

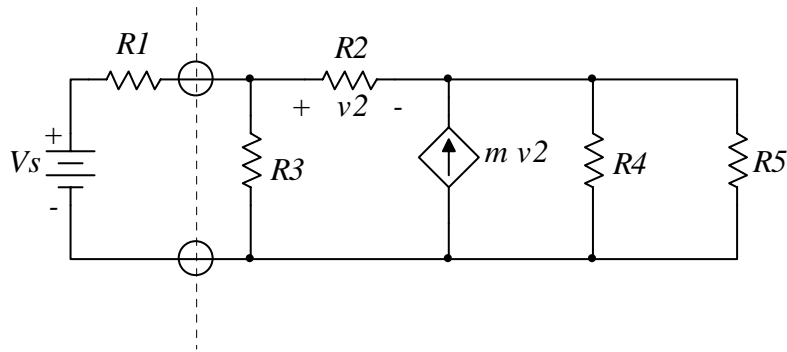
Massachusetts institute of Technology
Department of Nuclear Science and Engineering
Department of Electrical Engineering and Computer Science

22.071, 6.071 - Introduction to Electronics, Signals and Measurement
Spring 2006

Homework 4
 Due 3/8/06

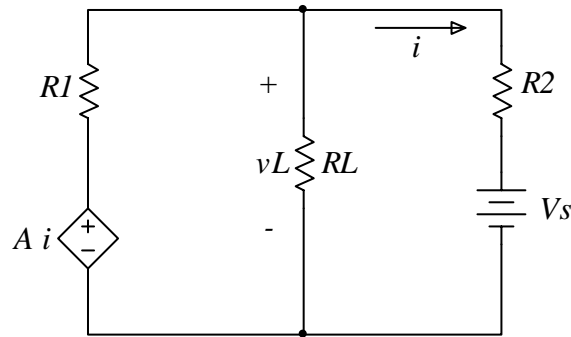
Problem 1.

Determine the Thevenin equivalent circuit to the right of the dotted line.



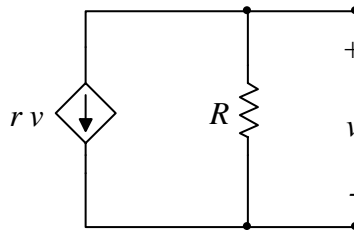
Problem 2.

For the following circuit: (a) determine the value of R_L at which maximum power is delivered, (b) what is v_L at that value of resistance?



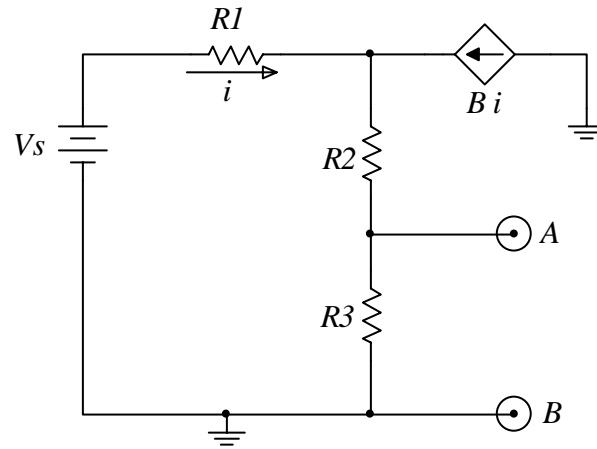
Problem 3.

Determine the Thevenin and the Norton equivalent circuit of the following network



Problem 4.

Determine the Thevenin equivalent resistance seen across the terminals A-B of the following circuit.



Problem 5.

The circuit below is an audio amplifier. The 8Ω resistor represents a speaker. Determine the value of resistor RE so that maximum power is delivered to the speaker.

