

```

(a)
commandwindow
clear
clc
close all
A=[0,10,4,-2;-3,-17,1,2;1,1,1,0;8,-34,16,-10]
B=[-4;2;6;4]
C=det(A)
boss=inv(A)
kura= boss*B

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(b)
commandwindow
clear
clc
close all
syms t
d=1.5*exp(-0.75*t)*sin(0.85*t)+0.375*t
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
V=diff(d)
Vn=subs(V,tn)
figure(2)
plot(tn,Vn)
xlabel('time (min)')
ylabel('velocity (km/min)')
grid on
grid minor
a=diff(V)
an=subs(a,tn)
figure(3)
plot(tn,an)
xlabel('time (min)')
ylabel('acceleration (km/min^2)')
grid on
grid minor

figure(4)
plot(tn,Vn,tn,an)
xlabel('velocity (m/min)')
ylabel('acceleration (m/min^2)')
grid on
grid minor
legend('velocity (km/min)', 'acceleration (m/min^2)')

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(c)
commandwindow
clear

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```
clc
close all
syms x
y= 5*sin(5*x)^5
V= int(y^2*pi)
Vintd=int(V,0,pi)
Vintd=double(Vintd)
syms e
```