

```
breakpoints Run Run and Advance Run
EDIT BREAKPOINTS RUN
Editor - C:\Users\olado\Documents\MATLAB\TOBIQUESTION4C.m
TOBIQUESTION4A.m x TOBIQUESTION4B.m x TOBIQUESTI
1 - commandwindow
2 - clear
3 - clc
4 - close all
5 - syms t
6 - V = 110*cos(120*pi*t)
7 - C=100
8 - P = 0.5*C*V^2
9 - I=P/V
10 - t = [0:0.01:0.35]
11 - Vn = subs(V,t)
12 - Pn = subs(P,t)
13 - In = subs(I,t)
14 - plot(t,Vn,t,Pn,t,In)
15 - xlabel=('time(sec)')
16 - ylabel=('variable')
17 - grid on
18 - grid minor
19 - legend('voltage(V)', 'current(I)', 'power (W)')
20
```

Command Window

```
ylabel =
    'variable'
fx >> |
<
```

```
PLOTS APPS EDITOR PUBLISH VIEW
Find Files Compare Go To Find Breakpoints Run Run and Advance Run and Time
C:\Users\olado\
Editor - C:\Users\olado\Documents\MATLAB\TOBIQUESTION4B.m
TOBIQUESTION4A.m x TOBIQUESTION4B.m x +
1 - commandwindow
2 - clc
3 - clear
4 - A=[1 -2 -1 3; 2 3 0 1; 1 0 -4 -2; 0 -1 3 1]
5 - B=[10; 8; 3; -7]
6 - C= inv(A)
7 - D= C*B
8 - E= [273; 273; 273; 273]
9 - F= D+E
10
11
12
13
14
15
Value
Add double
[10;8;3;-7]
Add double
[-1.0000;2.0000;-3.0000...
[273;273;273;273]
[272;275;270;277]
Command Window
I =
    272
    275
    270
    277
fx >> |
```

```
breakpoints Run Run and Advance Run and Time
EDIT BREAKPOINTS RUN
Editor - C:\Users\olado\Documents\MATLAB\TOBIQUESTION4A.m
TOBIQUESTION4A.m x +
1 - P=34
2 - O=42
3 - R=56
4 - S=72
5 - T=80
6 - clear R
7 - clear T
8 - commandwindow
9 - clc
Command Window
```

QUESTION4b

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

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

$$A^{-1} = \begin{pmatrix} 0.027 & 0.24 & 0.493 & 0.667 \\ -0.093 & 0.16 & -0.227 & -0.333 \\ -0.107 & 0.04 & 0.027 & 0.333 \\ 0.227 & 0.04 & -0.307 & -0.333 \end{pmatrix}$$

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

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

$$Z := \begin{pmatrix} 273 \\ 273 \\ 273 \\ 273 \end{pmatrix}$$

$$Tk := Z + T$$

$$Tk = \begin{pmatrix} 275 \\ 270 \\ 270 \\ 277 \end{pmatrix}$$

$$Tk1 := 272$$

$$Tk2 := 275$$

$$Tk3 := 270$$

$$Tk4 := 277$$

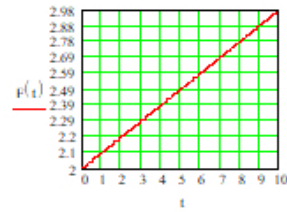
QUESTION4d

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

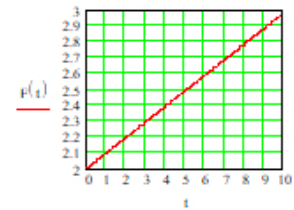
$$G(t) := 2 \sin\left(\frac{\pi}{70}\right)t$$

i > seprately

$$0 \leq t \leq 10$$



ib



ii > together

