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```
close all;
clear;
clc;
u = 5;
x0 = 2;
y0 = 0;
state0 = [x0;y0];
finalTime = 25;

tspan = [0;finalTime];
[Tout, Yout_ode45] = ode45(@(t, x) dynamics(t, x, u), tspan, state0);


A_4 = [0 0 0 0;
        0.5 0 0 0;
        0 0.5 0 0;
        0 0 1 0];
b_4 = [1/6; 1/3; 1/3; 1/6];
c_4 = [0; 1/2; 1/2; 1];

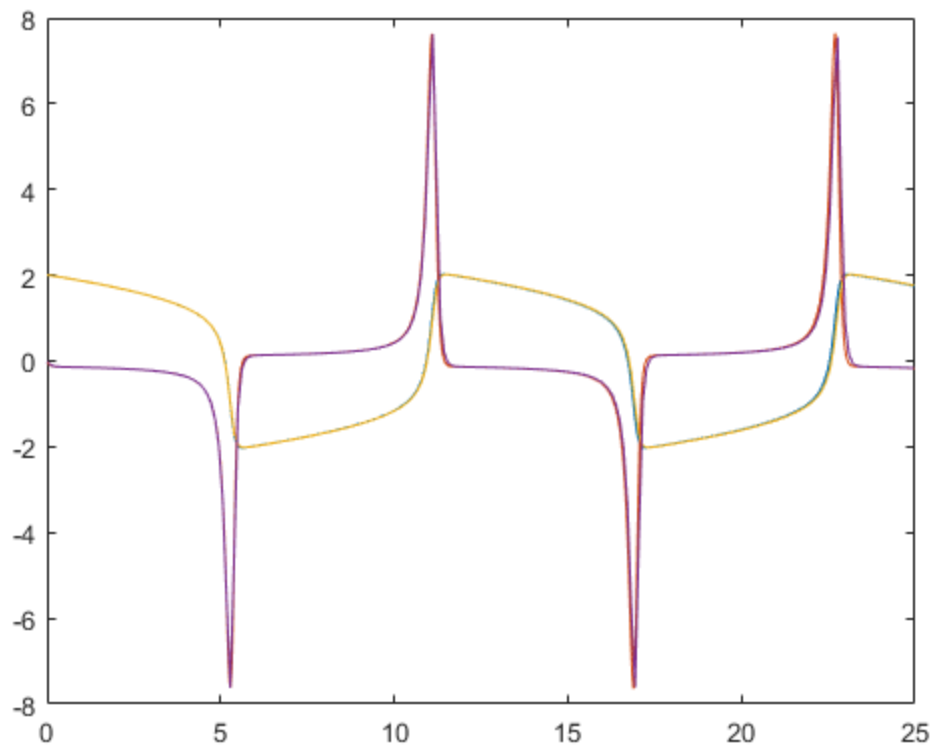
HeunArray_4 = struct('A',A_4,'b',b_4,'c',c_4);

dt = 0.11;

T = 0:dt:finalTime;

X_RK4 = ERKTemplate(HeunArray_4, @(t,x) dynamics(t, x, u), T, state0,
    dt);

plot(Tout, Yout_ode45);
hold on;
plot(T, X_RK4);
```



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