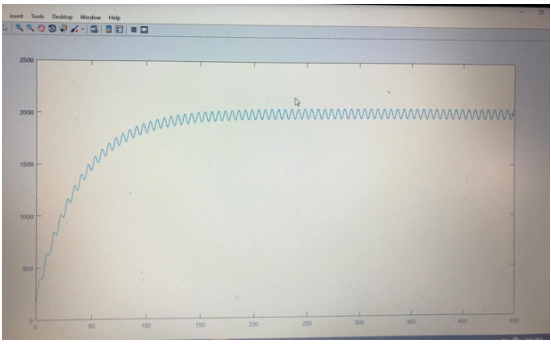
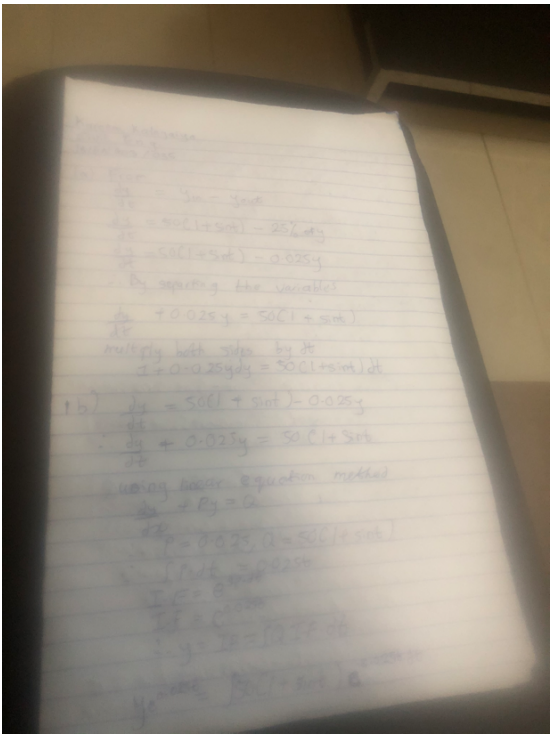
```
1 -  commandwindow
2 -  clear
3 -  clc
4 -  close all
5 -  syms m t
6 -  ans=dsolve('Dm+0.025*m-50+50*sin(t)','m(0)=150')
7 -  t=0:0.5:450
8 -  tn=subs(ans,t)
9 -  plot(t,tn)
```

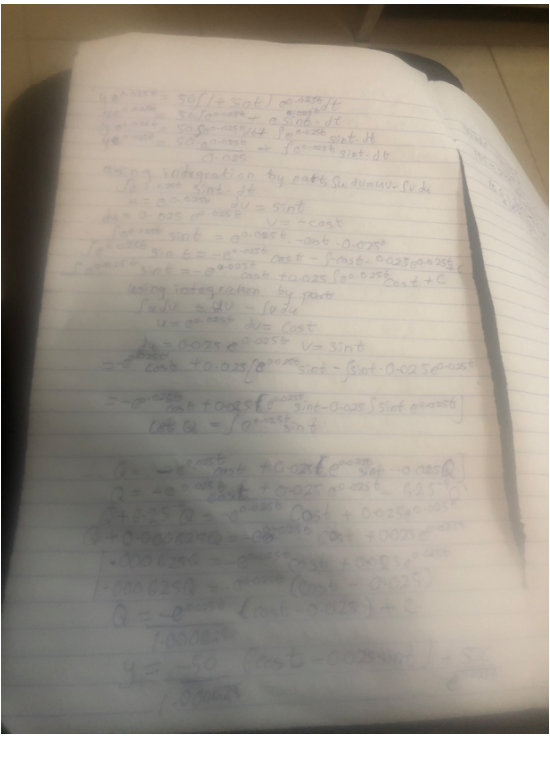
Command Window

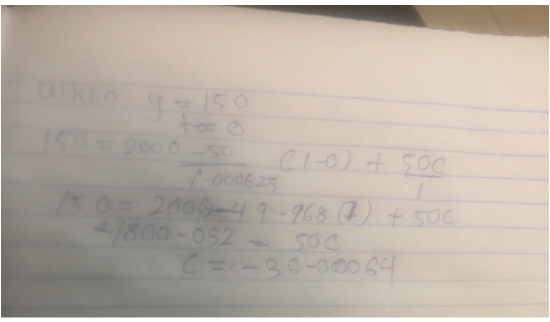
New to MATLAB? See resources for Getting Started.

```
  445.5000  446.0000  446.5000  447.0000  447.5000  448.0000  448.5000  449.0000  449.5000  450.0

tn =

  150, 2000 - (2000*1601^(1/2)*cos(atan(1/40) + 1/2))/1601 - (2881850*exp(-1/80))/1601, 2000 - (2

>>
```









```
commandwindow
clear
clc
close all
syms t
values=[]
t=1:1:500
mean=2000-((exp(-0.05*t))*800)
y=1000+(50/1.0025)*sin(t)+(2.5/1.0025)*cos(t)-((exp(-0.05*t))*802.
if rem(t,2) ==0
    values=[values,mean]
else
    values=[values,y]
end
excelvalues=transpose(values)
mins=transpose(t)
plot(t,values)
grid on
grid minor
xlabel ('time(mins)')
ylabel('volume(litres)')
xlswrite('odevbeedata.xlsx',['t(min)'],'vertical','A1')
xlswrite('odevbeedata.xlsx',mins,'vertical','A2')
xlswrite('odevbeedata.xlsx',['V(litres)'],'vertical','B1')
xlswrite('odevbeedata.xlsx',excelvalues,'vertical','B2')
```