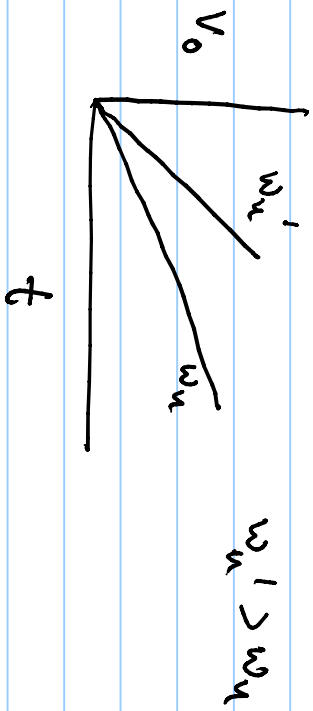
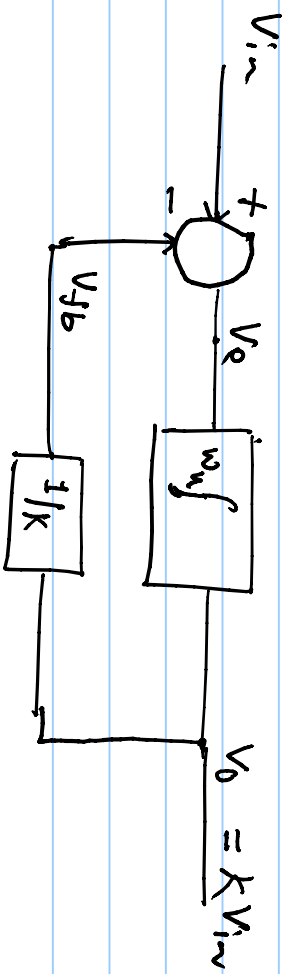


$\omega_u \rightarrow$ unity gain frequency





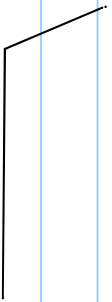
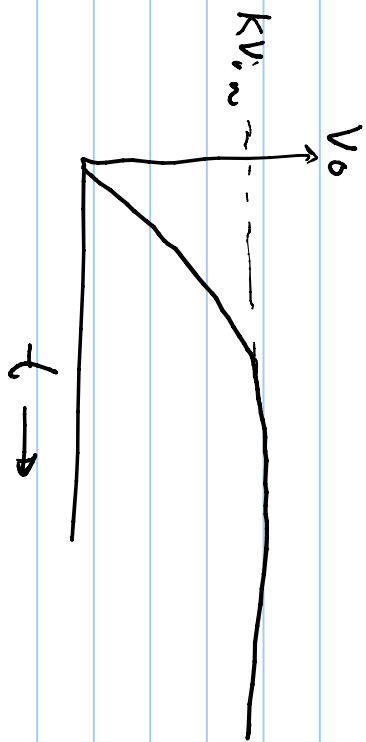
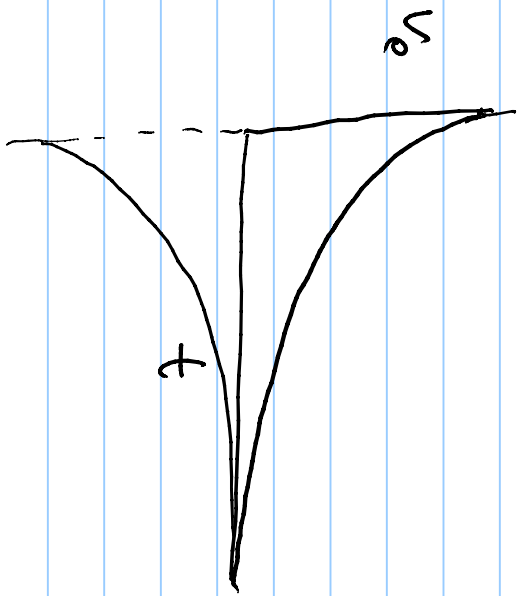
$$V_e = V_{in} - V_{fb} = V_{in} - \frac{V_0}{K}$$

