MATLAB R2018a

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Current Folder

Name

- win32
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- deploytool.bat
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- lcdata.xsd
- lcdata_utf8.xml
- matlab.exe
- mbuild.bat
- mcc.bat
- mex.bat
- mex.pl
- mexext.bat
- mexsetup.pm
- mexutils.pm
- mw_mpiexec.bat
- worker.bat

Details

Workspace

Name	Value
C	100
I	1x1 sym
In	1x36 sym
P	1x1 symfun
Pn	1x1 symfun
t	1x1 sym
tn	1x36 double
V	1x1 symfun
Vn	1x1 symfun
vp	1x1 sym

Editor - C:\Users\personal\Desktop\New folder\temitayo345.m

temitayo345.m | Untitled.m | OTAOGHEHEAKA45.m | otaogheneakak44.m

```
1  commandwindow
2  clear
3  close all
4  syms t
5  V(t)=110*cos(120*pi*t)
6  C= 100
7  vp= diff(V(t))
8  I=C*vp
9  P=V*I
10 tn=[0:0.01:0.35]
11 Vn=subs(V,tn)
12 In=subs(I,tn)
13 Pn=subs(P,tn)
14 plot(tn,Vn,'b-',tn,In,'r-',tn,Pn,'k-')
15 xlabel('time(sec)')
16 ylabel('variable')
17 grid on
18 grid minor
19 legend('voltage','current','power')
```

Command Window

New to MATLAB? See resources for Getting Started.

```
Pn(t) =

[ 0, -36300000*2^(1/2)*pi*(5^(1/2)/4 + 1/4)*(5 - 5^(1/2))^(1/2), -36300000*2^(1/2)*pi*(5^(1/2)/4 - 1/4)*(5^(1/2) + 5)^(1/2

>>
```

MATLAB R2018a | Figure 1 | File Explorer | Mathcad Professio... | Spotify | 22:49

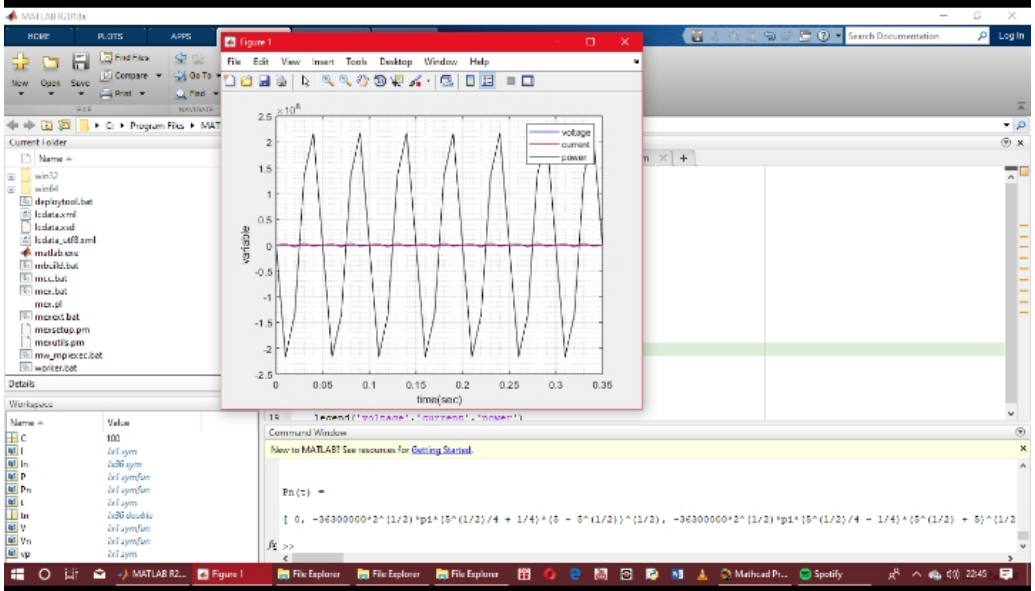
Figure 1
File Edit View Insert Tools Desktop Window Help
voltage
current
power
variable
time(sec)
Command Window
New to MATLAB? See resources for Getting Started.

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Normal Arial 10

OJO TEMITAYO
18/ENG05/044
MECHATRONICS ENGINEERING

QUESTION 4bi:

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

$$B = \begin{pmatrix} T1 \\ T2 \\ T3 \\ T4 \end{pmatrix} \qquad C := \begin{pmatrix} 10 \\ 8 \\ 3 \\ -7 \end{pmatrix}$$

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

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

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Normal | Arial | 10 | B I U

QUESTION 4d:

$t := 0, 0.1 .. 10$

$t =$

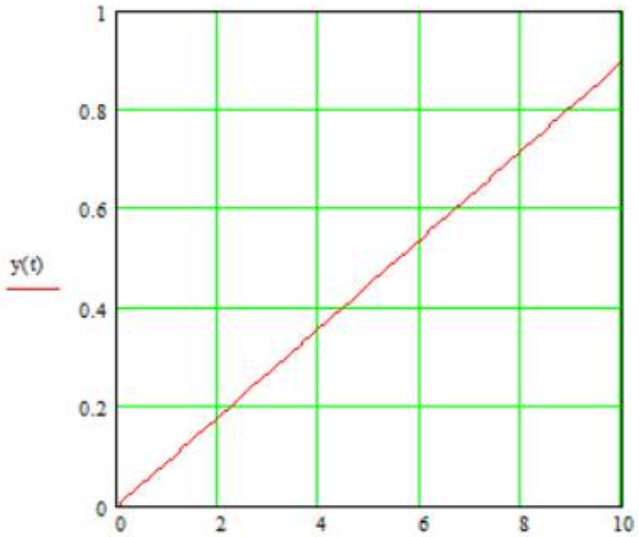
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5

separately,

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

$y(t) =$

0
$8.973 \cdot 10^{-3}$
0.018
0.027
0.036
0.045
0.054
0.063
0.072
0.081
0.09
0.099
0.108
0.117
0.126
0.135



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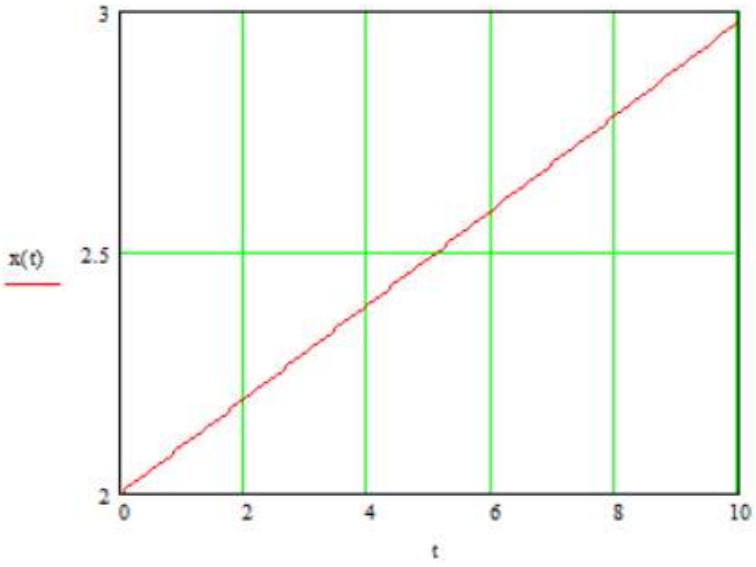
Normal Arial 10

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

$x(t) =$

2
2.01
2.02
2.029
2.039
2.049
2.059
2.069
2.078
2.088
2.098
2.108
2.117
2.127
2.137
2.147



together ,