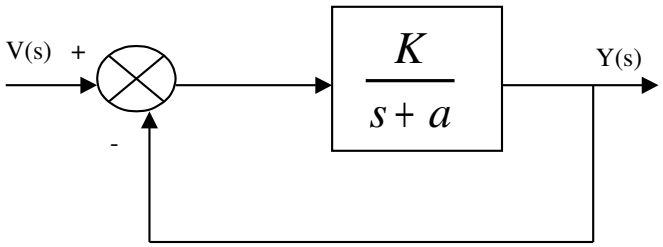
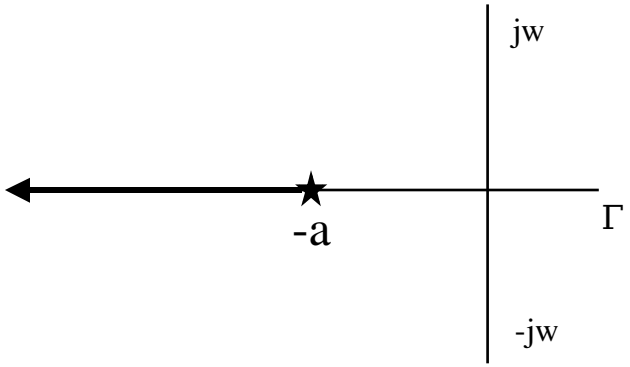
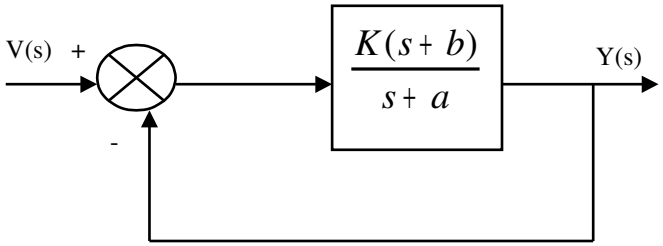
4.1 LDR de sistemas continuos típicos

