D 2.35 Design the circuit shown in Fig. P2.35 to have an input resistance of 100 kΩ and a gain that can be varied from −1 V/V to −100 V/V using the 100-kΩ potentiometer R_4. What voltage gain results when the potentiometer is set exactly at its middle value?

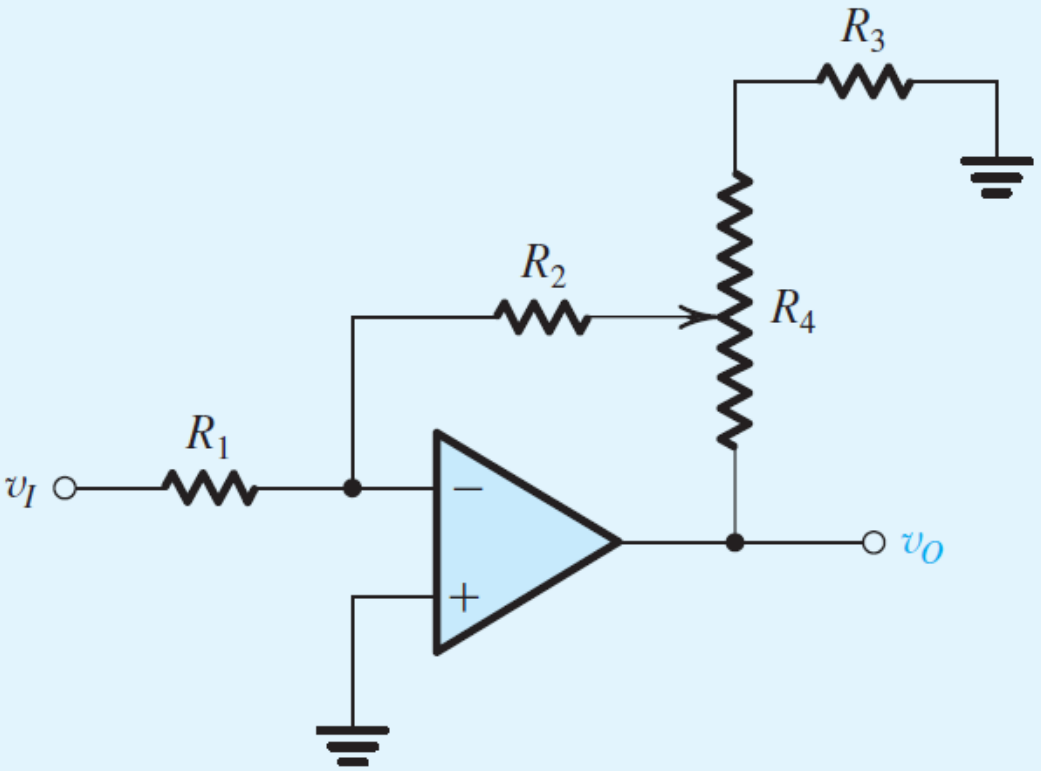

Figure P2.35

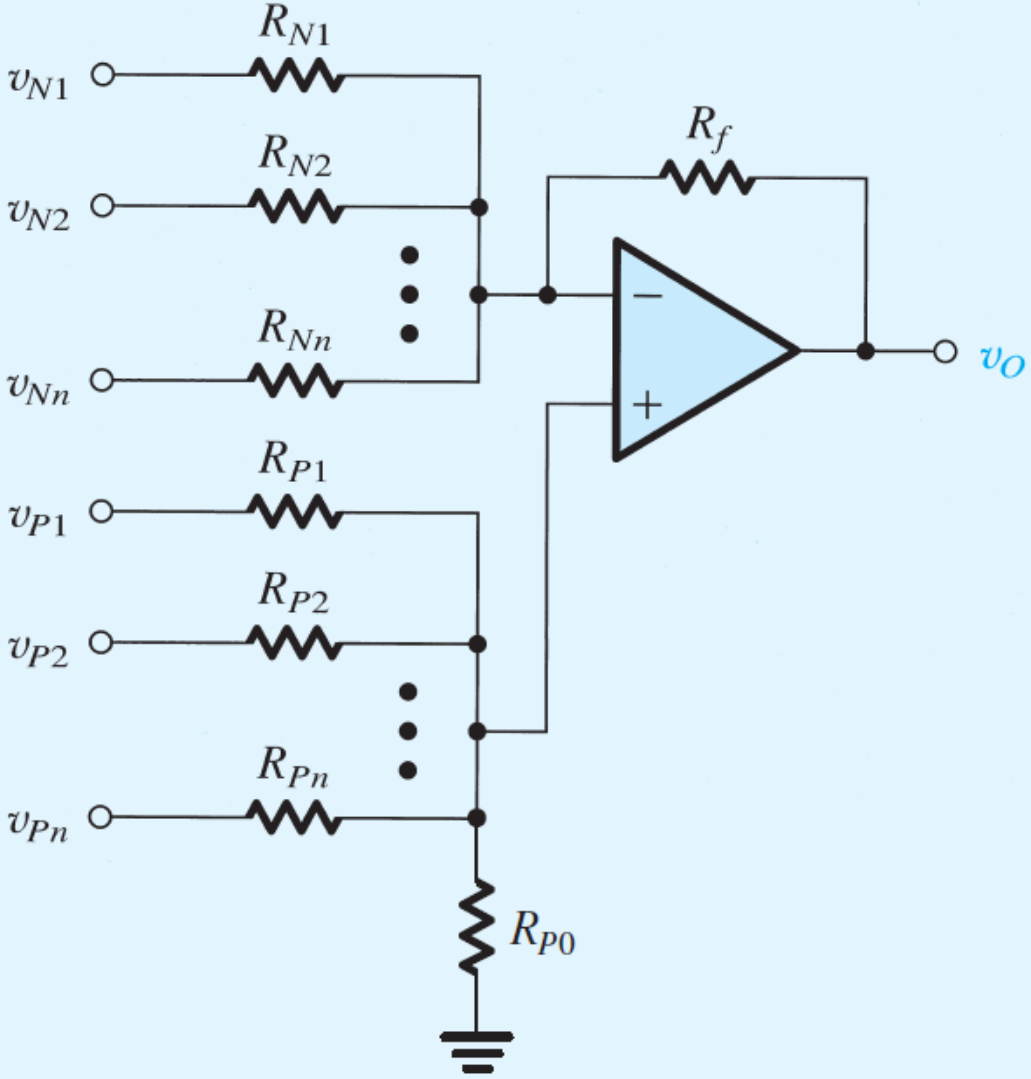

Figure P2.47

D *2.48 Design a circuit, using one ideal op amp, whose output is $v_O = v_{I1} + 2v_{I2} - 9v_{I_3} + 4v_{I4}$. (*Hint:* Use a structure similar to that shown in general form in Fig. P2.47.)

2.62 For the circuit shown in Fig. P2.62, express v_o as a function of v_1 and v_2. What is the input resistance seen by v_1 alone? By v_2 alone? By a source connected between the two input terminals? By a source connected to both input terminals simultaneously?

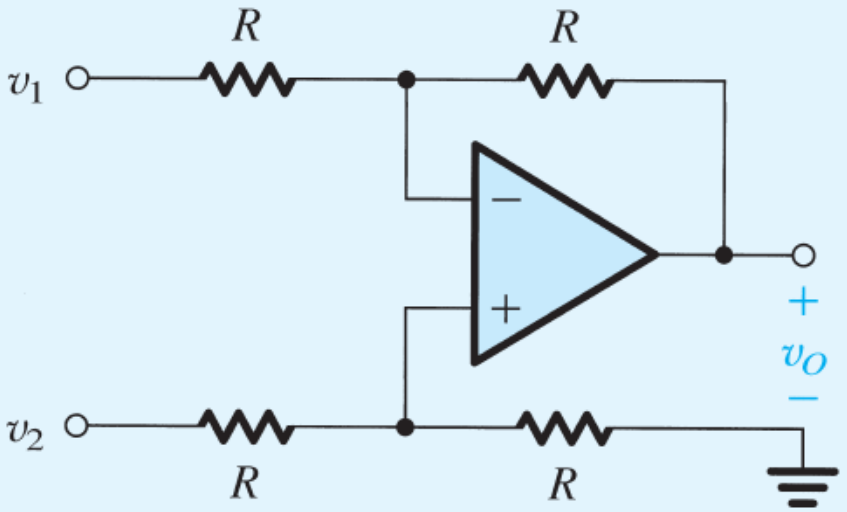

Figure P2.62