

1. Phase Response

Sketch the phase (in radians) vs. $\log \omega$ for the filter specified below with $\omega_1 = 10^3$ rad/s and $\omega_2 = 10^5$ rad/s.

$$H(\omega) = \frac{-5}{1 + j\omega/\omega_1} \frac{1}{1 + j\omega/\omega_2}$$

Hint: You may want to figure out the phase responses of each component of $H(\omega)$ individually and then combine them together.