



```

commandwindow
clear
clc
close all
syms t
format short
y = (50/0.05)+((50/1.0025)*sin(t))+(((50*(0.05))/1.0025)*cos(t))-(802.49*exp(-0.05*t))
ym = 1000-(800*exp(-0.05*t))
tdd=1:2:500
tn=0:2:500
yn=subs(y,tdd)
ymn=subs(ym,tn)
totT = 0:1:500
timeT = totT'
unionOfV=union(yn,ymn)
valuesT = unionOfV'
combined=double(valuesT)
plot(tdd,yn,tn,ymn)
col_header = {'t(min)', 'V(Litre)'}
xlswrite('odevbesdata.xlsx',col_header,'veriler','A1')
xlswrite('odevbesdata.xlsx',timeT,'veriler','A2')
xlswrite('odevbesdata.xlsx',combined,'veriler','B2')

```

Equa =

$$m + 0.025m = 50(1 + \sin(\tau))$$

ans =

$$2000 - (2000 \cdot 1601^{1/2} \cdot \cos(\tau + \arctan(1/40))) / 1601 - (2881850 \cdot \exp(-\tau/40)) / 1601$$

```
- commandwindow
- clc
- clear
- close all
- syms t
- Equa = 'Dm + 0.025*m == 50*(1+sin(t))'
- anss = dsolve(Equa, 'm(0)=150')
- time=0:0.5:450
- yVal = subs(anss,time)
- pretty(anss)
- plot(time, yVal)
- grid on
- grid minor
- xlabel('T (min)')
- ylabel('quantity of salt')
```

$$2000 \sqrt{1601} \cos\left(\frac{t}{\sqrt{1601}} + \operatorname{atan}\left(\frac{1}{\sqrt{40}}\right)\right) \exp\left(-\frac{t}{\sqrt{40}}\right)$$

2000

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