

Chapter 5, Solution 42

A three-input summing amplifier has input resistors with $R_1 = R_2 = R_3 = 75 \text{ k}\Omega$. To produce an averaging amplifier, what value of feedback resistor is needed?

Solution

Since the average of three numbers is the sum of those numbers divided by three, the value of the feedback resistor needs to be equal to one-third of the input resistors or,

$$R_f = \frac{1}{3}R_1 = 25 \text{ k}\Omega.$$