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16/ENG04/019
ELECTRICAL AND ELECTRONICS

```
1) commandwindow
clear
clc
A=[0,10,4,-2;-3,-17,1,2;1,1,1,0;8,-34,16,-10]
B=[-4;2;6;4]
x=A^-1*B
```

ANS
A =

```
     0     10     4     -2
    -3    -17     1     2
     1     1     1     0
     8    -34    16    -10
```

B =

```
   -4.0
    2.0
    6.0
    4.0
```

```
II) commandwindow
clear
clc
syms t
d=1.5*exp(-0.75*t)*sin(0.85*t)+0.375*t
tn=[0:0.01:2.5]
v=diff(d)
A=diff(v)
s=subs(v,tn)
r=subs(A,tn)
figure(1)
plot(tn,s,tn,r)
axis tight
grid on
grid minor
xlabel('time(min)')
ylabel('variable')
legend('velocity(km/m)', 'accleration(km/m^2)')
```

```
III) syms x
y=5*(sin(5*x))^5
by=y^2
r=int(by,0,pi)
q=r*pi
double(q)
```

>>

MATLAB R2017a

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Workspace:

Name	Value
A	1x1 sym
ans	60.7212
by	1x1 sym
d	1x1 sym
q	1x1 sym
r	1x1 sym
s	1x251 sym
t	1x1 sym
tn	1x251 double

Figure 1

Legend: velocity(km/m), acceleration(km/m²)

Command Window:

```
ans =  
60.7212
```

script Ln 1 Col 14

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