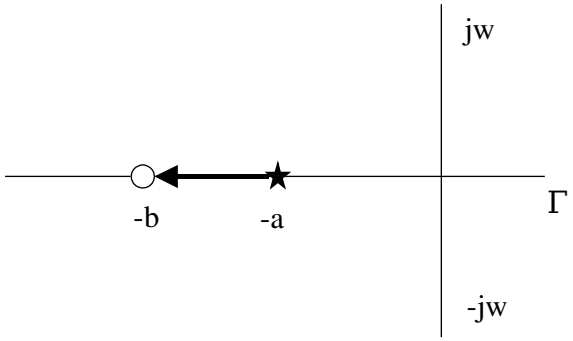
- Orden 1

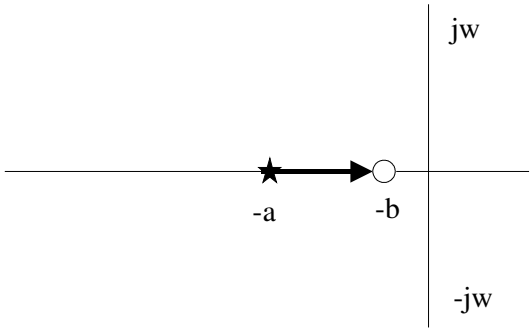




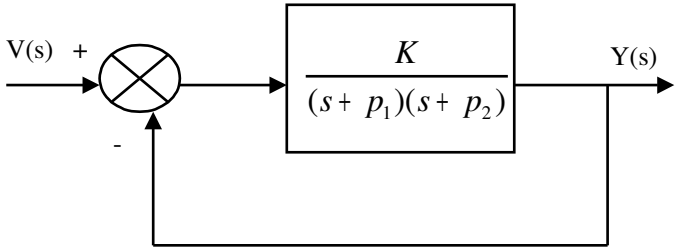
- Añadimos un cero

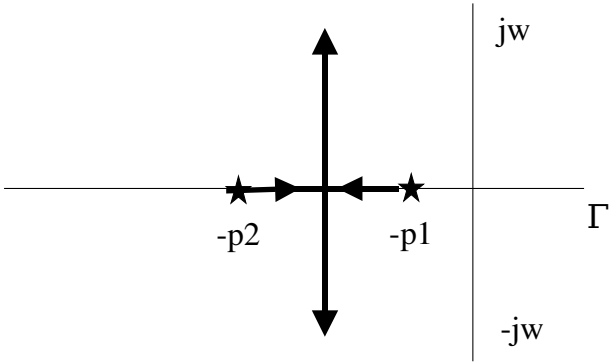






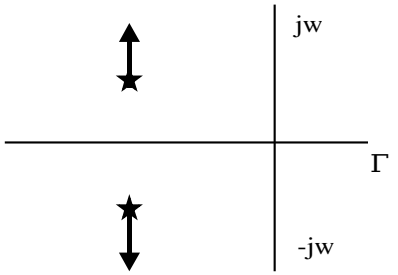
- Orden 2
  - Caso 1. Dos polos reales



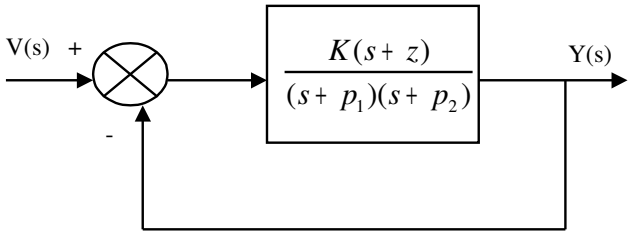


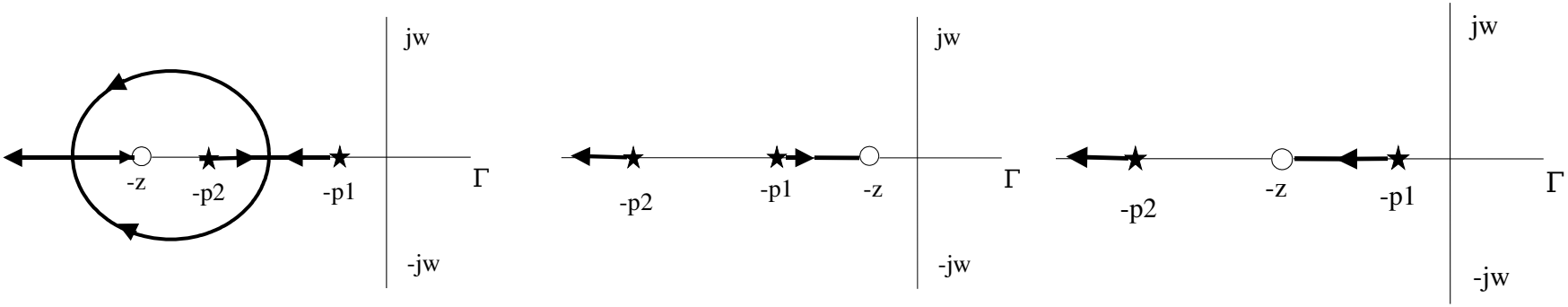
4.1 LDR de sistemas continuos típicos

•Caso 2. Dos polos complejos conjugados

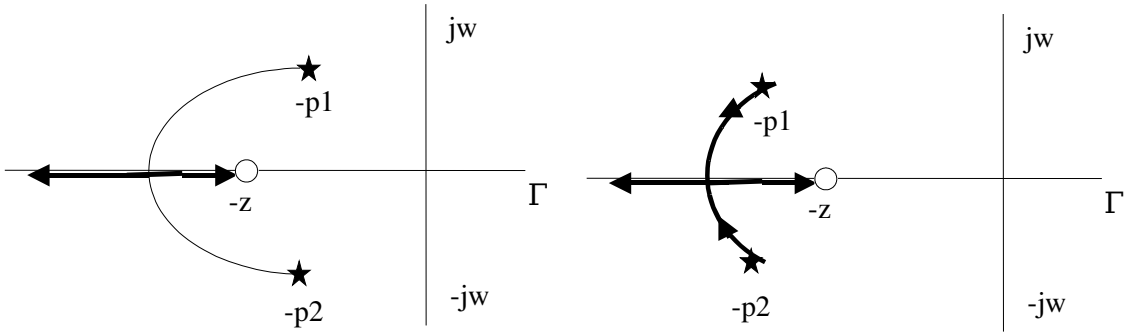


o Cero añadido al caso 1



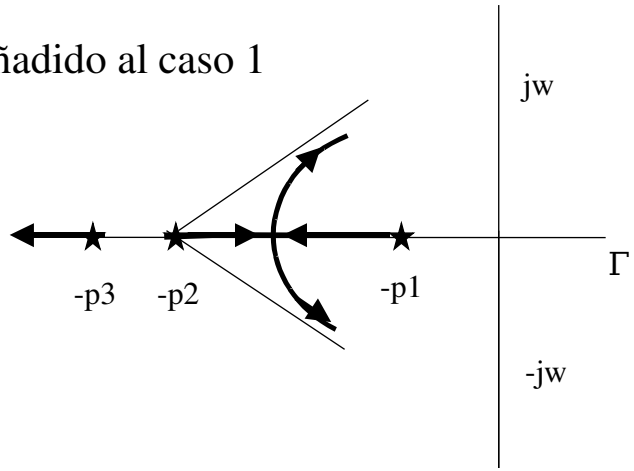


