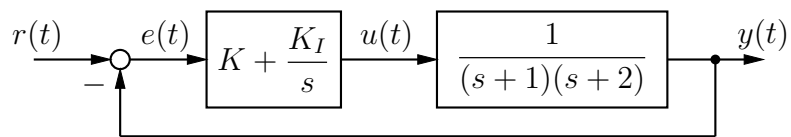


**Instruction:** Hand in your work with name and code by hand before the class is started. DO NOT copy homework from your classmates or lend it to others. Anyone who violates this regulation will be given -10 for the homework.

1. Find the range of the controller gains  $(K, K_I)$  so that the PI (proportional-integral) feedback system



is stable.