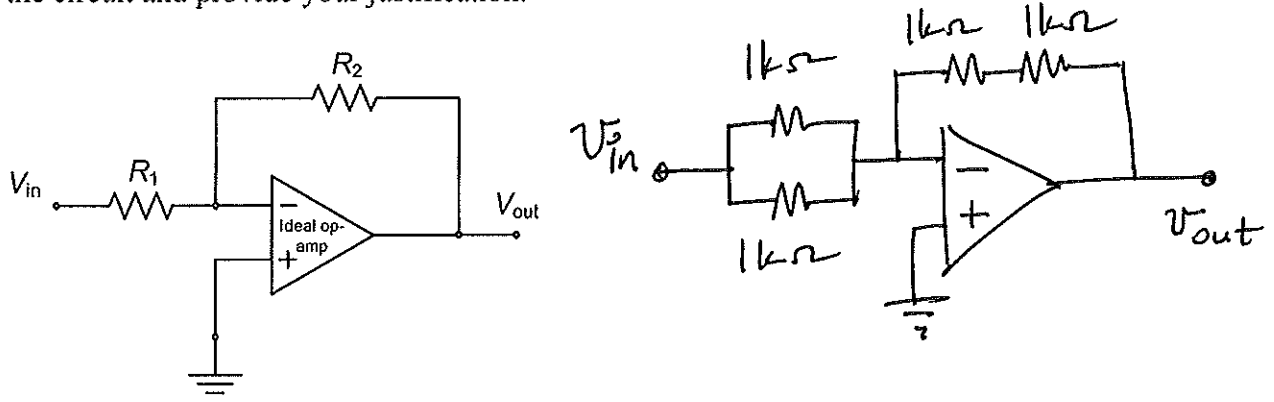
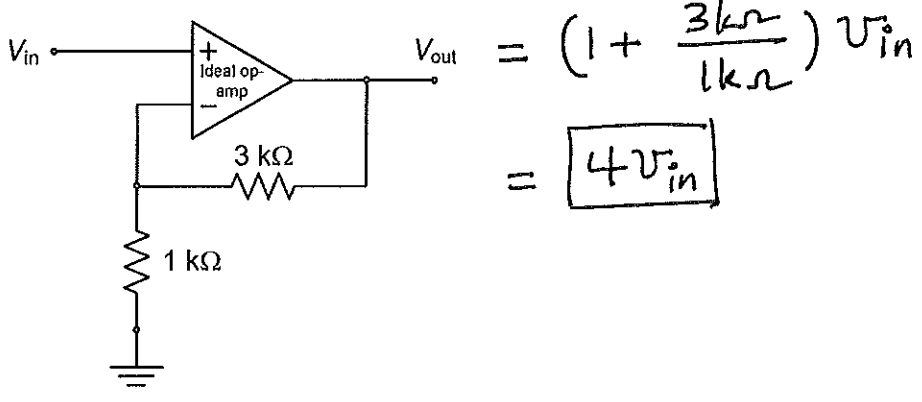


You are allowed to use your lab manual and lab notebook during the quiz.

- (1) (30 points) If you have only one op amp and four 1 kΩ resistors available, how would you construct an inverting amplifier circuit (as shown) such that $V_{out} = -4V_{in}$? Draw the circuit and provide your justification.



- (2) (30 points) For the op amp circuit shown, write V_{out} in terms of V_{in} .



- (3) (40 points) In the op amp circuit shown, find V_{out1} and V_{out2} in terms of V_{in} .

