

4.10 For the amplifier in Fig. P4.10, find the gain and I_o .

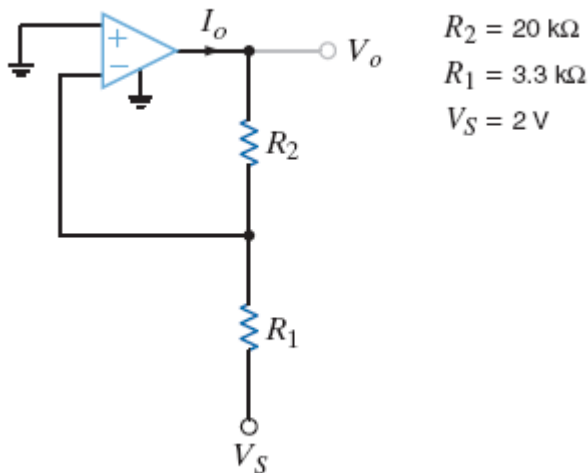
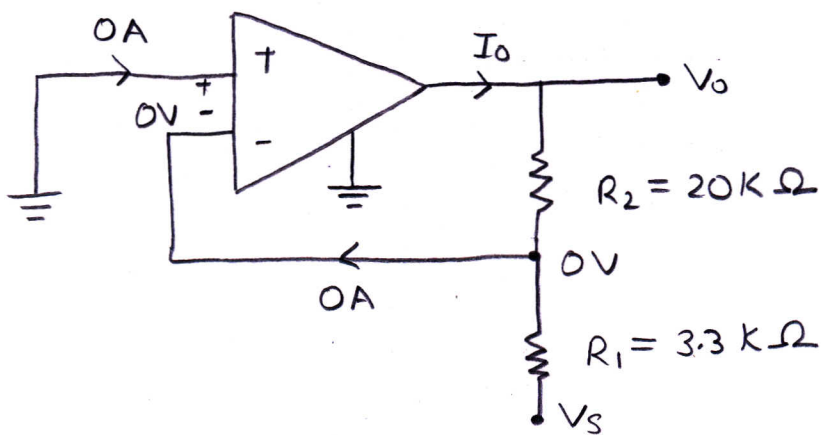


Figure P4.10

SOLUTION:



Inverting configuration

$$\frac{V_o}{V_S} = \frac{-R_2}{R_1} = \frac{-20 \times 10^3}{3.3 \times 10^3}$$

$$\frac{V_o}{V_S} = -6.06$$

$$I_o = \frac{V_o}{R_2}$$

$$V_o = -6.06(2)$$

$$V_o = -12.12$$

$$I_o = \frac{-12.12}{20 \times 10^3}$$

$$I_o = -606 \mu\text{A}$$