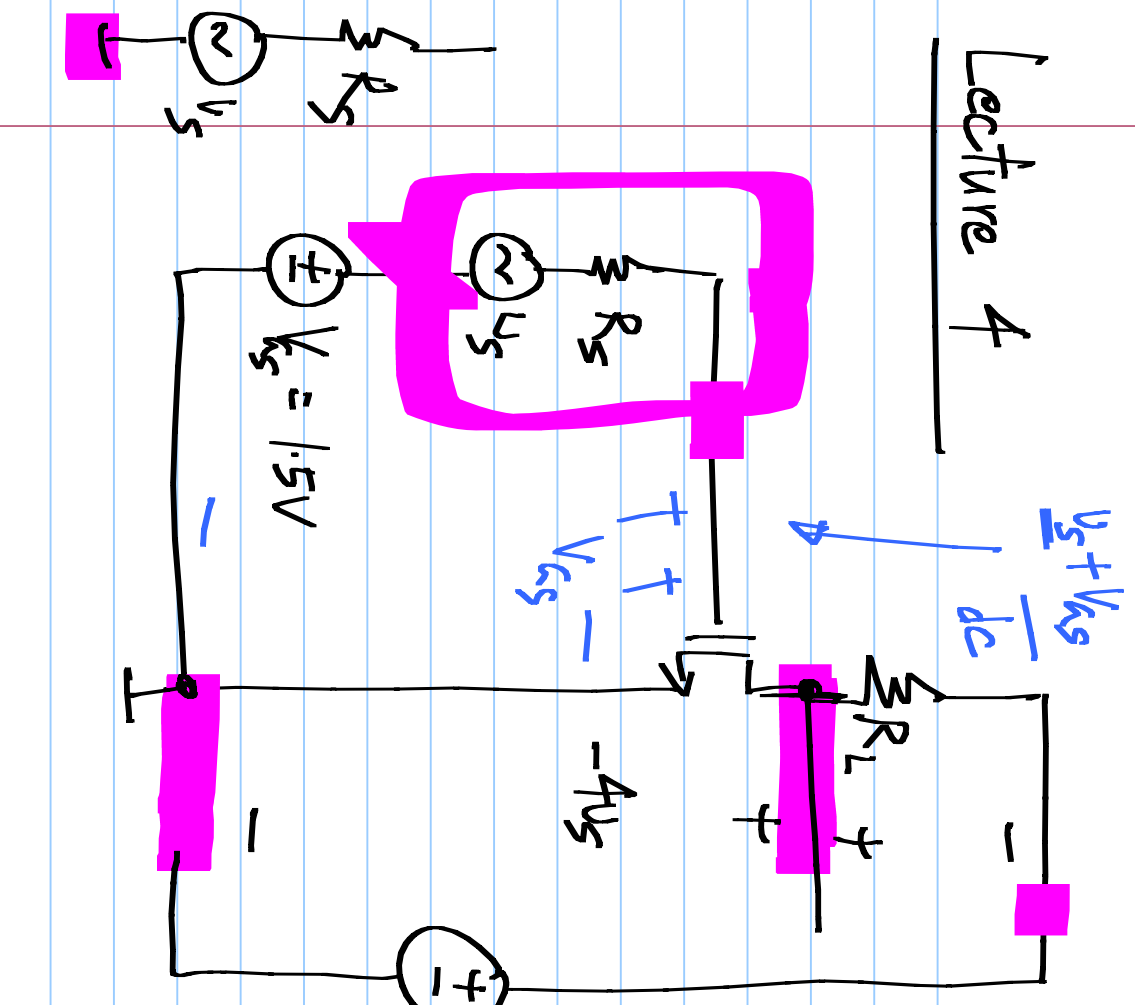
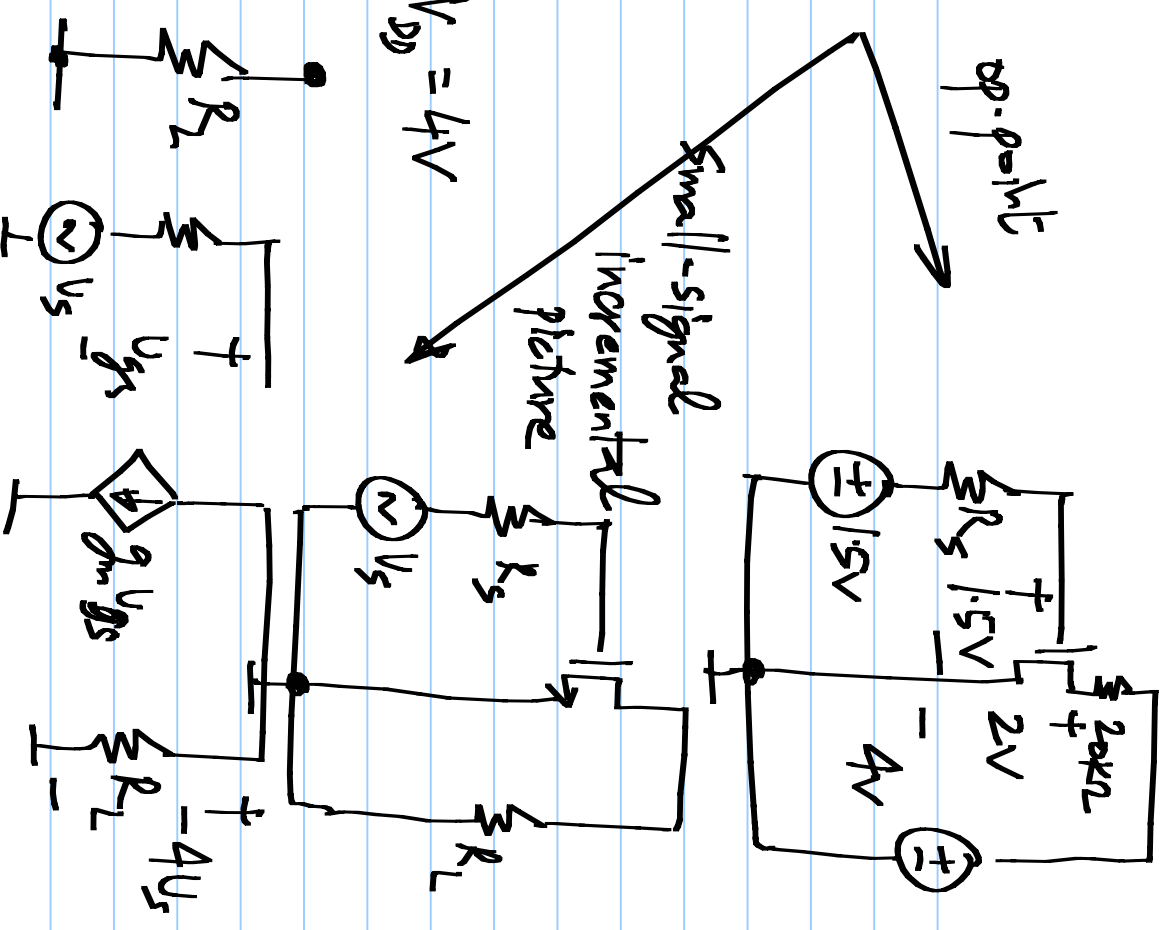


