

MATLAB R2018a

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- ABIOYE FOLAWIYO18ENG03002
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- Games
- HAMMED ABDULSAMAD 18 ENG06 025
- KIEN-OLALI AYEBAWATRI KINGGS 18 ENG05 027

Details

Workspace

Name	Value
C	1.0000e-04
dV	1x1 symfun
I	1x1 symfun
In	1x1 symfun
P	1x1 symfun
Pn	1x1 symfun
t	1x1 sym
tn	1x36 double
V	1x1 symfun
Vn	1x1 symfun

Editor - C:\Users\CORNELIUS\Desktop\Victor2.m

```

9 - I=C*dV
10 - P=V(t)*I
11 - tn=[0:0.01:0.35]
12 - Vn=subs(V,tn)
13 - In=subs(I,tn)
14 - Pn=subs(P,tn)
15 - plot(tn,Vn,tn,In,tn,Pn)
16 - xlabel('Time(secs)')
17 - ylabel('Variable')
18 - grid on
19 - grid minor
20 - legend('Voltage(V)', 'Current(A)', 'Power(W)')

```

Command Window

```

[ 110, - (55*5^(1/2))/2 - 55/2, (55*5^(1/2))/2 - 55/2, (55*5^(1/2))/2 - 55/2, - (55*5^(1/2))/2 - 55/2, 110, - (55*5^(1/2))

In(t) =

[ 0, (33*2^(1/2)*pi*(5 - 5^(1/2))^(1/2))/100, -(33*pi*2^(1/2)*(5^(1/2) + 5)^(1/2))/100, (33*pi*2^(1/2)*(5^(1/2) + 5)^(1/2))

Pn(t) =

[ 0, -(363*2^(1/2)*pi*(5^(1/2)/4 + 1/4)*(5 - 5^(1/2))^(1/2))/10, -(363*2^(1/2)*pi*(5^(1/2)/4 - 1/4)*(5^(1/2) + 5)^(1/2))/1

```

script Ln 9 Col 7

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MATLAB R2018a

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V	1x1 symfun
Vn	1x1 symfun

Editor - C:\Users\CORNELIUS\Desktop\Victor2.m

```

1 - commandwindow
2 - clear
3 - clc
4 - close all
5 - syms t
6 - V(t)=110*cos(120*pi*t)
7 - C=100.*(10.^-6)
8 - dV=diff(V)
9 - I=C*dV
10 - P=V(t)*I
11 - tn=[0:0.01:0.35]
12 - Vn=subs(V,tn)

```

Command Window

```

[ 110, - (55*5^(1/2))/2 - 55/2, (55*5^(1/2))/2 - 55/2, (55*5^(1/2))/2 - 55/2, - (55*5^(1/2))/2 - 55/2, 110, - (55*5^(1/2))

In(t) =

[ 0, (33*2^(1/2)*pi*(5 - 5^(1/2))^(1/2))/100, -(33*pi*2^(1/2)*(5^(1/2) + 5)^(1/2))/100, (33*pi*2^(1/2)*(5^(1/2) + 5)^(1/2))

Pn(t) =

[ 0, -(363*2^(1/2)*pi*(5^(1/2)/4 + 1/4)*(5 - 5^(1/2))^(1/2))/10, -(363*2^(1/2)*pi*(5^(1/2)/4 - 1/4)*(5^(1/2) + 5)^(1/2))/1

```

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Vn	1x1 symfun

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BASSEY1.m x Untitled2* x Vic

```

1 - commandwindow
2 - clear
3 - clc
4 - close all
5 - syms t
6 - V(t)=110*cos(120*pi*t)
7 - C=100.*(10.^-6)
8 - dV=diff(V)
9 - I=C*dV
10 - P=V(t)*I
11 - tn=[0:0.01:0.35]
12 - Vn=subs(V,tn)

```

Command Window

```

[ 110, - (55*5^(1/2))/2 - 5

```

In(t) =

```

[ 0, (33*2^(1/2)*pi*(5 - 5

```

Pn(t) =

```

[ 0, -(363*2^(1/2)*pi*(5^(1/2)/4 + 1/4)*(5 - 5^(1/2))^(1/2))/10, -(363*2^(1/2)*pi*(5^(1/2)/4 - 1/4)*(5^(1/2) + 5)^(1/2))/1

```

Figure 1

Variable

Time(secs)

Legend: Voltage(V), Current(A), Power(W)

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