

Diff. Eq. $\ddot{y}(t) + 2\dot{y}(t) + 120y(t) + 100y(t) = x(t)$

By inspection: \rightarrow Factor \rightarrow

$$H(s) = \frac{s}{s^3 + 21s^2 + 120s + 100} = \frac{s}{(s+1)(s^2 + 20s + 100)}$$

Start w/ $j\omega$ & constant
 $\frac{j\omega}{100}$

$\omega = 0.1$ is dec below lowest BP

$s = 1$ so keep together

$\Rightarrow \frac{0.1}{100} \Rightarrow -60dB$

BP	Δ Slope
1	-20
10	-40

\Rightarrow Start plot @ $\omega = 0.1$ & $-60dB$

$|H(\omega)|$ (dB)