Lecture 4

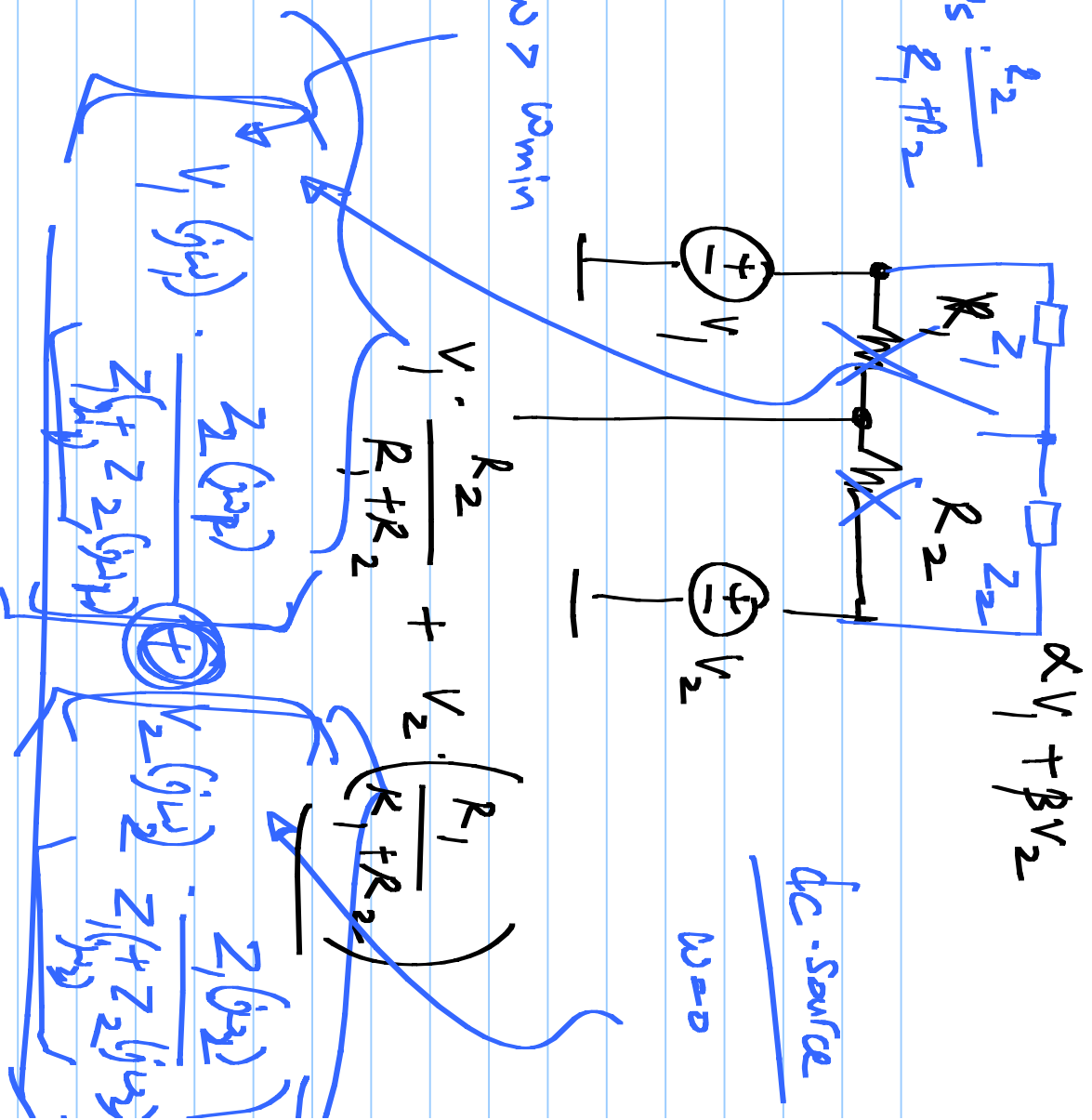
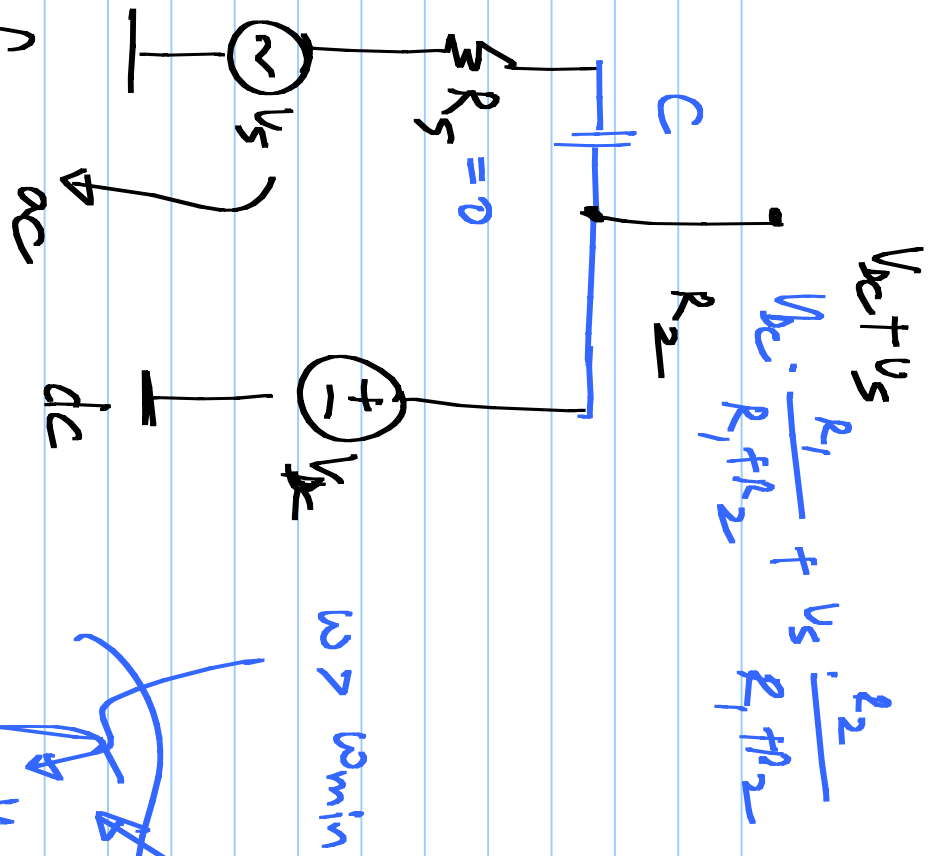


