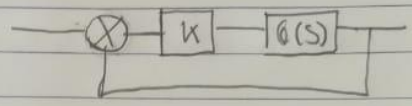
Tarea #9.

Daniel Alemán Saborío.

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



Valor de K para polo final sea $\frac{-1}{2}$.

$G(s) = \frac{q(s)}{n(s) + Kq(s)} = \frac{1}{(s+1)(s+2)}$

$= \frac{1}{s^2+3s^2+2K}$

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

$x = \frac{-3 \pm \sqrt{3^2 - 4 \cdot 2K}}{2}$

$x = \frac{-3 \pm \sqrt{9-8K}}{2}$

$\frac{-1}{2} = \frac{-3 \pm \sqrt{9-8K}}{2}$

$-1 = -3 \pm \sqrt{9-8K}$

$-1+3 = \pm \sqrt{9-8K}$

$(2)^2 = \pm(\sqrt{9-8K})^2$

$A - 9 = -8K$

$A + 9 = 8K$

$\frac{5}{8} = K$ ✓

$\frac{13}{8} = K$ ✗