

Experiment 6

**Op-Amp
Circuits I****Pre-Lab Report****Question 1:**

Prove theoretically that for an ideal op-amp, the relation between the output voltage and the input voltage of the inverting amplifier shown in part A of this experiment is $V_o = -\frac{R_2}{R_1} V_I$.

Question 2:

Prove theoretically that for an ideal op-amp, the relation between the output voltage and the input voltage of the non-inverting amplifier shown in part B of this experiment is $V_o = \left(1 + \frac{R_2}{R_1}\right) V_I$.

Question 3:

Prove theoretically that for an ideal op-amp, the relation between the output voltage and the input voltage of the unity gain non-inverting amplifier shown in part C of this experiment is **$V_o = V_i$** .