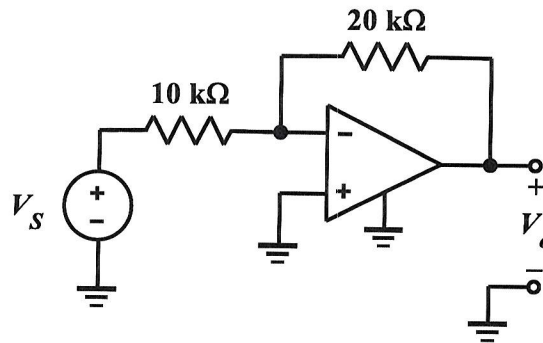


EE 2240  
Homework Problem #052



The OpAmp is ideal. If  $V_o = 22\text{ V}$ , what is the value of  $V_s$ ?

This is an inverting amplifier, with

$$V_o = - \frac{20\text{ k}\Omega}{10\text{ k}\Omega} \cdot V_s = -2V_s$$

$$\therefore 22\text{ V} = -2V_s$$

$$\Rightarrow V_s = - \frac{22}{2} \text{ V} = -11\text{ V}$$