Lab experiment: Part3: Opamp circuits

1. Connect the circuits shown in Fig.1. Use R_1=1k and R_2=10k.

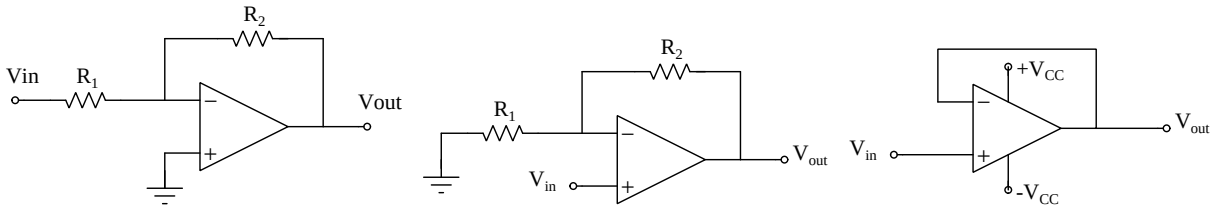

Figure 1: Basic OPAMP circuits

2. Apply input sinusoidal signal of 1Vp-p, 1kHz. Observe the input and output voltage waveform in each case.
3. Comment on these waveforms.
4. Connect the circuit shown in Fig.2.

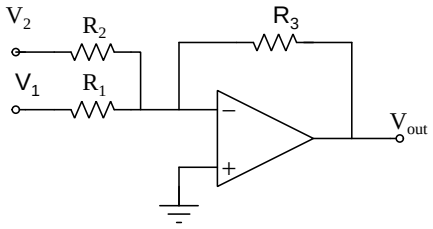

Figure 2: OPAMP adder

5. Use R_1=R_2=R_3=10kΩ.
6. Set V_1=2V DC and V_2=1V DC and measure V_{out}.
7. Now set V_2 = 1Vpp, 1kHz and observe V_{out} with reference to V_{in}.
8. Connect the circuit shown in Fig. 3.

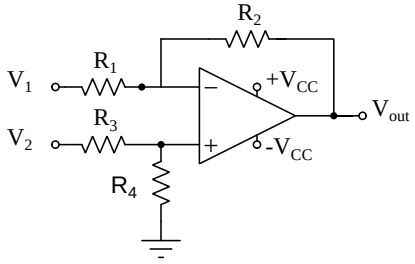

Figure 3: OPAMP subtracter

9. Use R_1=R_2=R_3=R_4=10kΩ.
10. Repeat step 6 and 7 for this circuit.