

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

$$\begin{pmatrix} 10 \\ 8 \\ 3 \\ -7 \end{pmatrix} = \begin{pmatrix} x1 \\ x2 \\ x3 \\ x4 \end{pmatrix}$$

$$C := A^{-1}$$

$$C = \begin{pmatrix} 0.027 & 0.24 & 0.493 & 0.667 \\ -0.093 & 0.16 & -0.227 & -0.333 \\ -0.107 & 0.04 & 0.027 & 0.333 \\ 0.227 & 0.04 & -0.307 & -0.333 \end{pmatrix}$$

$$X := C \cdot B$$

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

$$t := 0, 0.1..10$$

$$y(t) := \sin(0.25t) + 2t + e^{-0.85t} - \cos\left(\frac{\pi}{10}\right)t$$

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
1.048
1.103
1.165
1.231
1.303
1.379
1.46
1.544
1.632
1.724
1.818
1.915
2.014
2.116
2.219