o Cero añadido al caso 2

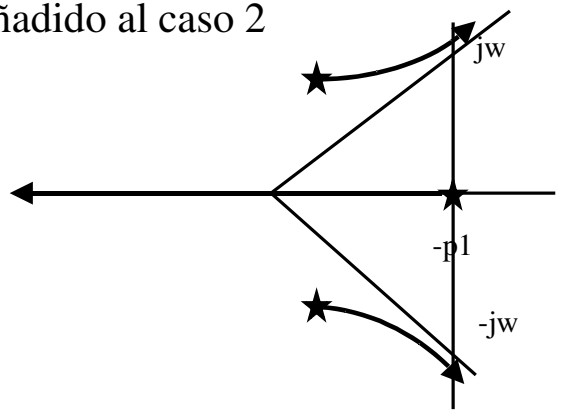


4.1 LDR de sistemas continuos típicos

o Polo añadido al caso 1

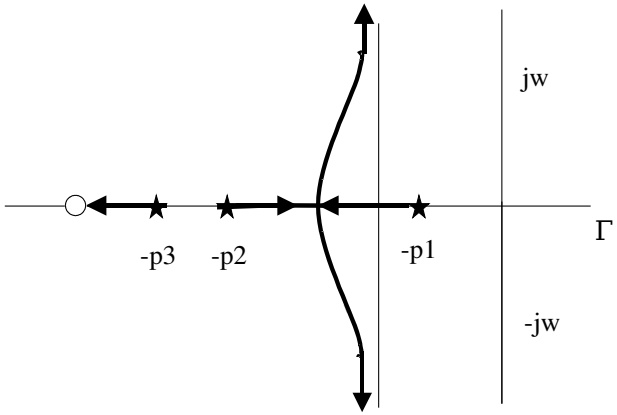


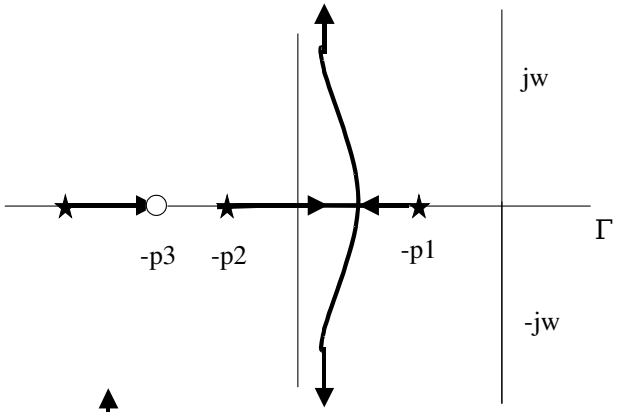
o Polo añadido al caso 2

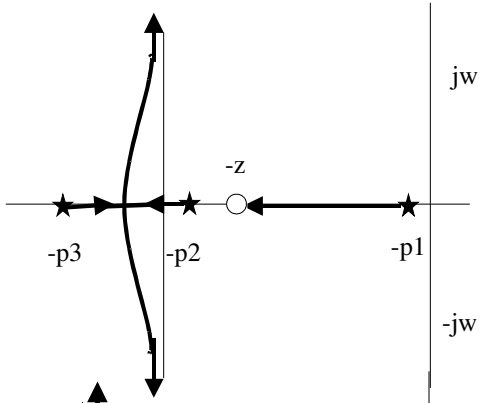


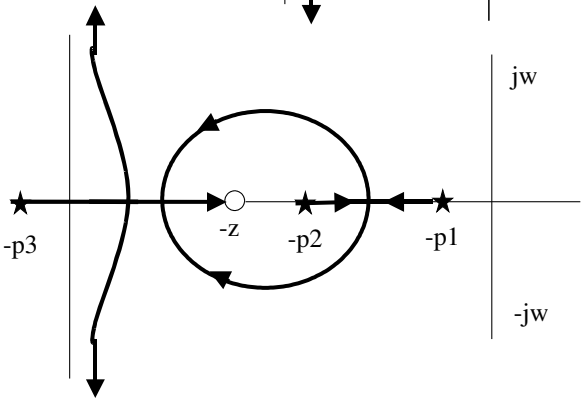
➢Orden 3

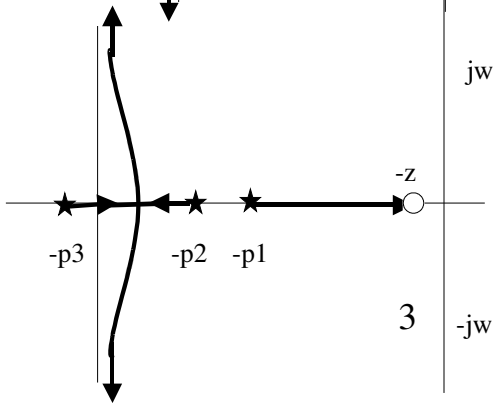
•Añadimos un cero







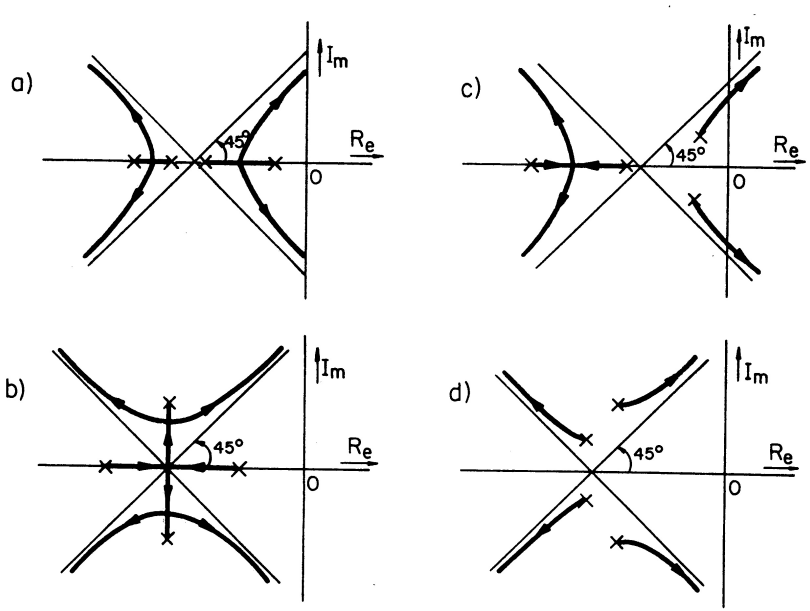




4.1 LDR de sistemas continuos típicos

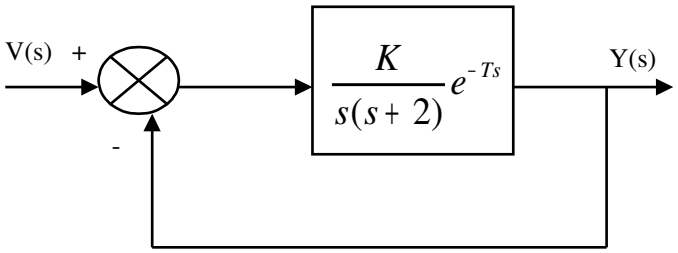
- Orden 4

  a. 4 polos reales
  b. 2 polos complejos y 2 reales
  c. 2 polos complejos y 2 reales
  d. 4 polos complejos



- Sistemas condicionalmente estables (ejemplo)

- Sistemas con retardo puro (ejemplo)



➢Contorno de las raíces: lugar geométrico de los polos en bucle cerrado de un sistema, manteniendo constante la K y variando los polos y ceros de la función de transferencia en bucle abierto

$$G(s)H(s) = K\frac{Z(s)}{P(s)}$$

$$1 + G(s)H(s) = 0$$

$$1 + K\frac{Z(s)}{P(s)} = 0 \qquad P(s) + K \cdot Z(s) = 0$$

$$P(s) + T\,Z(s) = 0 \qquad 1 + \frac{Z(s)}{P(s)} = 0$$