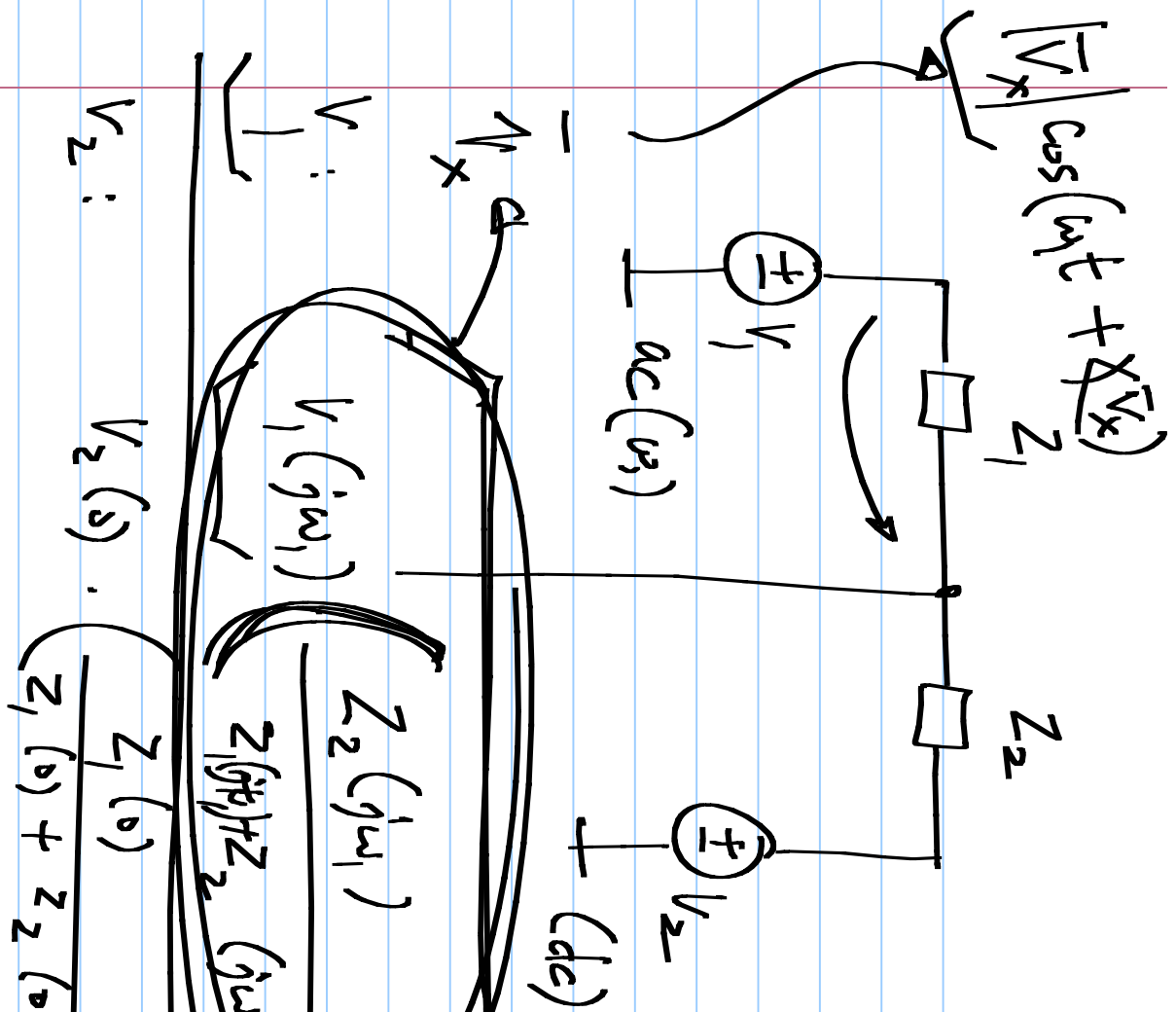
op-point

Small-signal incremental picture



$f \rightarrow f_{min}$
 voltage





$$\frac{Z_1}{Z_2}$$

capacitor resistor

$$Z_1(0) = \infty$$

capacitor

$$Z_1(0) = \infty$$

inductor

