

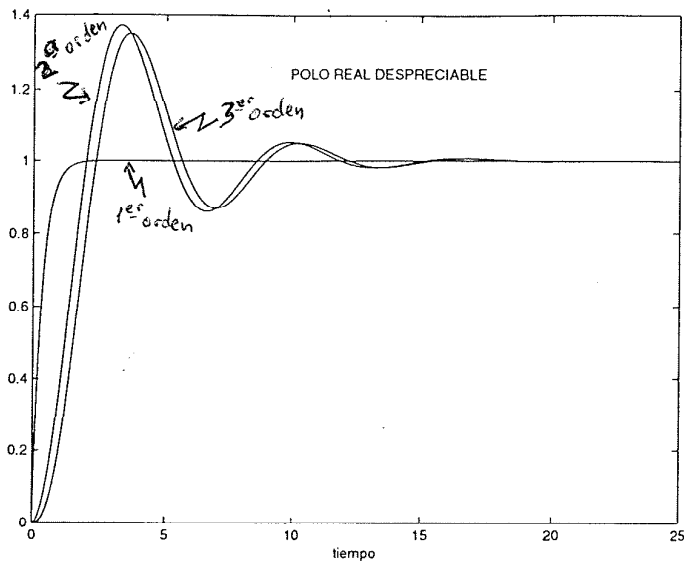
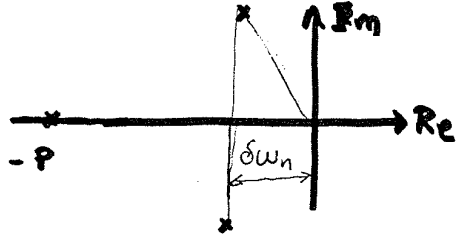
SISTEMA DE TERCER ORDEN

ADICIÓN DE POLO A SISTEMA DE SEGUNDO ORDEN SUBAMORTIGUADO

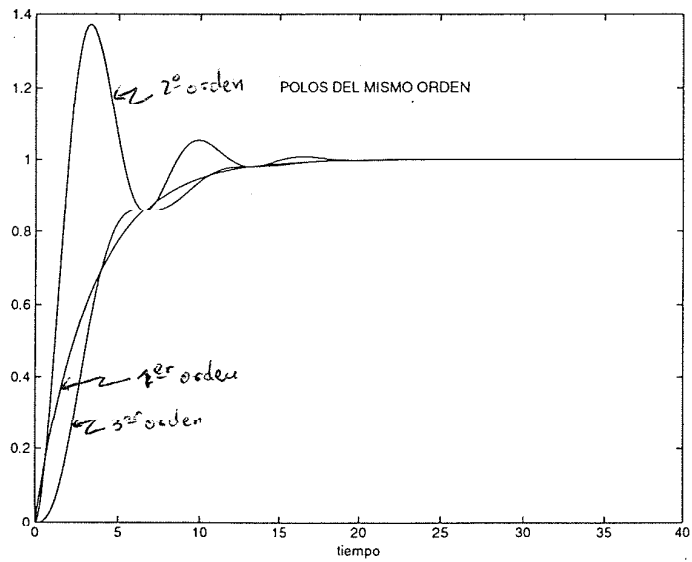
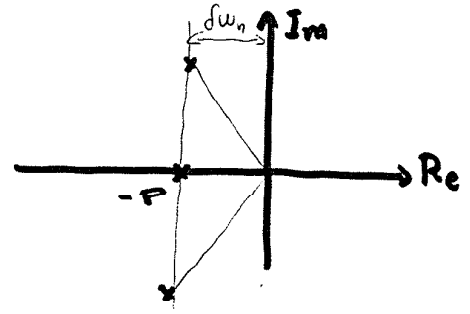
$$G(s) = \frac{\omega_n^2}{s^2 + 2\delta\omega_n s + \omega_n^2} \frac{P}{s+P}$$

