

OpAmps in Negative Feedback

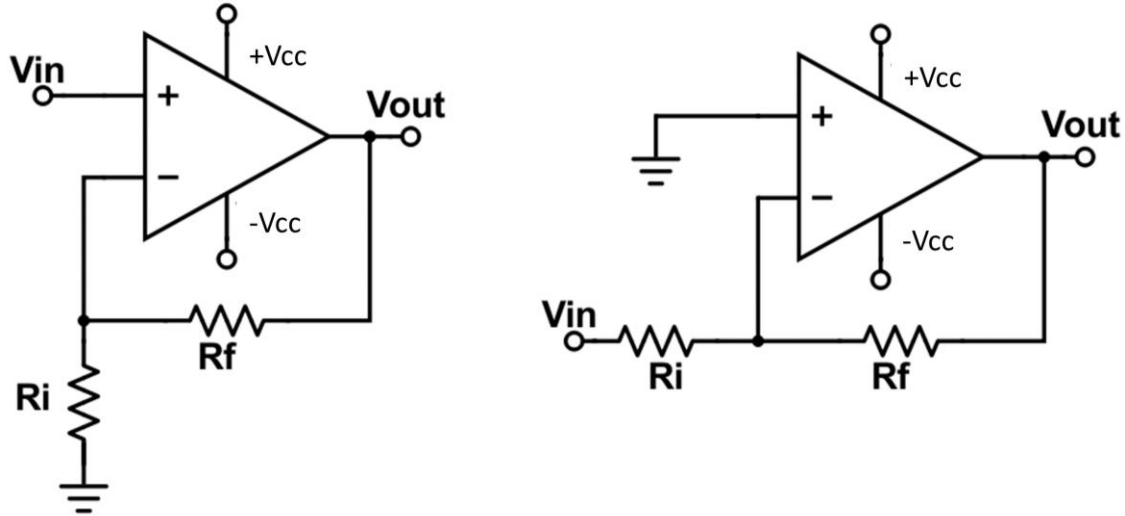


Figure 1. Basic Op-Amp Configs in Negative Feedback. $+V_{cc}$ and $-V_{cc}$ indicate power supply connections. Left: **Non-inverting** amplifier. Right: **Inverting** amplifier. Input and output signals are measured with respect to ground.

1. Show that for the non-inverting amplifier:

$$\frac{V_{out}}{V_{in}} = 1 + \frac{R_f}{R_i}$$

2. Show that for the inverting amplifier:

$$\frac{V_{out}}{V_{in}} = -\frac{R_f}{R_i}$$