

The Operational Amplifier Lab Report

Name(s): _____

TA: _____
Section: _____

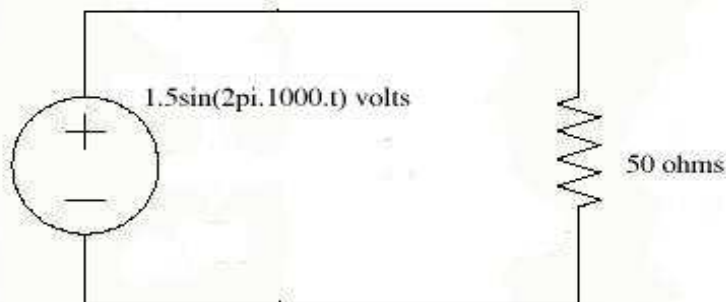
3. i. The Voltage Follower

a. Output is the same as the input, TA Checkoff: _____

Suppose I connect a 50 ohm load at V_{out} in figure 13.

b. Power delivered by the function generator in figure 13: _____

Consider directly connecting the function generator to the 50 ohm load:



c. Power delivered by the function generator in the circuit above: _____

From b. and c., can you briefly explain the usefulness of the follower?

ii. The Inverting amplifier

R2 = _____ for a gain of -2.

iii. The Non-inverting Amplifier

a. With R2 = 10k and R1 = 1k, the voltage gain from the non-inverting amplifier is _____.

b. When Vin = 1.34 volts, you don't see the correct output on the scope. This is due to _____.

c. Can you get a gain less than 1 (in reality) using the non-inverting amplifier? Can you design a circuit that has the following output:

$$V_o = \frac{V_{in}}{2}$$

Can you use an op-amp to get the gain of 1/2 in the equation above? If yes, give an op-amp circuit that will do the job. If no, draw a circuit which has a gain of 1/2.