• $\delta = 0.3$
 $\omega_n = 1$

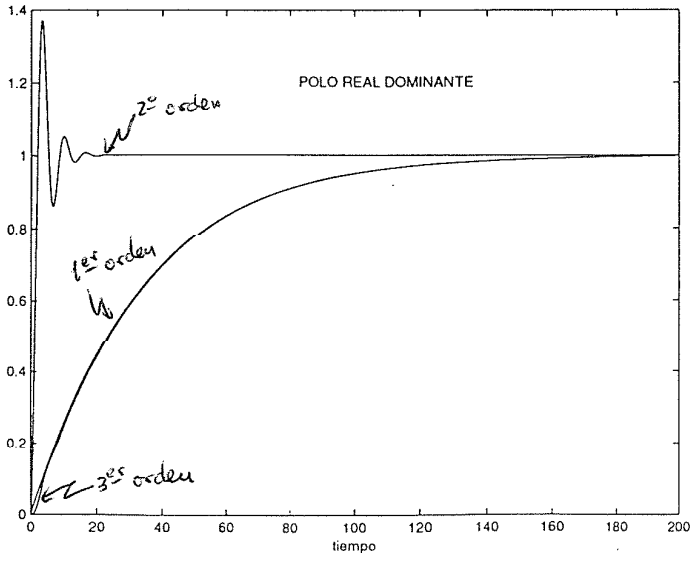
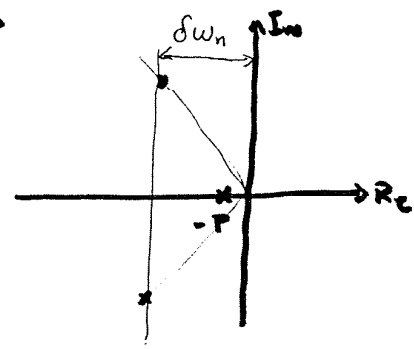
→ $P = 10\delta\omega_n$



→ $P = \delta\omega_n$



→ $P = 0.1\delta\omega_n$



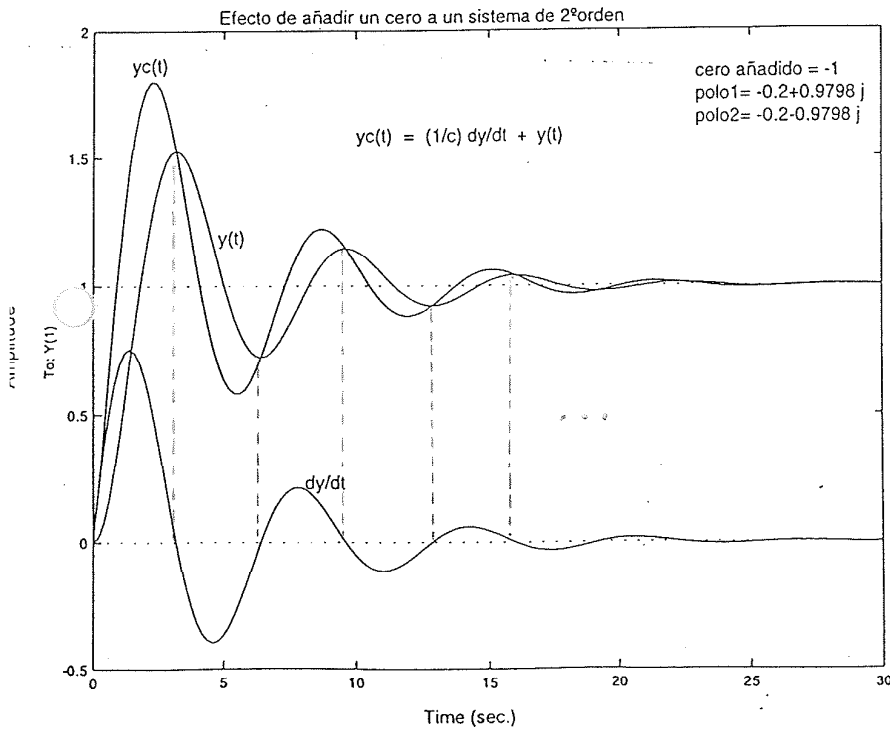
SISTEMA DE SEGUNDO ORDEN SUBAMORTIGUADO

ADICIÓN DE UN CERO:

