Notes on Filter Order

The *order* of a filter describes how quickly the gain approaches zero in the stopband.

First-order: Slope = -20 dB/decade
Second-order: Slope = -40 dB/decade
Third-order: Slope = -60 dB/decade ...

Below are sample Bode plots of first-, second-, and third-order low-pass filters. The -3 dB cutoff frequency for each filter is $\omega_c = 2\pi 400 \approx 2513$ rad/sec. You can listen to music that is processed by each filter in the demonstration at
`http://www.linux.bucknell.edu/~kozick/elec32007/notes.html`
that was played in class.