

Chapter 5, Solution 56.

Using Fig. 5.83, design a problem to help other students better understand cascaded op amps.

Although there are many ways to work this problem, this is an example based on the same kind of problem asked in the third edition.

Problem

Calculate the gain of the op amp circuit shown in Fig. 5.83.

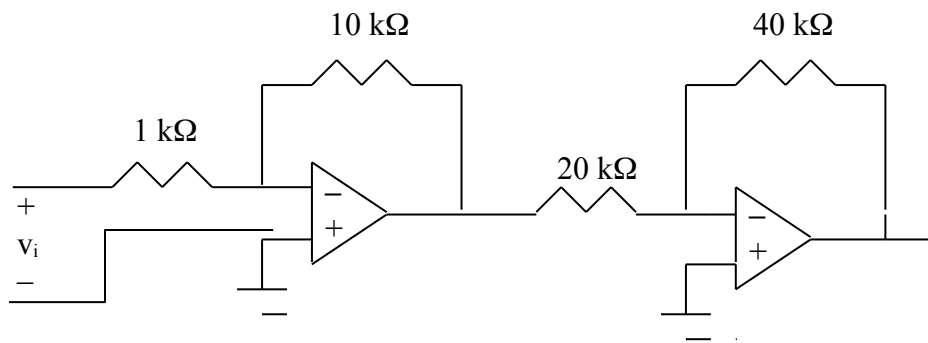


Figure 5.83 For Prob. 5.56.

Solution

Each stage is an inverting amplifier. Hence,

$$\frac{v_o}{v_s} = \left(-\frac{10}{1}\right)\left(-\frac{40}{20}\right) = \underline{20}$$