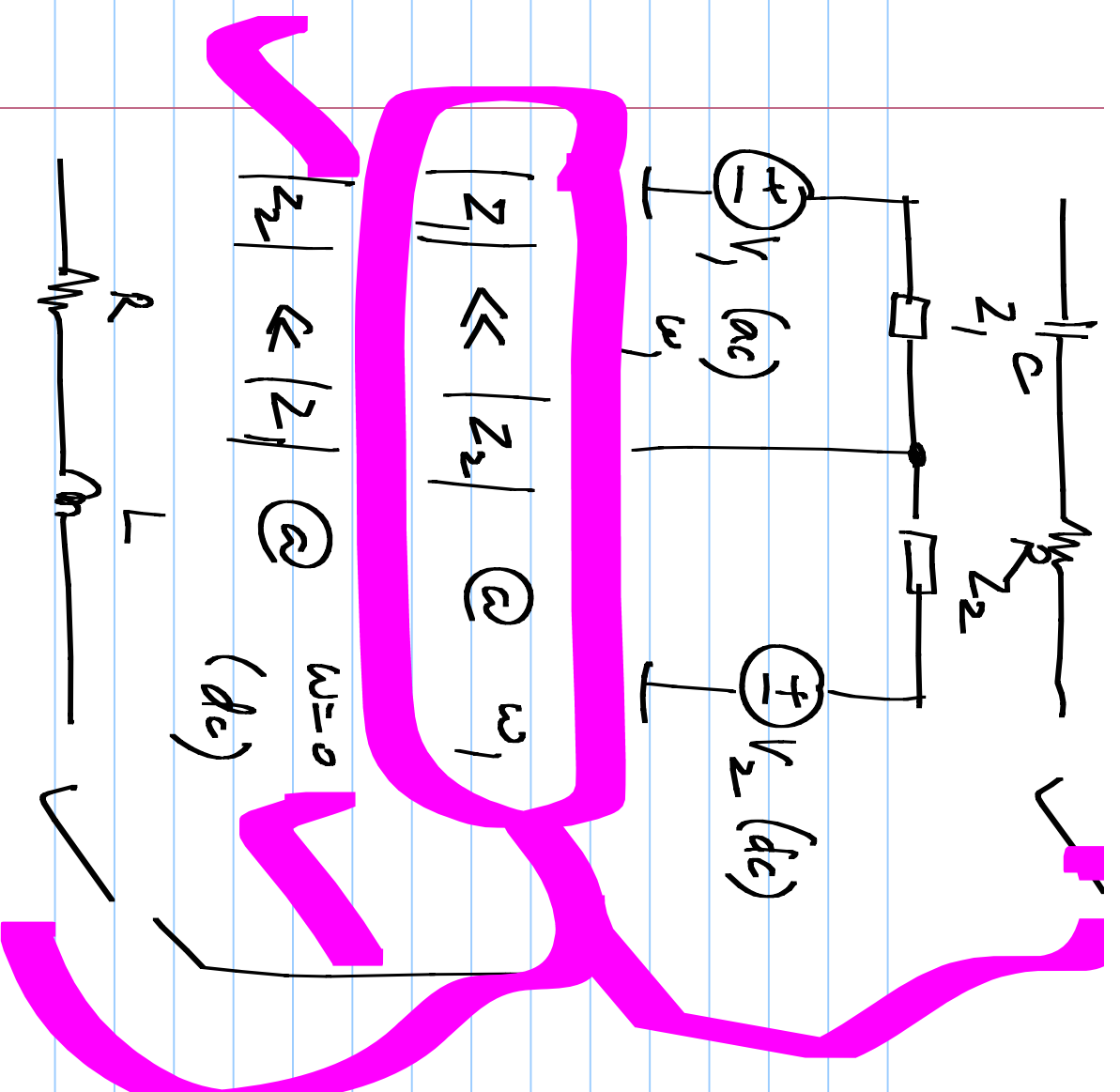
$$Z_2(0) = 0$$

$$\approx 1 @ \omega_1$$

$$|Z_1(j\omega)| \ll |Z_2(j\omega)|$$

$$|Z_2(0)| \ll |Z_1(0)|$$

$$V_2 : V_2(s) \cdot \left(\frac{Z_1(s)}{Z_1(s) + Z_2(s)} \right)$$



Z_1 Z_2

capacitor resistor