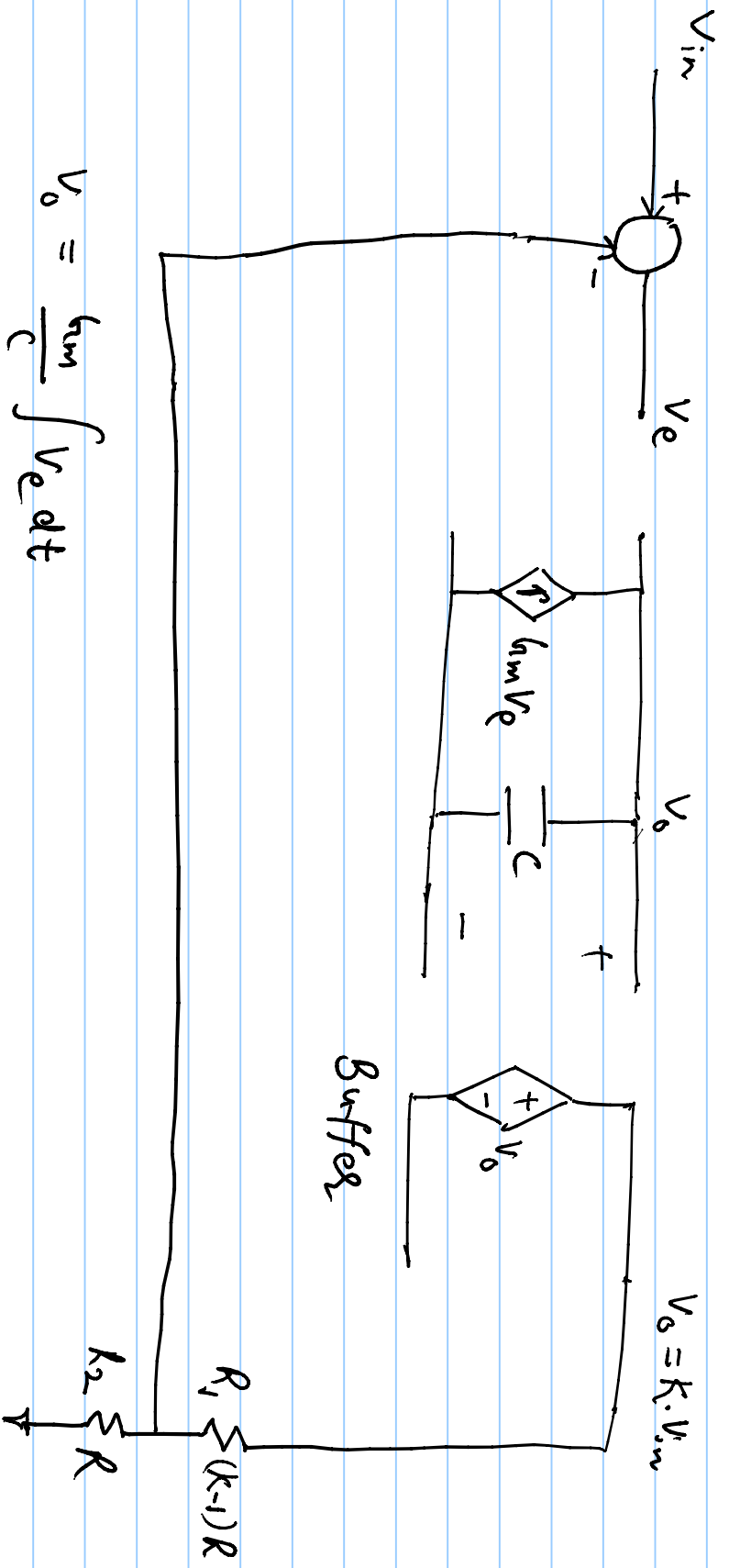
$$V_0 = \omega_u \int V_e dt$$

$$\frac{1}{\omega_u} \frac{dV_0}{dt} = V_{in} - \frac{V_0}{K}$$

$$e^{-\frac{\omega_u}{K} t}$$

$$\frac{K}{\omega_u} \frac{dV_0}{dt} + V_0 = K V_{in}$$





$$V_0 = \frac{g_m}{C} \int V_e dt$$

$$W_u = \frac{g_m}{C}$$

$$V_0 = K \cdot V_{in}$$

Buffer

$$V_o = w_n \int V_{in} dt$$

$$\frac{V_o(s)}{V_{in}(s)} = \frac{w_n}{s}$$

