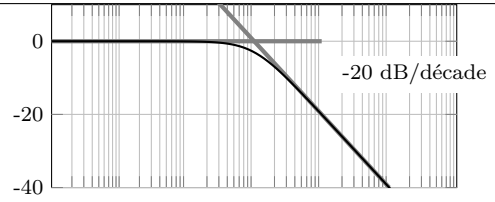
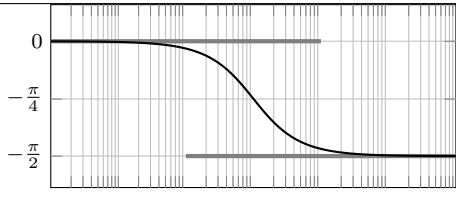
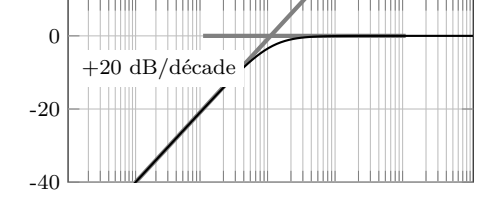
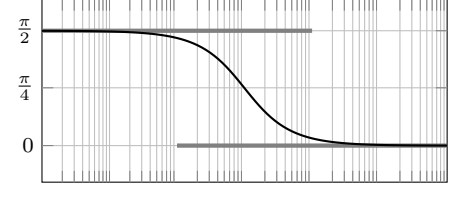
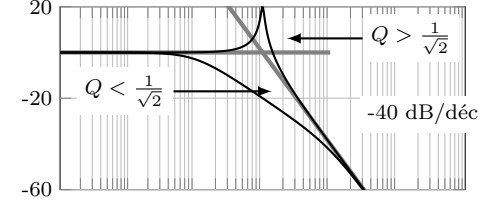
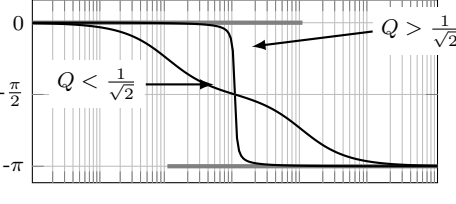
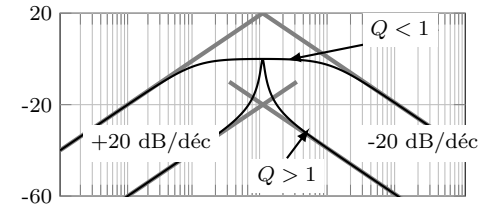
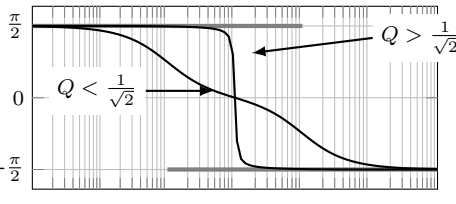
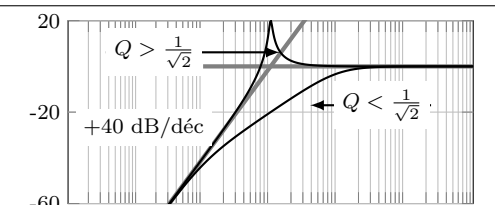
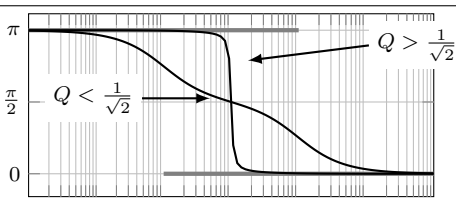


CHAPITRE E1 - Systèmes linéaires

Nature du filtre	Fonction de transfert canonique normalisée	Diagramme de Bode en gain en dB	Diagramme de Bode en phase	Bande passante à -3 dB ou résonance
Passe-bas 1 <sup>er</sup> ordre	$\underline{H}(x) = \frac{1}{1 + jx}$			$\omega_c = \omega_0$ BP = $[0; \omega_0]$
Passe-haut 1 <sup>er</sup> ordre	$\underline{H}(x) = \frac{jx}{1 + jx}$			$\omega_c = \omega_0$ BP = $[\omega_0; +\infty]$
Passe-bas 2 <sup>ème</sup> ordre	$\underline{H}(x) = \frac{1}{1 + j\frac{x}{Q} - x^2}$			Résonance si $Q > \frac{1}{\sqrt{2}}$ $\omega_r = \omega_0 \sqrt{1 - \frac{1}{2Q^2}}$
Passe-bande 2 <sup>ème</sup> ordre	$\underline{H}(x) = \frac{1}{1 + jQ(x - \frac{1}{x})}$			Toujours résonance $\Delta\omega = \frac{\omega_0}{Q}$
Passe-haut 2 <sup>ème</sup> ordre	$\underline{H}(x) = \frac{-x^2}{1 + j\frac{x}{Q} - x^2}$			Résonance si $Q > \frac{1}{\sqrt{2}}$ $\omega_r = \omega_0 \sqrt{1 - \frac{1}{2Q^2}}$