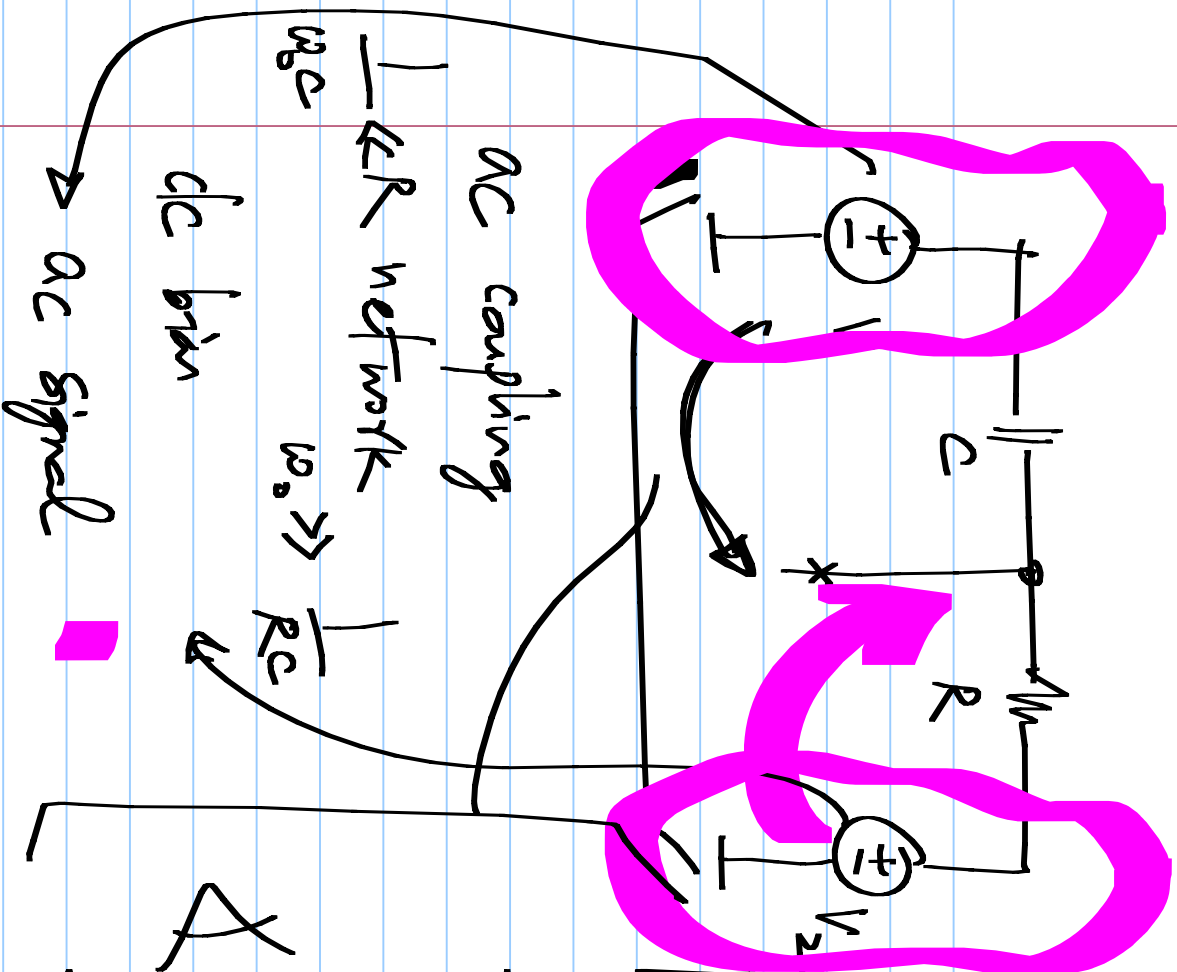
$(Z_1(\omega) = \infty)$ inductor

resistor inductor

$(Z_2(\omega) = 0)$

$$\omega \gg \frac{1}{RC}$$

$$\omega \gg \frac{R}{L}$$



$$V_1(s) \cdot \frac{sCR}{1+sCR} + V_2(s) \cdot \frac{1}{1+sCR}$$

Bode plot

