

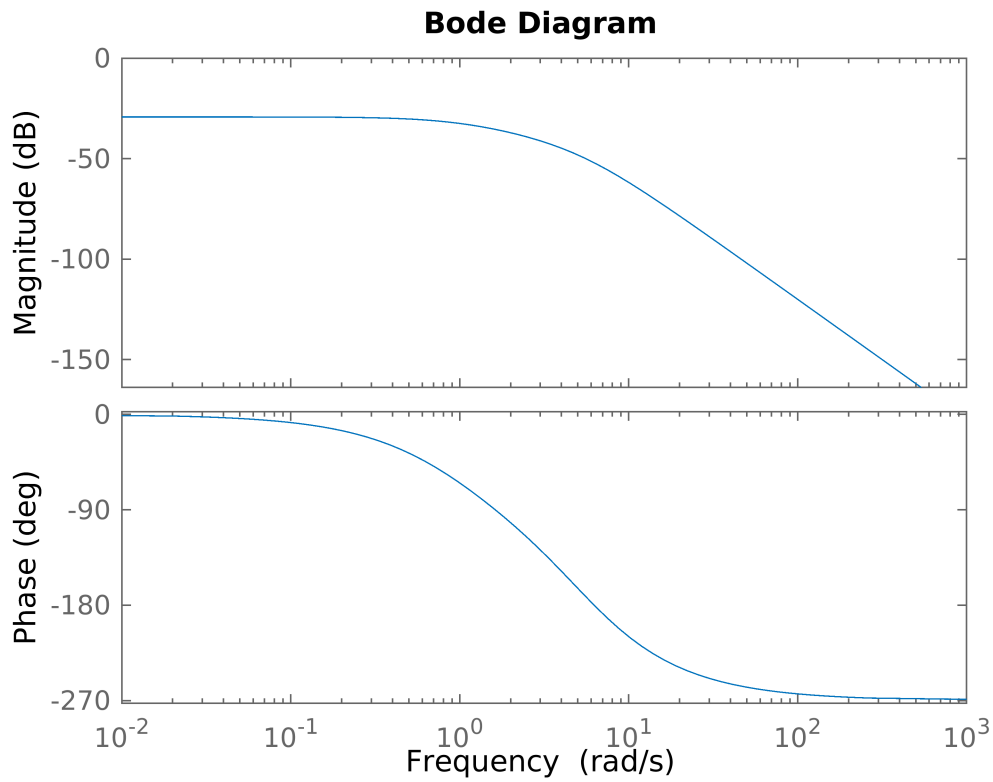
```
G = tf([1], [1, 11, 39, 29])
```

G =

$$\frac{1}{s^3 + 11s^2 + 39s + 29}$$

Continuous-time transfer function.

```
bode(G)
```

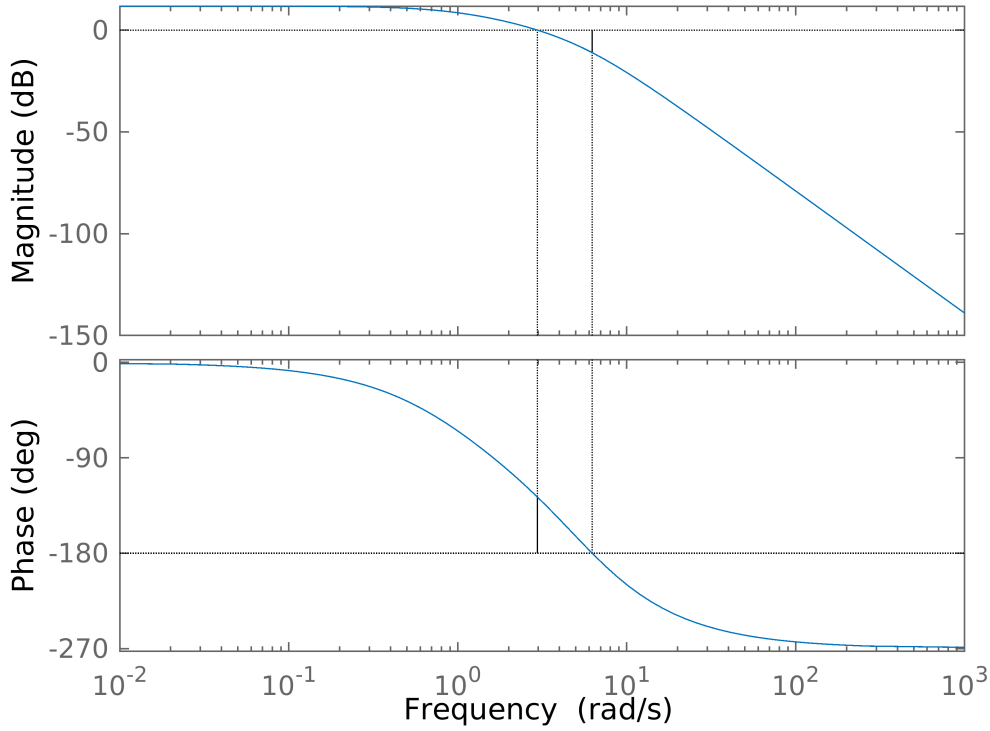


```
K = 1 / db2mag(-41)
```

```
K = 112.2018
```

```
margin(K * G)
```

