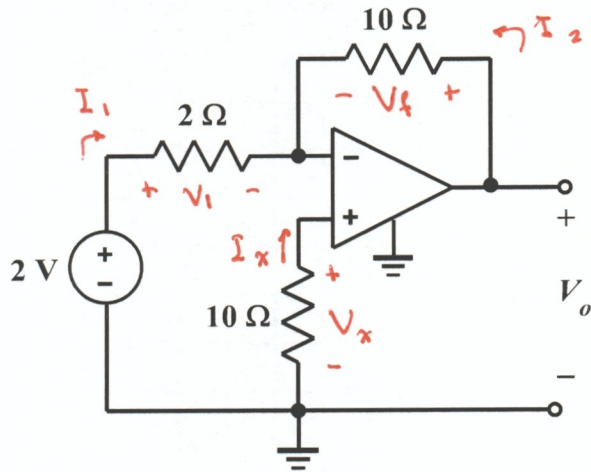


EE 2240
Problem #02

Assume the op amp is ideal, and find V_o .



$$I_x = 0 \Rightarrow V_x = 0$$

$$V_1 = 2V - V_x = 2V$$

$$I_1 = \frac{V_1}{2\Omega} = \frac{2V}{2\Omega} = 1A$$

$$V_f = V_o - V_x = V_o$$

$$I_2 = \frac{V_f}{10\Omega} = \frac{V_o}{10\Omega}$$

$$I_1 + I_2 = 0 \Rightarrow \frac{V_o}{10\Omega} = -1A$$

$$V_o = -(10\Omega)(1A) = -10V$$