

PHY2250 – HW 9 – Op Amps

1. (1 point) What is "slew-rate distortion" and when does it occur? (Some of you saw this in lab.) Feel free to refer to your text.

2. (2 points) Look through the textbook chapter on op-amps, and write the names of as many different types of circuits/amplifiers/signal-processors built from op-amps as you can. (Hint: Look at the figures!)

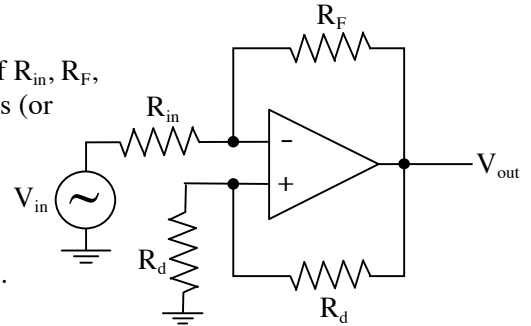
3. (4 points) Regarding the schematic of the op-amp circuit to the right...

a) Find V_+ and V_- , the voltages at the + and - inputs, respectively, in terms of R_{in} , R_F , V_{in} and V_{out} . Hint: assume you *know* V_{out} , think about where the current goes (or does

not go), and thus what *simple circuit* each "channel" of the op-amp makes.

b) If the R_F feedback loop functions so as to force $V_+ = V_-$, use your answer to part (a) to compute the gain of the amplifier (in terms of R_{in} and R_F).

c) Is this amplifier inverting or non-inverting? Hint: Use your answer to (b).



4. (1 point) Problem 33-28

5. (Not graded) Problem 33-39

6. (2 points) Problem 33-50