Bode Diagram
Gm = 11 dB (at 6.24 rad/s), Pm = 53 deg (at 2.96 rad/s)



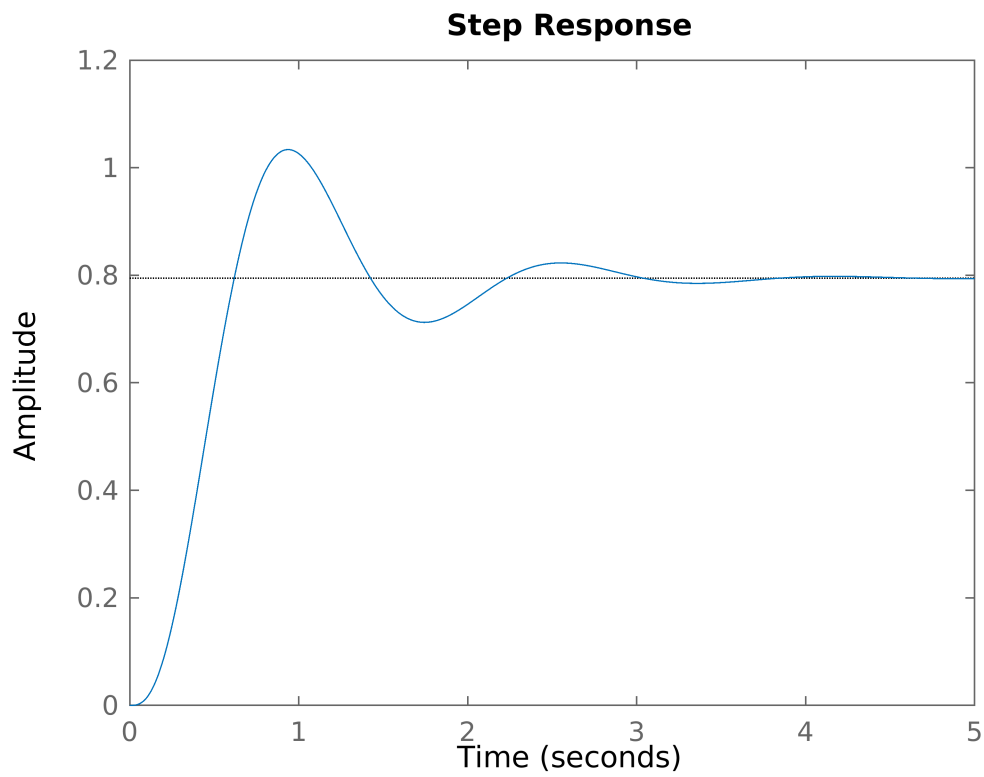
```
Gc1 = feedback(K * G, 1)
```

```
Gc1 =
```

$$\frac{112.2}{s^3 + 11 s^2 + 39 s + 141.2}$$

```
Continuous-time transfer function.
```

```
step(Gc1)
```



```
stepinfo(Gc1)
```

```
ans = struct with fields:  
    RiseTime: 0.3760  
    TransientTime: 2.8182  
    SettlingTime: 2.8182  
    SettlingMin: 0.7124  
    SettlingMax: 1.0338  
    Overshoot: 30.0944  
    Undershoot: 0  
    Peak: 1.0338  
    PeakTime: 0.9370
```

```
pzmap(K * G)
```

Pole-Zero Map

