

MATCAD JOSHUA.png

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Normal Arial 10 **B** *I* U

$$A := \begin{pmatrix} 1 & -2 & -1 & 3 \\ 2 & 3 & 0 & 1 \\ 1 & -4 & 0 & -4 \\ -1 & 3 & 0 & 1 \end{pmatrix} \quad B := \begin{pmatrix} 10 \\ 8 \\ 3 \\ -7 \end{pmatrix}$$

$$X_1 := 5$$

$$X_2 := -1.25$$

$$X_3 := 2.75$$

$$A^{-1} = \begin{pmatrix} 0 & 0.333 & 0 & -0.333 \\ 0 & 0.125 & 0.125 & 0.375 \\ -1 & -0.042 & -1.375 & -2.458 \\ 0 & -0.042 & -0.375 & -0.458 \end{pmatrix}$$

$$X_4 := 1.75$$

+

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

$$C = \begin{pmatrix} 5 \\ -1.25 \\ 2.75 \\ 1.75 \end{pmatrix}$$

$$Y(t) := \left(\sin(0.25t) + 2t + e^{-0.85t} \right) - 2 \cos\left(\frac{180}{10}\right)t$$

t := 0, .1.. 15

t =

t =	Y(t) =
0	1
0.1	1.011
0.2	1.03
0.3	1.054
0.4	1.083
0.5	1.118
0.6	1.158
0.7	1.201
0.8	1.249
0.9	1.3
1	1.354
1.1	1.411
1.2	1.471
1.3	1.534
1.4	1.598
1.5	1.665

