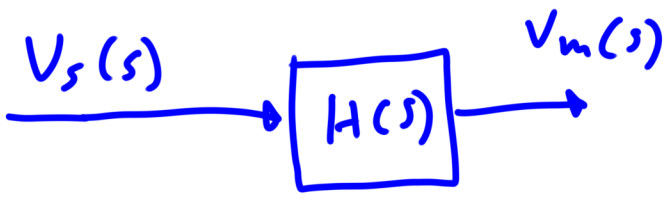
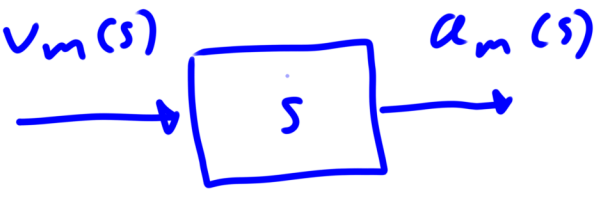
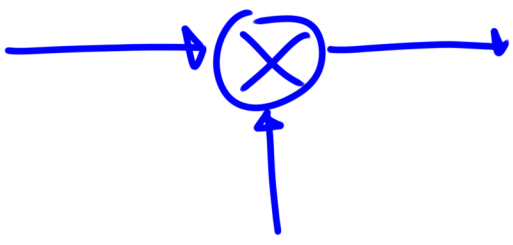
Block Diagrams



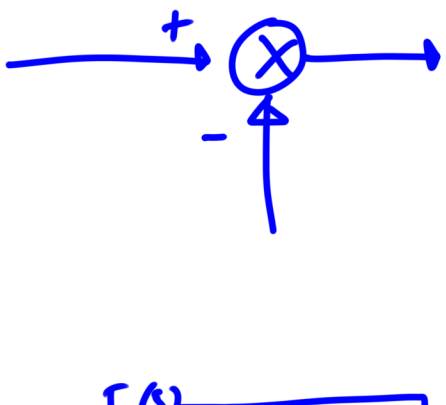


derivative

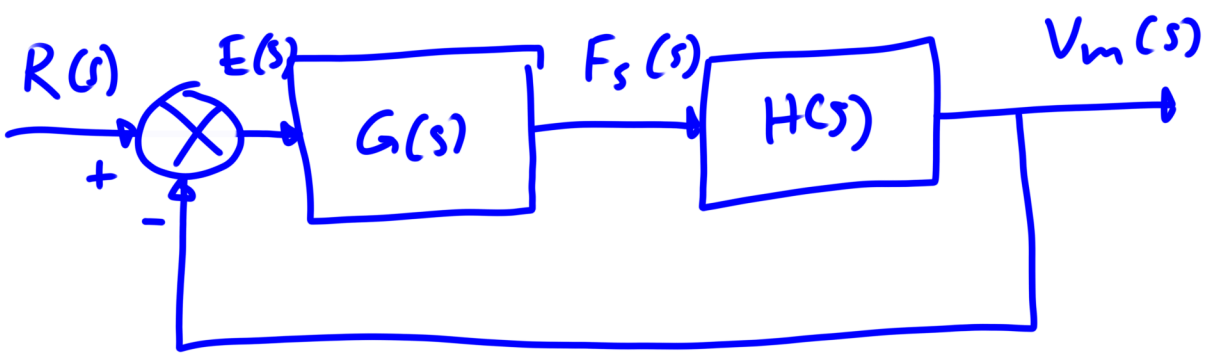
Integral



sum



difference



$$E(s) = R(s) - V_m(s)$$

$$F_s(s) = G(s)\,E(s)$$

$$V_m(s) = F_s(s)\,H(s)$$

$$V_m(s) = E(s)\,H(s)\,G(s)$$

$$V_m(s) = (R(s) - V_m(s))\,H(s)\,G(s)$$

$$= R(s)\,H(s)\,G(s) - V_m(s)\,H(s)\,G(s)$$

$$V_m(s) + V_m(s)\,H(s)\,G(s) = R(s)\,H(s)\,G(s)$$

$$V_m(s)\,(1 + H(s)\,G(s)) = R(s)\,H(s)\,G(s)$$

$$\frac{V_m(s)}{R(s)} = \frac{H(s)\,G(s)}{1 + H(s)\,G(s)}$$

$$\frac{Y(s)}{R(s)} = \frac{H(s)\,G(s)}{1 + H(s)\,G(s)}$$