

/MATLAB Drive/ss2.m

```
1 clearvars;close all;clc;
2
3 % First, define state space system
4 A=[0, 1, 0; 0, 0, 1; -3, -4, -2];
5 B=[0; 0; 1];
6 C=[5, 1, 0];
7 D=0;
8
9 [num,den] = ss2tf(A,B,C,D)
10
11 sys_tf = tf(num,den)
12
13 ts1 = 15; %sampling time
14
15 [y1, t1] = step(sys_tf,ts1); %
16 plot(t1, y1, 'r');
17 xlabel('time(sec)');
18 ylabel('output y(t)');
19 title('Response y(t)');
20 grid on;
21
```

```
sys1 =
    0.01
-----
s^2 + 0.15 s + 0.3
Continuous-time transfer function.
Model Properties
>>
```

