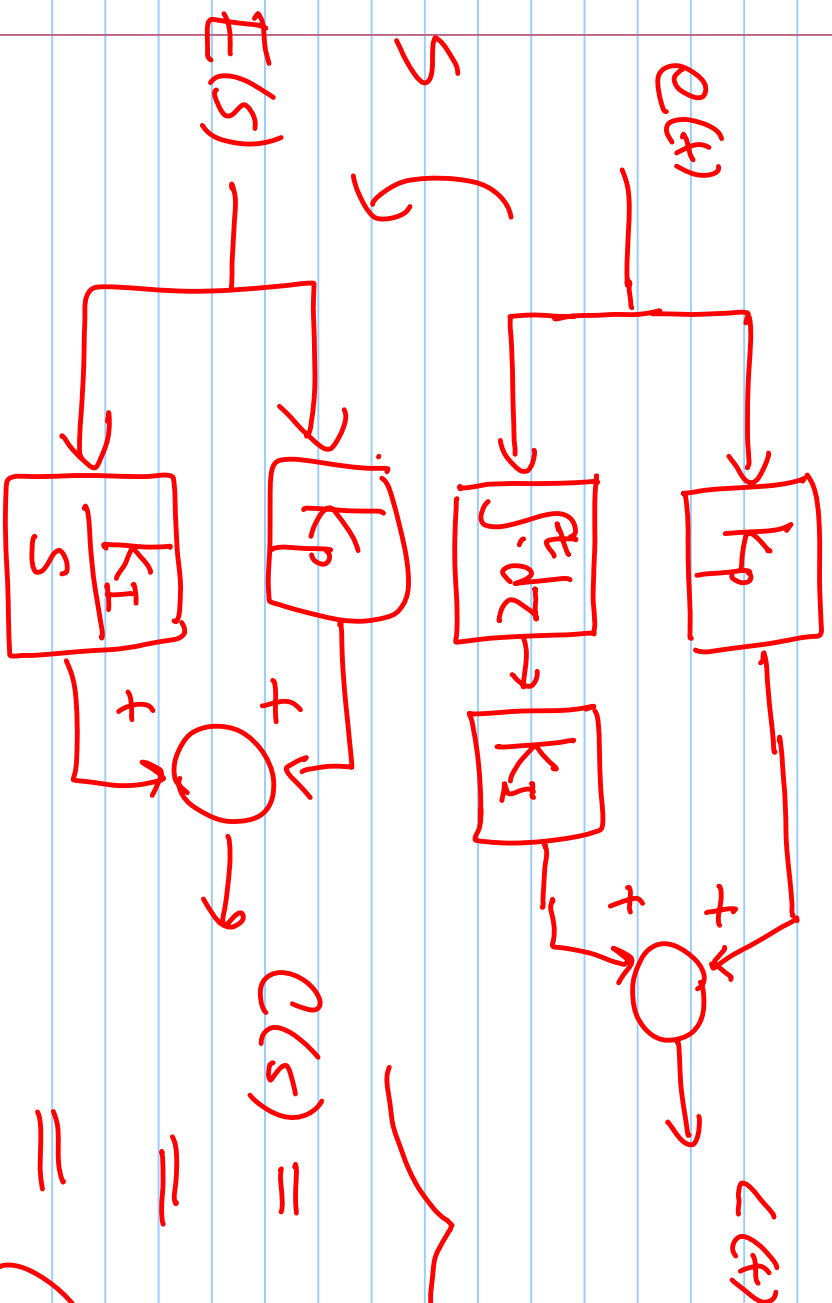


# PI controller



$$\frac{C(s)}{E(s)} = \left( \frac{K_p s + K_I}{s} \right)$$

$$C(s) = K_p E(s) + \frac{K_I}{s} E(s)$$

$$= \left( K_p + \frac{K_I}{s} \right) E(s)$$

$$= \left( \frac{K_p s + K_I}{s} \right) E(s)$$

$$\frac{G(s)}{E(s)} = \left( \frac{k_I}{s} \right)$$

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$$\frac{G(s)}{E(s)} \Big|_{k_p=0}$$