$$G(s) = \frac{\omega_n^2}{s^2 + 2\delta\omega_n s + \omega_n^2} \frac{s+c}{c}$$

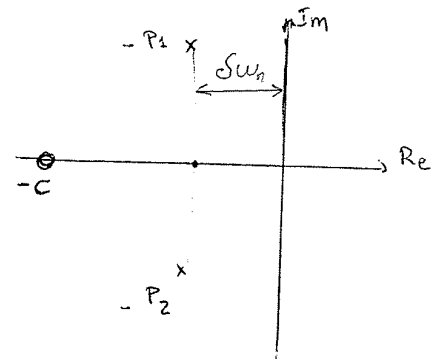
$$\omega_n = 1 \text{ rad/s}$$

$$\delta = 0.2$$

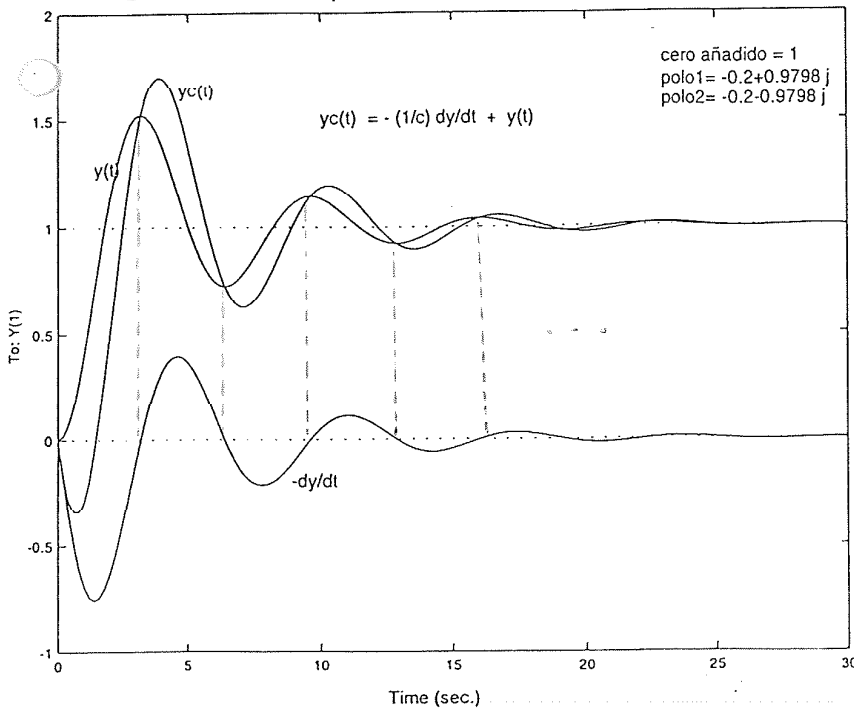


CERO DE FASE MÍNIMA

$$C = +1$$

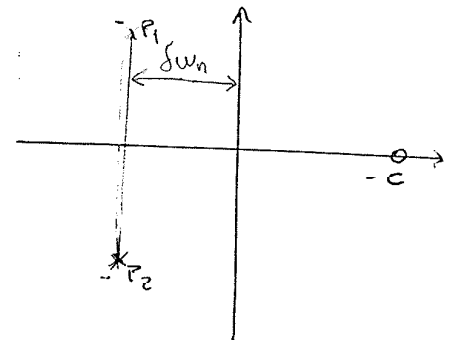


Efecto de añadir un cero positivo a un sistema de 2ºorden: Sistema de fase no-mínima



CERO DE FASE NO MÍNIMA

$$C = -1$$



SISTEMA DE SEGUNDO ORDEN SOBREAMORTIGUADO

ADICIÓN DE UN CERO:

