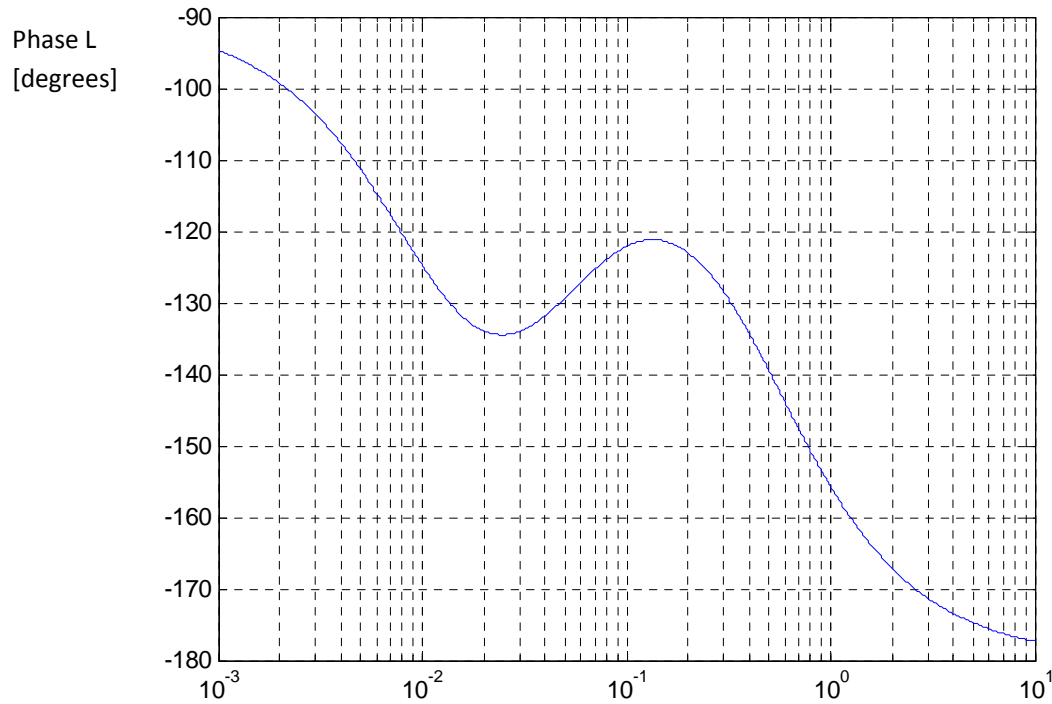
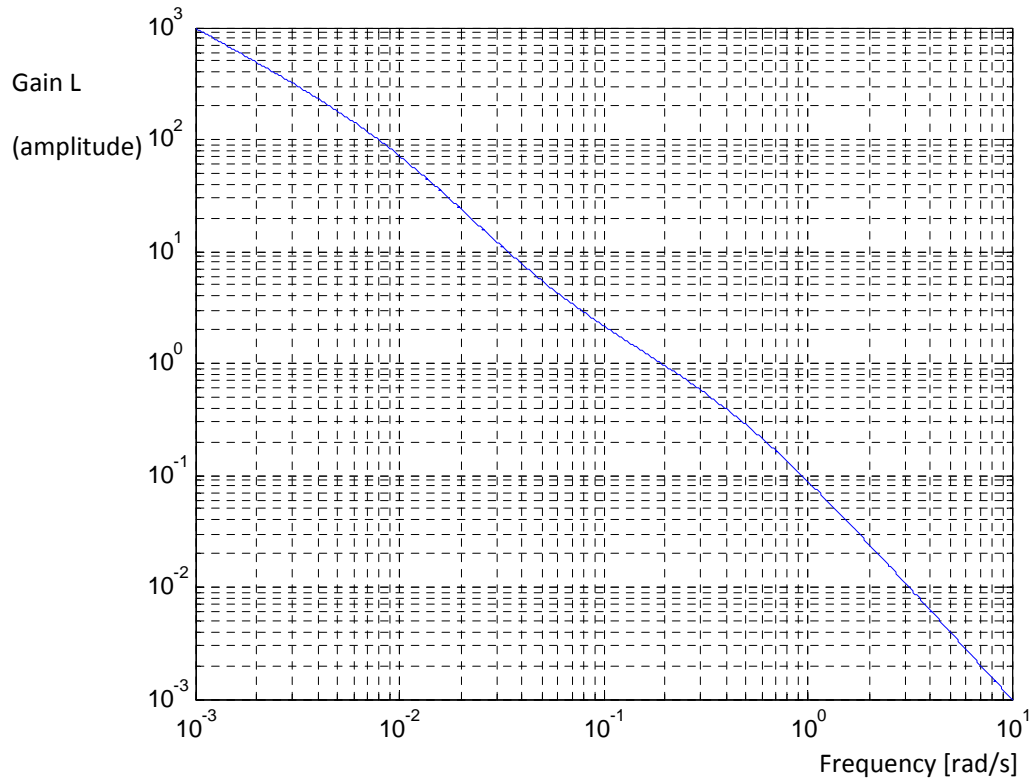


TASK 1: Bode-plot of $L(s) = (20s+1)/[s(100s+1)(2s+1)]$. Write on the asymptotes

TASK 2: What is GM and PM?

TASK 2: How does the plot change if we add a delay of 2 time units (e^{-2*s})

TASK 3: What is now GM and PM? How much extra time delay can we allow?



```
s=tf('s')
L = (20*s+1)/[s*(100*s+1)*(2*s+1)]
figure(3), bode(L) % gives AR in dB
w = logspace(-3,1,1000)
[mag,phase]=bode(L,w)
figure(1), loglog(w,mag(:)), grid on, axis([0.001 10 0.001 1000])
figure(2), semilogx(w,phase(:)), grid on
```