

A.commandwindow

```
clear
clc
close all
syms t
d=1.5*exp(-0.75*t)*sin(0.85*t)+0.375*t;
d
tn=[0:0.01:2.5]
dn=subs(d,tn)
figure(1)
plot(tn,dn)
xlabel('time(min)')
ylabel('distance(m)')
grid on
grid minor
axis tight
V=diff(d)
Vn=subs(V,tn)
figure(2)
plot(tn,Vn)
xlabel('time(min)')
ylabel('velocity(m/min)')
grid on
grid minor
a=diff(V)
an=subs(a,tn)
figure(3)
plot(tn,an)
xlabel('time(min)')
ylabel('acceleration(m/min)')
grid on
grid minor
figure(4)
plot(tn,dn,tn,Vn,tn,an)
xlabel('time(min)')
ylabel('variables')
legend('distance(m)','velocity(m/min)','acceleration(m/min)','location','best')
axiStight
```



FIG1.fig



FIG2.fig



FIG3.fig



FIG4.fig

B.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]
D=det(A)
W=A^-1
Q=A^-1*B
```

C. commandwindow

```
clear
clc
syms x
ys=5*(sin(5*x))^5
V=int(ys,0,pi)
vint=double(v)
```