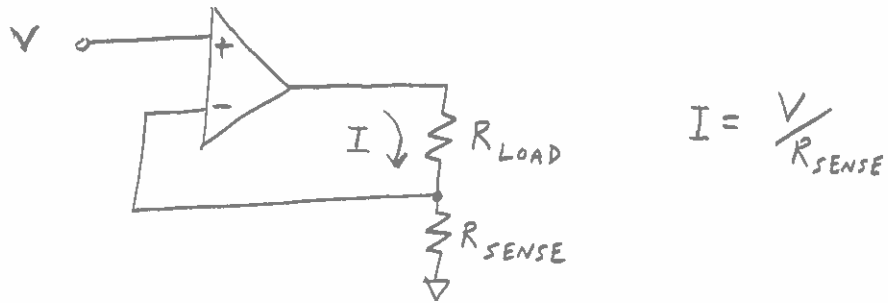
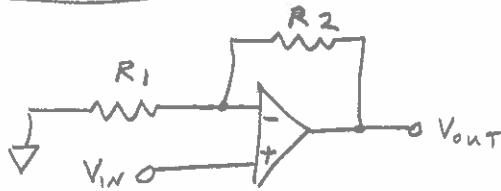


VOLTAGE-TO-CURRENT CONVERTER:



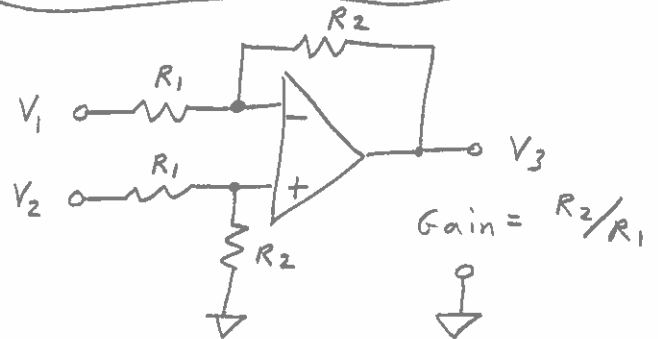
NON-INVERTING GAIN:

$$V_{OUT} = \frac{R_1 + R_2}{R_1} * V_{IN}$$



DIFFERENTIAL AMPLIFIER:

$$V_3 = V_2 - V_1$$



Use a differential amplifier to reference a signal to ground when the signal originates on a different board with a different (or noisy) ground.

Use a differential amplifier for inverting or non-inverting gain.

For best temperature stability, let all 4 resistors be matched resistors from a resistor array IC.