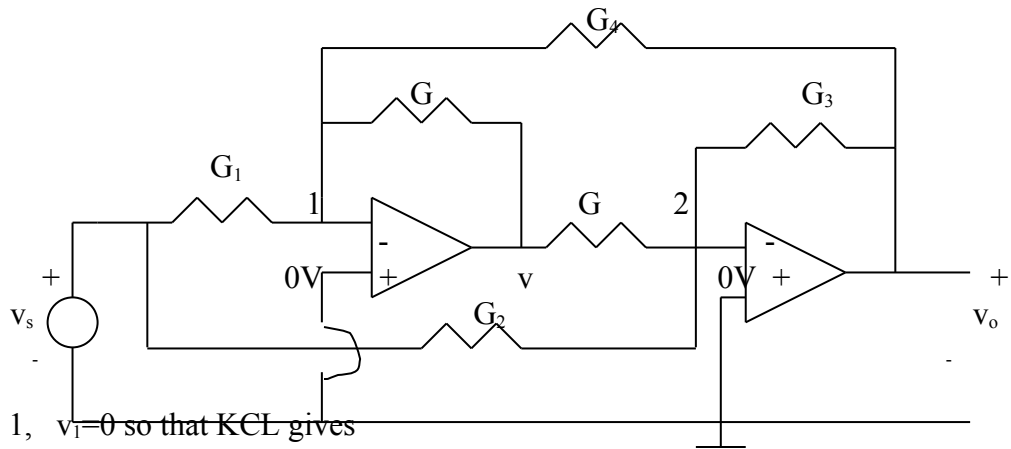


## Chapter 5, Solution 64



At node 1,  $v_1 = 0$  so that KCL gives

$$G_1 v_s + G_4 v_o = -Gv \quad (1)$$

At node 2,

$$G_2 v_s + G_3 v_o = -Gv \quad (2)$$

From (1) and (2),

$$G_1 v_s + G_4 v_o = G_2 v_s + G_3 v_o \quad \longrightarrow \quad (G_1 - G_2)v_s = (G_3 - G_4)v_o$$

or

$$\frac{v_o}{v_s} = \frac{G_1 - G_2}{G_3 - G_4}$$