

Q2 $G(s) = \frac{2(s+10)}{(s^2+2s+2)} = \frac{2(s+10)}{(s-(-1+j))(s-(-1-j))}$

Zeros: -10

Poles Comp. Conj.: $(-1+j)$; $(-1-j) \Rightarrow \begin{cases} \omega_n = \sqrt{2} \\ \xi = \sqrt{2}/2 \end{cases}$

$|G(j\omega)|_{dB} = 20 \log_{10}(2 \cdot 10) + \text{Poles} - \text{Zeros}$

