

Assignment

function command

function dydt = Arch\_fun (t, y)

dydt(1) = (-0.03 \* y(1)) + (0.005 \* y(2)) + 1;

dydt(2) = (0.03 \* y(1)) - (0.01 \* y(2)) + (0.075 \* y(3));

dydt(3) = (0.018 \* y(2)) - (0.0325 \* y(3));

dydt = dydt;

end

Simulation file

Command window

clear all

clc

close all

[t, Y] = ode4s (Arch\_fun, [0:45:1200], [0; 0; 0]);

figure 1

- subplot (3, 1, 1)

plot (t, Y(:, 1), 'r')

xlabel ('Time - min')

ylabel ('Volume (litre)')

legend ('Tank 1')

grid on

axis minor

axis tight

subplot (3, 1, 2)

plot (t, Y(:, 2), 'b')

xlabel ('Time (min)')

ylabel ('Volume (litre)')

and ('back 3')

grid so

axis minor

axis tight

From the question, I substituted  $A_1, A_2, A_3$  with  $V_1, V_2, V_3$  respectively, to reduce confusion. I enumerated.

```
ylabel ('volume(litre)')
legend('Tank 3')
grid on
grid minor
axis tight
```

1

View Insert Tools Desktop Window Help

