

Normal

Arial

10

1.

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

$$B = \begin{pmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \end{pmatrix}$$

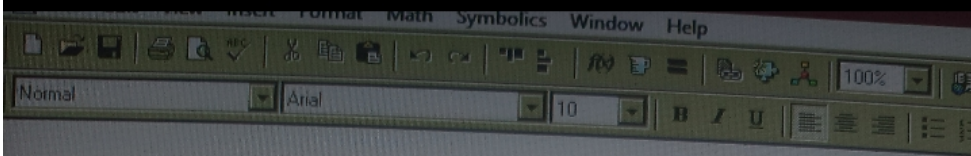
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$$C := \begin{pmatrix} 10 \\ 8 \\ 3 \\ -7 \end{pmatrix}$$

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

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





2. $t = 0, 0.1, \dots, 10$ $y(t) = \sin(0.25t) + 2t + e^{-0.85t} - 2\cos\left(\frac{\pi t}{10}\right)$

t =

0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5

y(t) =

-1
-0.856
-0.702
-0.541
-0.373
-0.197
-0.015
0.174
0.368
0.568
0.773
0.982
1.197
1.415
1.637
1.864

