

## QUESTION 4B II

$$a = \begin{pmatrix} 1 & -2 & -1 & 3 \\ 2 & 3 & 0 & 1 \\ 1 & 0 & -4 & -2 \\ 0 & -1 & 3 & 1 \end{pmatrix} \quad b = \begin{pmatrix} 10 \\ 8 \\ 3 \\ -7 \end{pmatrix}$$

$$c = a^{-1}$$

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

$$d = c \cdot b$$

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

$$k = d + 273$$

$$k = \begin{pmatrix} 272 \\ 275 \\ 270 \\ 277 \end{pmatrix}$$

QUESTION 4D

$$x(t) := 2 + (2t) - 2 \left( \cos \left( t \cdot \frac{\pi}{10} \right) \right)$$

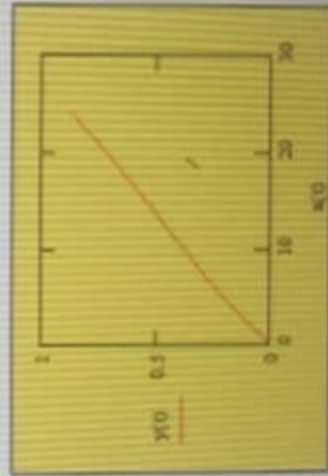
$$t := 0..10$$

y(t) =

0
0.09
0.179
0.268
0.357
0.445
0.532
0.618
0.703
0.786
0.868

x(t) =

0
2.098
4.382
6.824
9.382
12
14.618
17.176
19.618
21.902
24



NAVIGATE

EDIT

BREAKPOINTS

RUN

C:\Program Files\MATLAB\R2018a\bin\win64

Editor - C:\Users\LAWAL MUHAMMAD\Documents\MATLAB\muha4b.m

muhammad2.m

muha4b.m

muha4c.m

Untitled3

+

```
1 - commandwindow
2 - clear
3 - clc
4 - close all
5 - a= [1 -2 -1 3; 2 3 0 1; 1 0 -4 -2; 0 -1 3 1]
6 - b= [10; 8; 3; -7]
7 - c= inv(a)*b
8 - muha= c+273
```

I

```
1 -    commandwindow
2 -    clear
3 -    clc
4 -    close all
5 -    syms t
6 -    v= 110*cos(120*pi*t)
7 -    c=100
8 -    vp= diff(v)
9 -    i= vp*c
10 -    p= i*v
11 -    t= [0:0.01:0.35]
12 -    pn= subs(p)
13 -    vn= subs(v)
14 -    in= subs(i)
15 -    plot(t,vn,'b', t,in,'r', t,pn,'black')
16 -    xlabel('time(sec)')
17 -    ylabel('variable')
18 -    grid on
19 -    grid minor
20 -    legend ('voltage(m/s)', 'current(A)', 'power(w)')
21
22
23
24
```

C:\Program Files\MATLAB\R2016a\bin\win64  
Editor - C:\Users\LAWAL MUHAMMAD\Documents\MATLAB\muhammad2.m  
muhammad2.m x muha4b.m x muha4c.m x Untitled3 x +

```
1 - commandwindow
2 - clear
3 - clc
4 - close all
5 - p= 1
6 - q= 2
7 - r= 3
8 - s= 4
9 - t= 5
10 - clear r
11 - clear t
12
13
14 |
```