

Important Remarks

- Homework is due on Oct. 4th, 2011 at the beginning of class
 - **For all problems, keeping your work in fractions will produce easier, more accurate results.**
 - Start early and get help if you need it
 - Start a new page per problem
 - Show all the work
 - Specify all the units
 - Circle your answers
 - Staple pages
1. Design an inverting operational amplifier circuit with an input voltage of 5V. Design for maximum gain without saturating the op amp. (V_{out} should be no more than the op amp supply voltage). Assume your amplifier is ideal and has $\pm 15V$ power supplies. Use resistor values between $1k\Omega$ and $100k\Omega$.
 2. For the op-amp circuit below assume it is an ideal op-amp with a supply voltage of $\pm 15V$:
 - (a) Determine the gain of the circuit.
 - (b) Determine the maximum value for V_S such that the op-amp does not saturate.

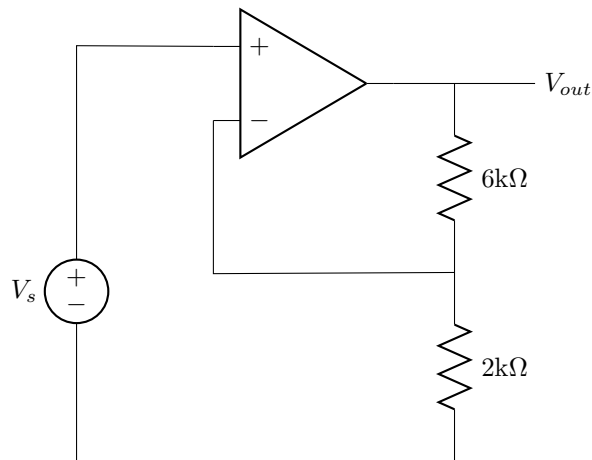


Figure 1:

3. For the op-amp circuit below, find V_{out} . Assume it is an ideal op-amp:

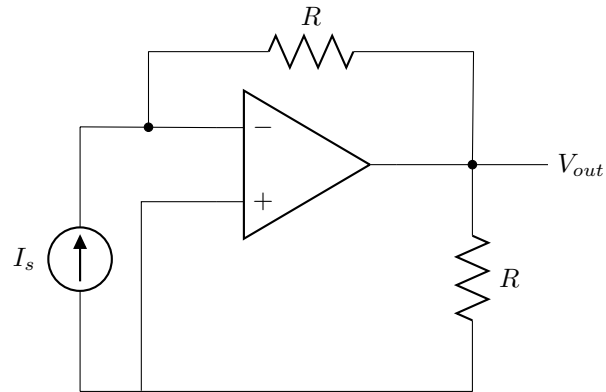


Figure 2: