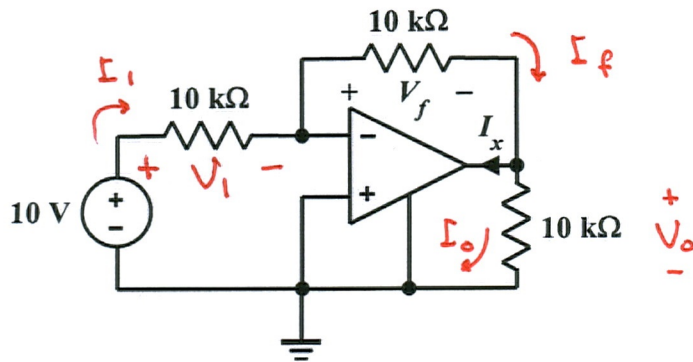


EE/EET 2240  
**Homework Problem #32**



The OpAmp is ideal. Determine:

(a) The numerical value of  $V_f$ .

$$V_1 = 10V$$

$$I_1 = \frac{V_1}{10k\Omega} = 1mA$$

$$V_f = (10k\Omega)(I_1) = 10V$$

(b) The numerical value of  $I_x$ .

$$I_f = \frac{V_f}{10k\Omega} = 1mA$$

$$V_o = -V_f = -10V$$

$$I_o = \frac{V_o}{10k\Omega} = -1mA$$

$$I_x = I_f - I_o = 1mA - (-1mA) = 2mA$$