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17/MATSOI/083

Civil Engineering
Eng 381

① Command window

clc

~~clear~~ close all

Syms n(t)

D = diff(n)

ode = (diff(n,t,2)) - (diff(n,t)) - (12*n) = =
144*t^3 + 12.5 ;

Cond 1 = D(0) == -0.5 ;

Cond 2 = n(0) == 5

Cond3 = [Cond 1 Cond 2] ;

dsol(t) = solve(ode, Cond3) ;

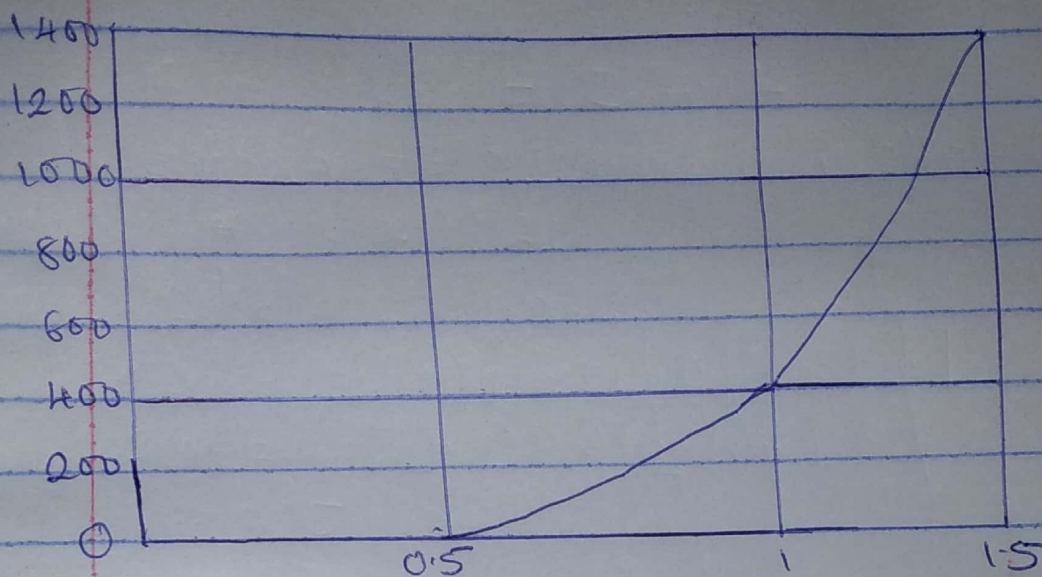
dsol = simplify(dsol(t))

tn = [0:0.1:1.5]

sade = subs(dsol, tn)

plot(tn, sade)

grid on



49 Command window

clear

clc

Syms f(s) a

U = (3-142) / (s^2) + 15*3.142*3 + 24*(3-142*s)

laplace (U)

40 Command window

clear

clc

Syms k w t s f(t) f(s) a

Z = k * exp(-a*t) * sin(s*w*t) * cos(3*w*t)

laplace (Z) /