = 4 - 3.16 = 0.84 \quad \therefore T_1 = 0.84$$

$$T_1 = 0.84$$

$$T_4 = 4.89$$

$$T_2 = -0.73$$

$$T_5 = 2$$

$$T_3 = 3.76$$

$$T_6 = -1$$