1)②

$$20 \log_{10}(x) = -12,3$$

$$\log_{10}(x) = \frac{-12,3}{20}$$

$$\log_{10}(x) = -0,615$$

$$x = 10^{-0,615}$$

$$x = 0,242661$$

Hairom Schneider Cardoso

③ $C(s) = \frac{K(s+1)}{s}$ e $G(s) = \frac{-6s-60}{0,6s^2-10}$

$$T(s) = \frac{C(s).G(s)}{1+C(s)G(s)} = \frac{\frac{C_m \cdot G_m}{C_d \cdot G_d}}{\frac{C_d \cdot G_d + C_m \cdot G_m}{C_d \cdot G_d}} = T(s) = \frac{C_m \cdot G_m}{C_d \cdot G_d + C_m \cdot G_m}$$

$$T(s) = \frac{K(s+1)(-6s-60)}{s(0,6s^2-10)+K(s+1)(-6s-60)} = \frac{-6Ks^2-66Ks-60K}{0,6s^3-10s-6Ks^2-66Ks-60K}$$

$$q(s) = 0,6s^3 + (-6K)s^2 + (-10-66K)s - 60K$$

s^3	$0,6$	$-10-66K$
s^2	$-6K$	$-60K$
s^1	b_1	0
s^0	c_1	0

$$b_1 = \frac{-6K.(-10-66K) - 0,6(-60K)}{-6K}$$

$$b_1 = (-10-66K) + \frac{(-36K)}{6K}$$

$$b_1 = (-10-66K) - 6$$

$$-16-66K > 0$$

$$\boxed{K_1 < -0,2424242424,\ldots}$$

$$c_1 = \frac{b_1(-60K) - 0}{b_1} = -60K$$

$$-60K > 0$$

$$\boxed{K_2 < 0}$$

$$-6K > 0$$

$$\boxed{K_3 < 0}$$

$K_1 \cap K_2 \cap K_3 \rightarrow -0,2424242424,\ldots$

Condição de estabilidade