

$$G(s) = \frac{2s + 1}{s^2 + 3s - 1}$$

Valor de K para que el modelo sea estable.

$$\begin{array}{ccc} s^2 & 1 & -1 \\ s^1 & 3 & 0 \\ s^0 & -1 & \end{array}$$

$$a_0 = 1$$

$$a_1 = 2$$

$$a_2 = -1$$

$$b_1 = \frac{a_1 * a_2 - a_0 * a_3}{a_1} = \frac{3 * (-1) - 1 * 0}{3} = -1$$

Por lo tanto:

$$s^2 + 3s + k$$

$$\begin{array}{ccc} s^2 & 1 & k \\ s^1 & 3 & 0 \\ s^0 & k & \end{array}$$

$$a_0 = 1$$

$$a_1 = 2$$

$$a_2 = k$$

$$b_1 = \frac{a_1 * a_2 - a_0 * a_3}{a_1} = \frac{3 * (k) - 1 * 0}{3} = \frac{3k}{3} = k$$

Y nuestra k debe ser mayor a 0

$$k > 0$$