QUESTION 1

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

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

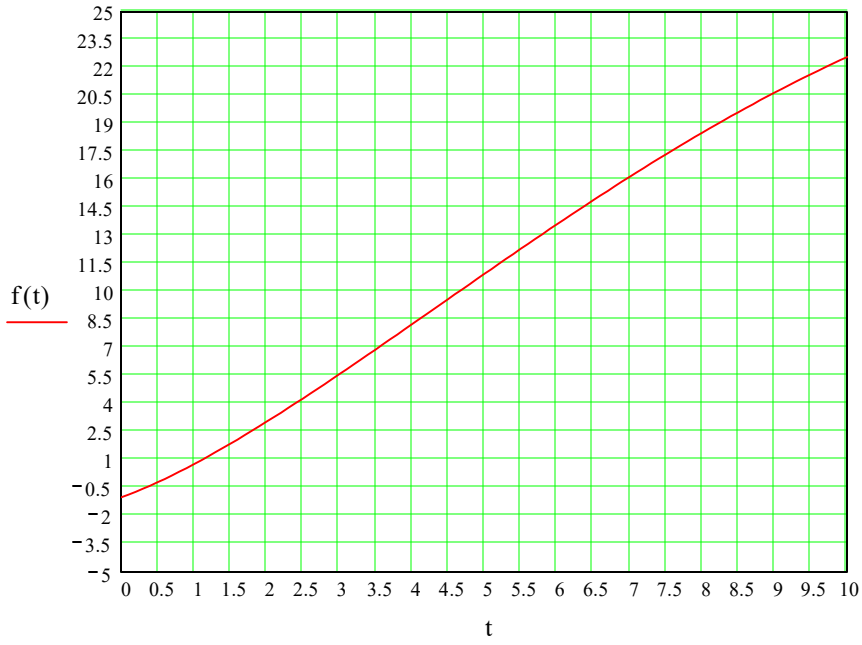
$x_1 := -1 \quad x_2 := 2 \quad x_3 := -3 \quad x_4 := 4$

QUESTION 2

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

$t := 0, 0.1 .. 10$

| t = | f(t) = |
|---|---|
| 0 | -1 |
| 0.1 | -0.856 |
| 0.2 | -0.702 |
| 0.3 | -0.541 |
| 0.4 | -0.373 |
| 0.5 | -0.197 |
| 0.6 | -0.015 |
| 0.7 | 0.174 |
| 0.8 | 0.368 |
| 0.9 | 0.568 |
| 1 | 0.773 |
| 1.1 | 0.982 |
| 1.2 | 1.197 |
| 1.3 | 1.415 |
| 1.4 | 1.637 |
| 1.5 | 1.864 |


f(t)
25
23.5
22
20.5
19
17.5
16
14.5
13
11.5
10
8.5
7
5.5
4
2.5
1
-0.5
-2
-3.5
-5
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9 9.5 10
t

$A^{-1}$