



$$V_{out1} = \frac{R_2}{R_1} V_S$$

$$\frac{\frac{R_2}{R_1} V_S}{R_3} \cdot R_4 = V_{out}$$

$$\frac{\frac{R_2 R_4 V_S}{R_1 R_3}}{V_S} = \text{gain} = \frac{R_2 R_4}{R_1 R_3}$$

$$i_{out} + \frac{R_2 V_S}{R_1 R_3} = \frac{V_S}{R_1}$$

$$i_{out} = \frac{V_S}{R_1} \left(1 - \frac{R_2}{R_3} \right)$$