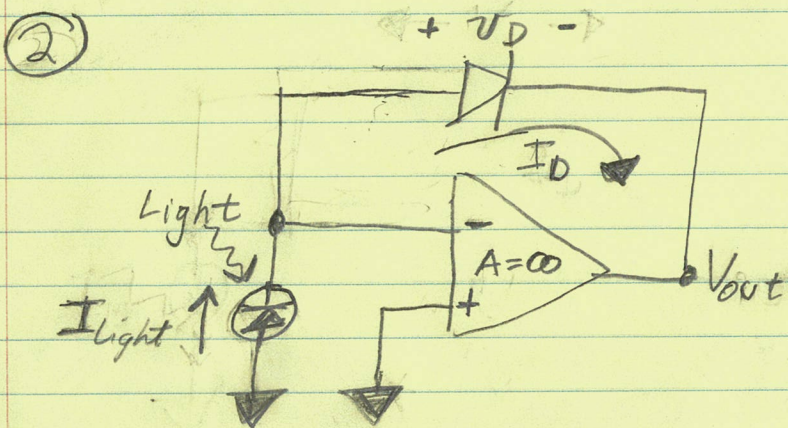


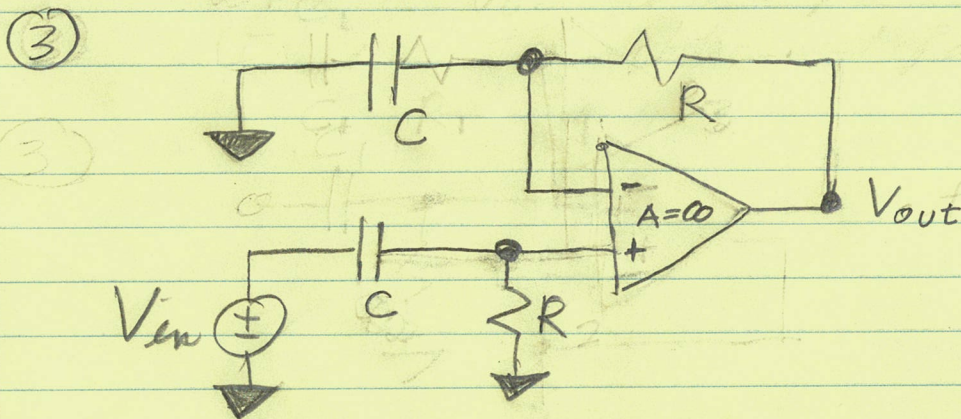
What is  $V_{out}$  with respect to  $V_{in}$ ?



$$I_D = i_0 (e^{eV_D/kT} - 1)$$

$$I_D \approx i_0 e^{eV_D/kT} \quad \text{when } V_D \gg kT/e$$

What is  $V_{out}$  in terms of the photocurrent  $I_{Light}$ ?



What is  $\hat{V}_{out}(\omega)$  in terms of  $\hat{V}_{in}(\omega)$ ?

Please write the answer in terms of a magnitude and phase. Plot your result.