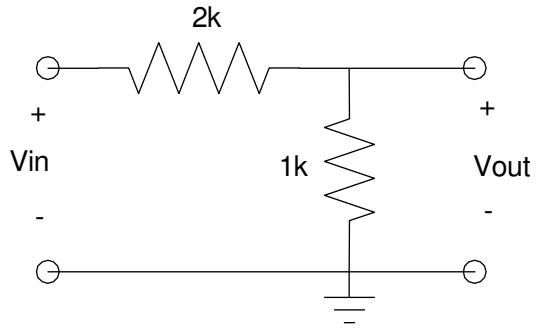
EE 206: Lab #7

Op Amp Amplifiers

If you want to build a circuit with a gain less than one, you don't need an op-amp. Two resistors will do.

Voltage Divider (0 < gain < 1)

1) Build the following circuit. Verify that the gain is 1/3rd
   - *Apply five different voltages to Vin*
   - *Measure the voltage at Vout*
   - *Compute the gain*



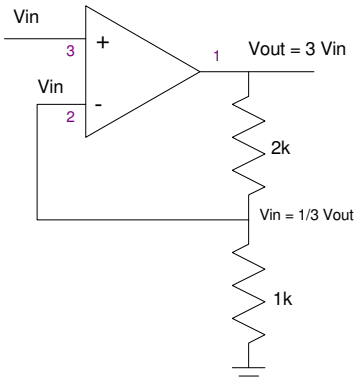
Vin	Vout	Gain Vout / Vin

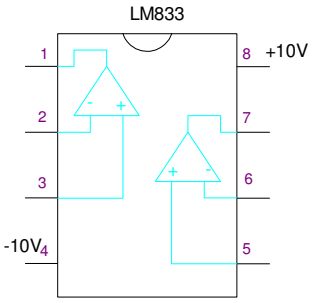
If you want to build a circuit with a gain more than one, you need an op-amp.

Noninverting Amplifier (1 < gain < infinity)

2) Build the following circuit. Verify that the gain is +3

- *Apply five different voltages to Vin*
- *Measure the voltage at Vout*
- *Compute the gain*



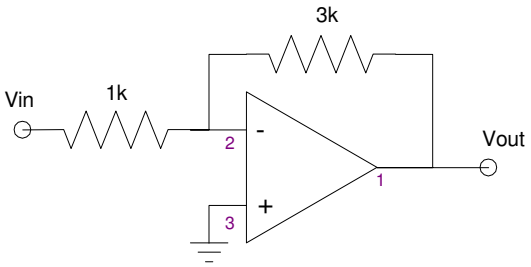


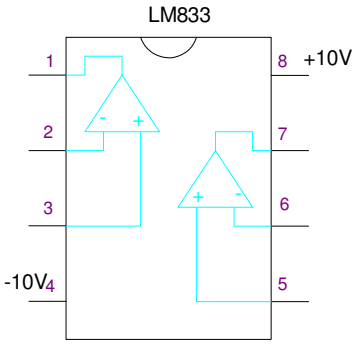
Vin	Vout	Gain Vout / Vin

Inverting Amplifier (-infinity < gain < 0)

3) Build the following circuit. Verify that the gain is -3

- *Apply five different voltages to Vin*
- *Measure the voltage at Vout*
- *Compute the gain*





Vin	Vout	Gain Vout / Vin