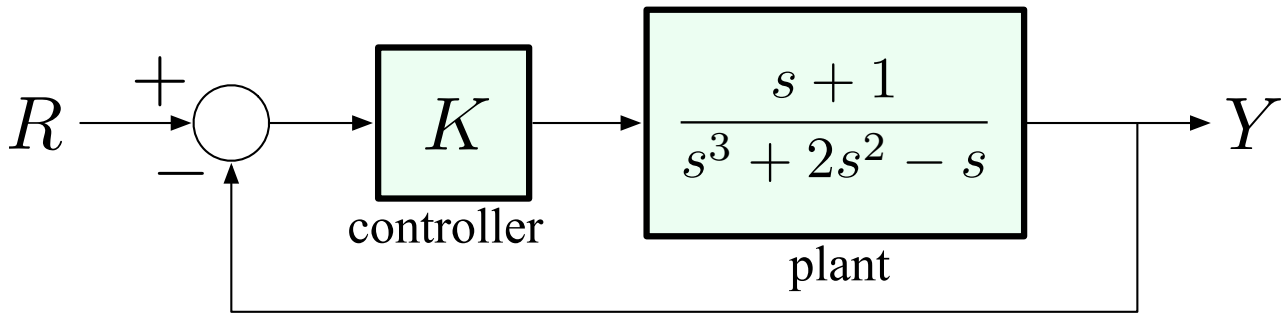
Routh–Hurwitz as a Design Tool

Parametric stability range

We can use the Routh test to determine *parameter ranges* for stability.

Example: consider the unity feedback configuration



Note that the plant is *unstable* (the denominator has a negative coefficient and a zero coefficient).

Problem: determine the range of values the scalar gain K can take, for which the closed-loop system is stable.