

2. plot f(t)

Command window

clc

clear

close all

$Sy = 0 + 0 + 4x +$

$z = Kt \exp(-\alpha t) + 3 - (5 \cdot \exp(-t)) + 100 \exp(-t)$

f = Laplace (z, t, s)

Simplify (f)

pretty (ans)

ii) Command window

clc

clear

close all

$Sy = 0 + 0$

$f = \mathcal{L}\{1 / (s^2) + 15s / (s^2 + 24(s+3))\}$

l = Laplace (f)

Simplify (ans)

pretty (ans)

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Question 4
Command window

clc;

clear

clear all

$S(x, n(x))$

$$c(x) = \text{diff}(Cn(x)) - \text{diff}(Cn(x)) - 12x = 12x + C(1.5) + 12.5$$

$$Cn(x) = n(x) = 0.5 \text{ diff}(Cn(x)) = -0.5$$

$$J/d = \text{diff}(Cn(x))$$

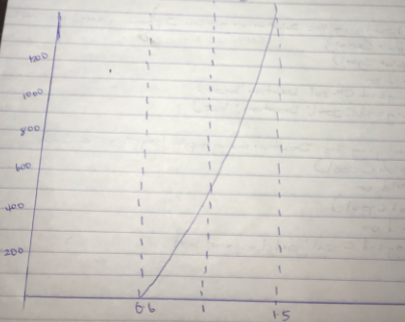
$$t = 0:0.1:1.5$$

$$Jen = S(0.5, J/d)$$

plot(Cn(x))

grid on

Legend (Adeniyi, location: 'bot')



Solution

Command window

- clc
- clear
- close

$$Dy = a(x) + b(y)$$

- eqn = diff(y,t) - 2*x - exp(-2*t)
- eqn = diff(x,t) - y + exp(2*t)
- eqn = [eqn1; eqn2]
- 10. Cond = a(Cond) = x(0) y(0) = 0
- 11. Ans = deval(Cond, Command)
- 12. Xsol(t) = Ans
- 13. Ysol(t) = Ans(2)

11 Visualizing the Solution on graph separately continue with

- 14 plot(Xsol)
- 15 plot(Ysol)
- 16 grid on
- 17 legend('Xsol', 'Location: best')
- 18 legend('Ysol', 'Location: best')

11 Visualizing the Solution on graph together - continue

- 14 plot(Xsol)
- 15 hold on
- 16 plot(Ysol)
- 17 grid on
- 18 legend('Xsol', 'Ysol', 'Location: best')