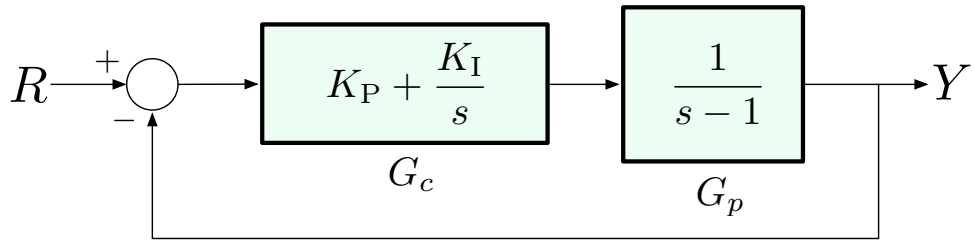

$$\text{Characteristic equation:} \quad 1 + \underbrace{\left(K_\mathrm{P} + \frac{K_\mathrm{I}}{s}\right)}_{G_c(s)} \underbrace{\left(\frac{1}{s-1}\right)}_{G_p(s)} = 0$$

To use the RL method, we need to convert it into the Evans form $1 + KL(s) = 0$, where $L(s) = \dfrac{b(s)}{a(s)} = \dfrac{s^m + b_1 s^{m-1} + \ldots}{s^n + a_1 s^{n-1} + \ldots}$

$$1 + \left(K_\mathrm{P} + \frac{K_\mathrm{I}}{s}\right)\frac{1}{s-1} = 1 + \frac{K_\mathrm{P}s + K_\mathrm{I}}{s}\frac{1}{s-1}$$

$$= 1 + K_\mathrm{P}\frac{s + K_\mathrm{I}/K_\mathrm{P}}{s(s-1)}$$

$$\implies K = K_\mathrm{P}, \; L(s) = \frac{s + K_\mathrm{I}/K_\mathrm{P}}{s(s-1)} \qquad \text{(assume } K_\mathrm{I}/K_\mathrm{P} \text{ fixed, } = 1)$$