

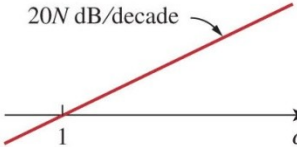

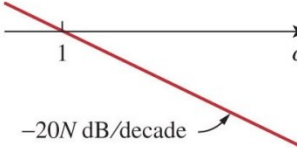

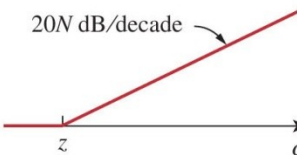
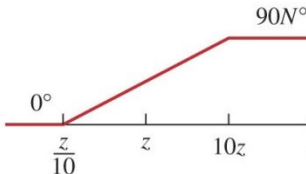


Bode Plots

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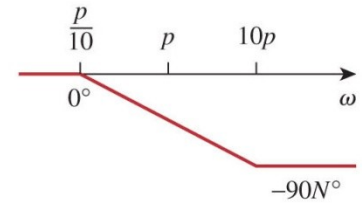
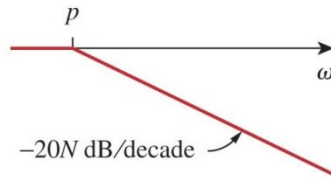
TABLE 14.3

Summary of Bode straight-line magnitude and phase plots.

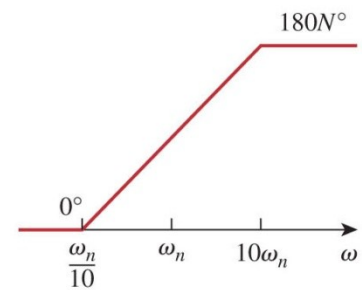
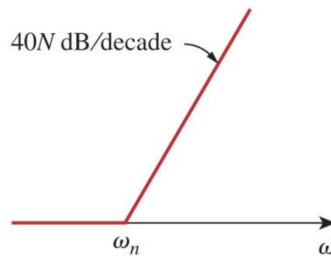
Factor	Magnitude	Phase
K	$20 \log_{10} K$ 	
$(j\omega)^N$	$20N \text{ dB/decade}$ 	$90N^\circ$ 
$\frac{1}{(j\omega)^N}$	 $-20N \text{ dB/decade}$	 $-90N^\circ$
$\left(1 + \frac{j\omega}{z}\right)^N$	$20N \text{ dB/decade}$ 	

Bode Plots

$$\frac{1}{(1 + j\omega/p)^N}$$



$$\left[1 + \frac{2j\omega\zeta}{\omega_n} + \left(\frac{j\omega}{\omega_n}\right)^2\right]^N$$



$$\frac{1}{[1 + 2j\omega\zeta/\omega_k + (j\omega/\omega_k)^2]^N}$$

