

Elect (Elect)

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$$1) \begin{cases} x_1 - 2x_2 - x_3 + 5x_4 = 10 \\ 2x_1 + 3x_2 + x_4 = 8 \\ 2x_1 - 4x_3 - 2x_4 = 3 \\ -x_2 + 3x_3 + x_4 = 7 \end{cases}$$

$$A = \begin{pmatrix} 1 & -2 & -1 & 5 \\ 2 & 3 & 0 & 1 \\ 2 & 0 & -4 & -2 \\ 0 & -1 & 3 & 1 \end{pmatrix}$$

$$B = \begin{pmatrix} 10 \\ 8 \\ 3 \\ 7 \end{pmatrix}$$

$$C = A^{-1} \cdot B$$

$$C = \begin{pmatrix} -1 \\ 2 \\ -3 \\ 4 \end{pmatrix}$$

| 2) t | y | t | y | t | y | t | y |
|------|---------|-----|--------|-----|--------|-----|--------|
| 0 | -1.0000 | 1.2 | 1.1466 | 2.4 | 4.0367 | 3.6 | 7.1787 |
| 0.1 | -0.8555 | 1.3 | 1.4150 | 2.5 | 4.2903 | 3.7 | 7.4470 |
| 0.2 | -0.7024 | 1.4 | 1.6375 | 2.6 | 4.5458 | 3.8 | 7.7167 |
| 0.3 | -0.5413 | 1.5 | 1.8657 | 2.7 | 4.8030 | 3.9 | 7.9866 |
| 0.4 | -0.3726 | 1.6 | 2.0935 | 2.8 | 5.0617 | 4.0 | 8.2568 |
| 0.5 | -0.1969 | 1.7 | 2.3266 | 2.9 | 5.3223 | 4.1 | 8.5220 |
| 0.6 | -0.0146 | 1.8 | 2.5625 | 3.0 | 5.5841 | 4.2 | 8.7820 |
| 0.7 | 0.1738 | 1.9 | 2.8004 | 3.1 | 5.8473 | 4.3 | 9.0690 |
| 0.8 | 0.3681 | 2.0 | 3.0411 | 3.2 | 6.1116 | 4.4 | 9.3482 |
| 0.9 | 0.5679 | 2.1 | 3.2847 | 3.3 | 6.3720 | 4.5 | 9.612 |
| 1.0 | 0.7727 | 2.2 | 3.5318 | 3.4 | 6.6413 | 4.6 | 9.8831 |
| 1.1 | 0.9824 | 2.3 | 3.7852 | 3.5 | 6.9106 | 4.7 | 10.158 |

| | | | | | |
|-----|----------|-----|---------|------|---------|
| 4.8 | 10.4230 | 6.6 | 15.1500 | 8.2 | 19.416 |
| 4.9 | 10.6435 | 6.7 | 15.4160 | 8.5 | 19.631 |
| 5.0 | 10.9632 | 6.8 | 15.6664 | 8.6 | 19.802 |
| 5.1 | 11.2325 | 6.9 | 15.9151 | 8.7 | 20.091 |
| 5.2 | 11.5012 | 7.0 | 16.1622 | 8.8 | 20.286 |
| 5.3 | 11.7672 | 7.1 | 16.4074 | 8.9 | 20.4758 |
| 5.4 | 12.0365 | 7.2 | 16.6509 | 9.0 | 20.6807 |
| 5.5 | 12.03031 | 7.3 | 16.8925 | 9.1 | 20.883 |
| 5.6 | 12.5622 | 7.4 | 16.1322 | 9.2 | 21.0833 |
| 5.7 | 12.8358 | 7.5 | 16.3700 | 9.3 | 21.2810 |
| 5.8 | 13.0973 | 7.6 | 17.6058 | 9.4 | 21.4769 |
| 5.9 | 13.3600 | 7.7 | 17.8396 | 9.5 | 21.6694 |
| 6.0 | 13.6246 | 7.8 | 18.0714 | 9.6 | 21.8600 |
| 6.1 | 13.8820 | 7.9 | 18.3009 | 9.7 | 22.0048 |
| 6.2 | 14.1412 | 8.0 | 18.5280 | 9.8 | 22.224 |
| 6.3 | 14.3990 | 8.1 | 18.7538 | 9.9 | 22.4125 |
| 6.4 | 14.6355 | 8.2 | 18.9770 | 10.0 | 22.594 |
| 6.5 | 14.9105 | 8.3 | 19.1970 | | |

