

```

% Bode, Nyquist and Root Locus
sys = tf([-2 -1],[1 5 3])
figure(1)
pzmap(sys)
grid
figure(2)
margin(sys)
[Gm,Pm,Wcg,Wcp] = margin(sys)
grid
figure(3)
nyquist(sys)
grid
figure(4)
rlocus(sys)
grid
figure(5)
step(sys)
grid
stepinfo(sys)

sys =

      -2 s - 1
      -----
      s^2 + 5 s + 3

Continuous-time transfer function.

Gm =

      2.5000

Pm =

      Inf

Wcg =

      0.7071

Wcp =

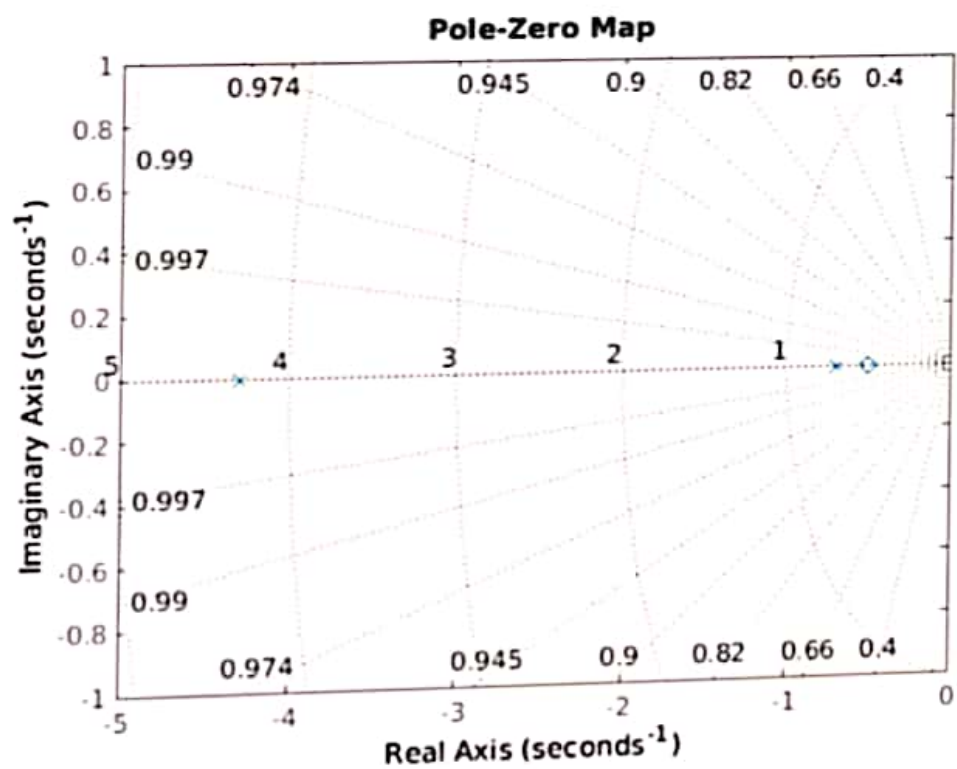
      NaN

ans =

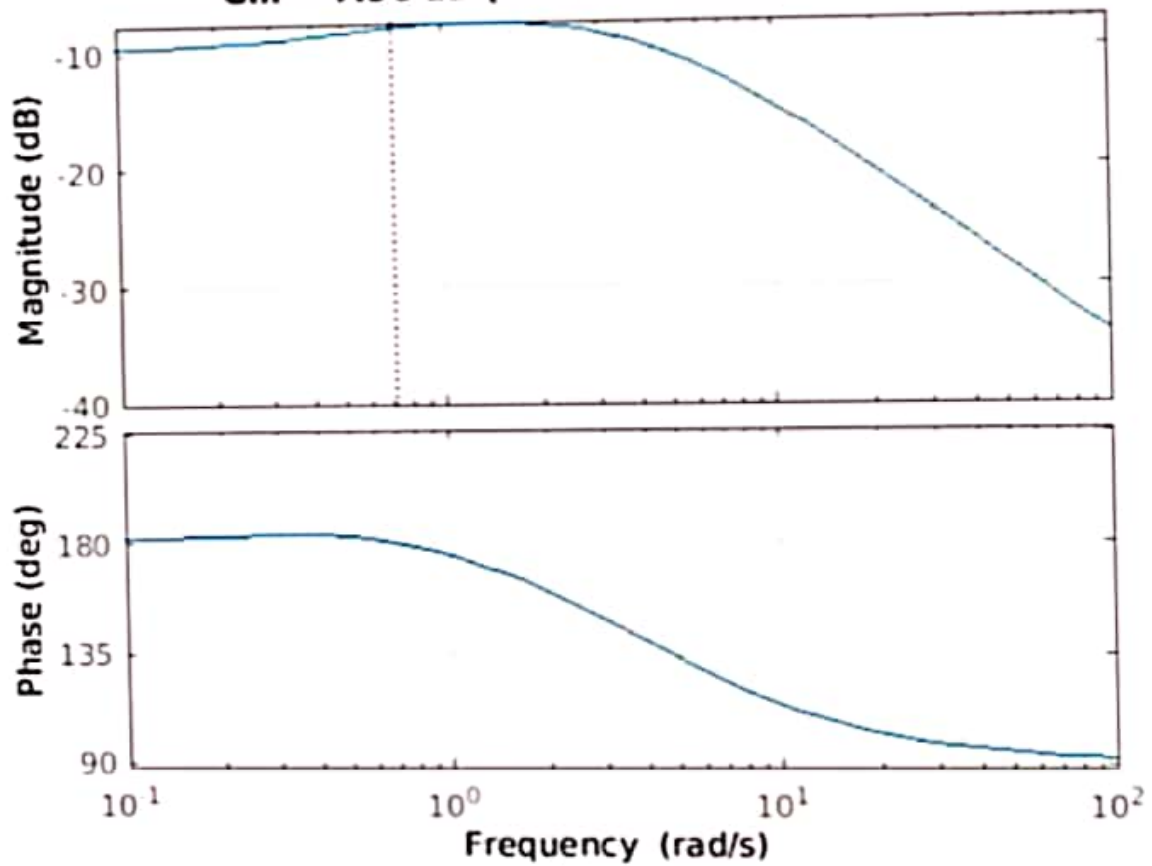
```

struct with fields:

RiseTime: 0.2360
SettlingTime: 4.5302
SettlingMin: -0.4075
SettlingMax: -0.3022
Overshoot: 22.2557
Undershoot: 0
Peak: 0.4075
PeakTime: 0.8134



Bode Diagram
 $G_m = 7.96 \text{ dB (at } 0.707 \text{ rad/s) , } P_m = \text{Inf}$



Nyquist Diagram

