Inverting Amplifier

The circuit below is that of an op amp in an inverting amplifier configuration.

1. Calculate and measure the gain of the amplifier using a power supply as the input signal for 3 different values of $R_f$. (Take $R_f$ to be 510\,\Omega, 10\,K\Omega, and 100\,K\Omega.) You may use your meter to determine the input and output voltages. For each case, you should also measure the voltage between the inverting and noninverting inputs for the op amp.

2. Repeat part 1 using a sinusoidal source. In this case use only $R_f = 510\,\Omega$. To measure the gain, use the oscilloscope with the input on channel 1 and the output on channel 2. Use an input signal at 1,000\,Hz.

Noninverting amplifier

The circuit below is that of an op amp in a noninverting amplifier configuration.

1. Calculate and measure the gain of the amplifier using a power supply as the input signal for 3 different values of $R_f$. (Take $R_f$ to be 510\,\Omega, 10\,K\Omega, and 100\,K\Omega.) You may use your meter to determine the input and output voltages. For each case, you should also measure the voltage between the inverting and noninverting inputs for the op amp.

2. Repeat part 1 using a sinusoidal source. In this case use only $R_f = 10\,K\Omega$. To measure the gain, use the oscilloscope with the input on channel 1 and the output on channel 2. Use an input signal at 1,000\,Hz.