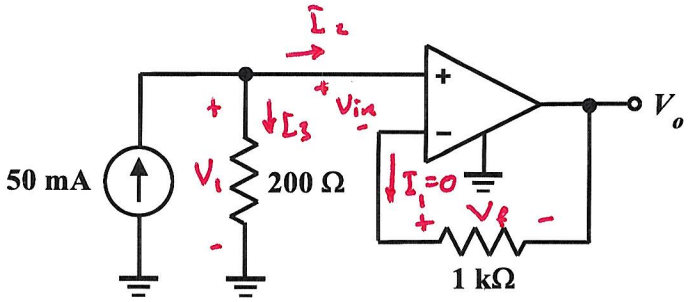
EE 2240

Homework Problem #050



The OpAmp is ideal. Determine the value of V_o.

$I_1 = 0 \Rightarrow V_f = 0$

$V_{in} = 0$

$\therefore \quad V_1 = V_{in} + V_f + V_o$

$= 0 + 0 + V_o$

$= V_o$

$I_2 = 0 \Rightarrow I_3 = 50\,mA$

$\therefore \quad V_1 = (200\,\Omega)\, I_3$

$= 10\,V$

Since $V_1 = V_o$, $\quad V_o = 10\,V$