

Tarea#11

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Curso: Control Automático

Hallar el centroide y angulo de salida para el sistema $G(s)H(s) = \frac{s^2+8s+12}{(s+3)(s^2+11s+15)}$

$$n = 3$$

$$q = 2$$

$$\sum_{i=1}^n P_i = -2 - 6 = -8$$

$$\sum_{i=1}^p Z_i = -3 - 1 - 1 = -5$$

$$c = \frac{-8 \mp 5}{1} = -3$$

$$\phi = 180 + \sum_{i=1}^q \phi Z_i - \sum_{i=1, i \neq x}^n \phi P_i$$

$$180 + (21.8 + 63.43) - (45 + 90) = 180 + 85.23 - 135$$

$$180 - 49.77 = 130.23$$

$$\phi = 130.23$$