

AZANOR - O. ANTHONY

17/ENGR09/006

PETROLEUM ENGINEERING

ENE381

matlab (bamm)

Ⓜ Command window

clc

clear all

syms n(t)

D = diff(n)

ODE = (diff(n,t,2)) - diff(n,t) - 12*n == 144*b^t + 12.5 * 2000 - (1) 1200

cond1 = D(0) == -0.5

cond2 = n(0) == 5

conds = (cond1, cond2);

dsol(t) = dsolve(ODE, conds);

dsol = simplify(dsol(t))

tn = 0:0:1.5

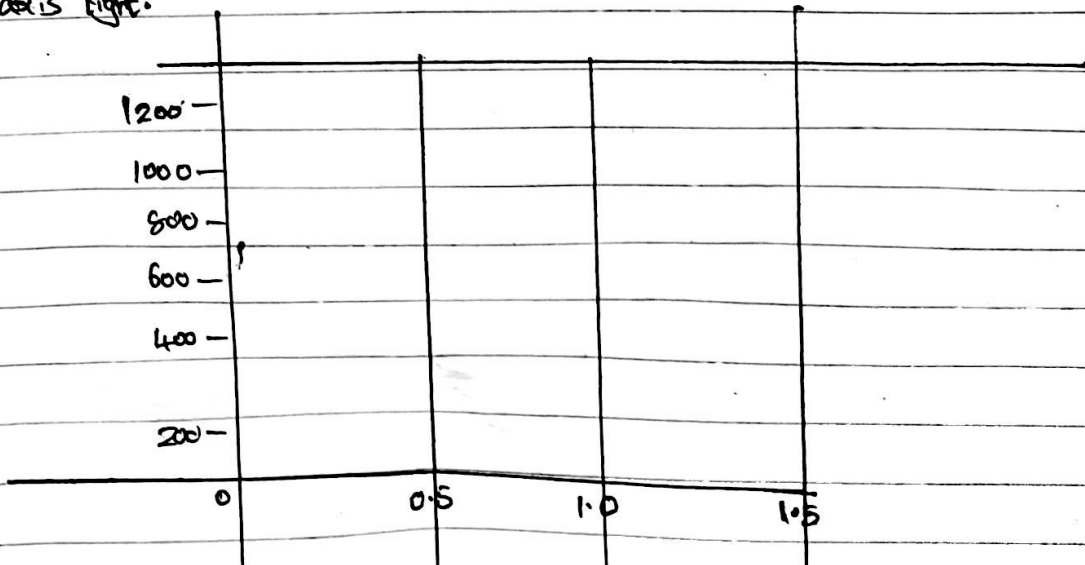
anthony = subs(dsol, tn)

Plot(tn, anthony)

grid on

grid minor

axis tight.



$(t) \times \mu (t) \mu 2000^2$

$(1 \mu) 2000 = \mu^2$

$(1 \mu) 2000 = 200$

$\mu + 0 + (1 \mu) 2000 = \mu^2 - 1 \mu^2$

$\mu - (1 \mu) 2000 = \mu^2 - 2000$

$(2000 - 1 \mu^2) = 2000$

$0 = (0) \mu, 0 = (0) \mu = 6000$

$(6000, 960) \text{ solve } b = 2000$

$\mu 2000 = (1) 2000$

$(1) 2000 = 2000$

$(1) 2000 = 2000$

no b^t

$(1 \mu^2), (0.1 \mu^2), (1 \mu^2)$

$(1 \mu^2), (0.1 \mu^2), (1 \mu^2)$

$(1 \mu^2) 2000$

no b^t

$(1 \mu^2) 2000$

no b^t

(b) Command window

clear

clc

syms y(t) yx(t)

Dy = diff(y,t)

Dx = diff(x,t)

Eqn1 = Dy == exp(-2*t) + 2*y

Eqn2 = Dx == exp(-1*t) - y

ode = (Eqn1 : Eqn2)

cond = x(0) == 0, y(0) == 0;

Ans = dsolve(ode, cond)

Dsol(t) = Ans.x

ysol(t) = Ans.y

Fplot(Dsol(t))

Fplot(ysol(t))

grid on

Legend('ksol', (location, 'best'))

Legend('ysol', (location, 'best'))

Fplot(ksol)

hold on

Fplot(ysol)

grid on

4c) Command window

clear all

clc

syms f(s)

$$F(s) = (3.142) / ((s+2) + 15 + 3.142 * s + 24 * (3.142 * s^2))$$

ilaplace(F(s))

Command window

clear all

clc

syms f(t) k w t 2

$$F(t) = k + \exp(-2 * t) * \sin(5 * w * t) + \cos(3 * w * t)$$

laplace(F(t)).