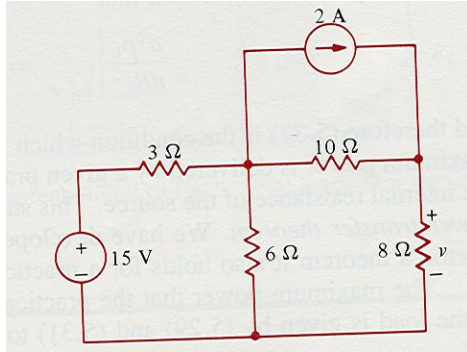
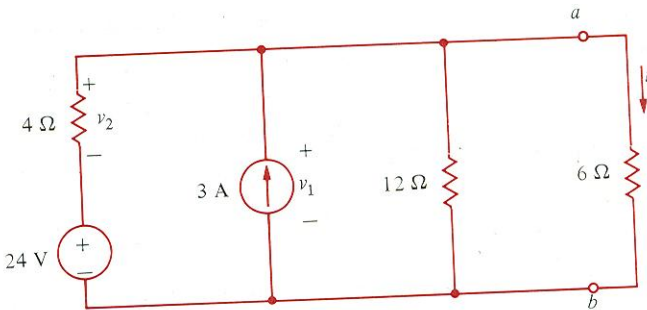


**ENGR&204 Homework #4 Winter 2010 Due the day of the test #2**

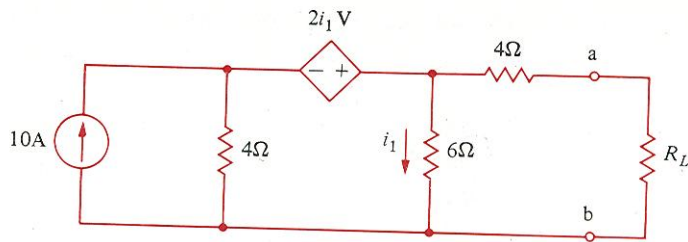
Use source transformations to replace the entire circuit except for the  $8\ \Omega$  resistor with a single source and a single resistor and use that to find  $v$ .



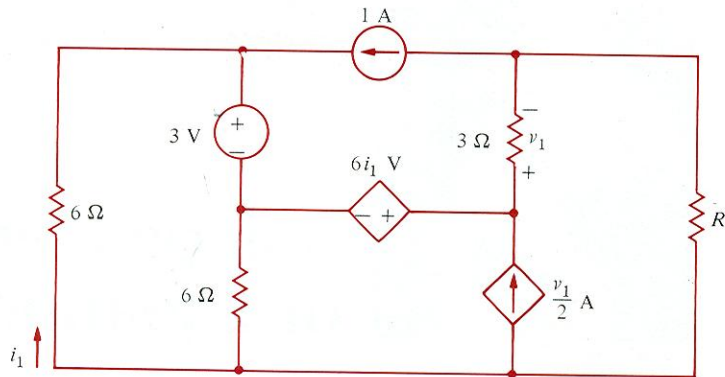
Find the Thevenin equivalent circuit to the left of the  $6\ \Omega$  resistor and use that to find  $i$ .



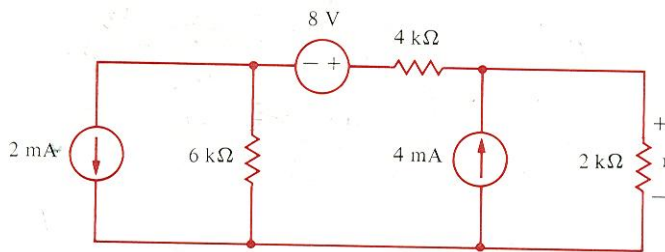
Find the Thevenin equivalent circuit to the left of the load resistor  $R_L$ .



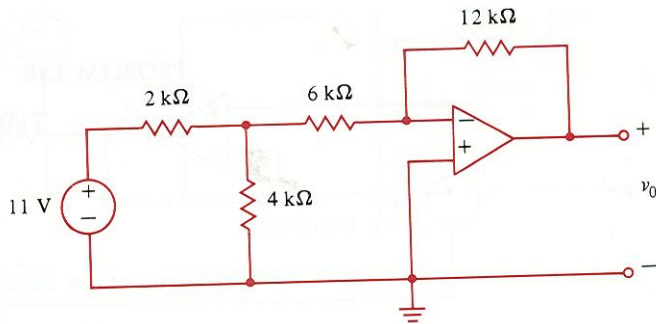
Find the value of  $R$  that will draw the maximum power from the rest of the circuit. Also find the maximum power drawn by  $R$ .



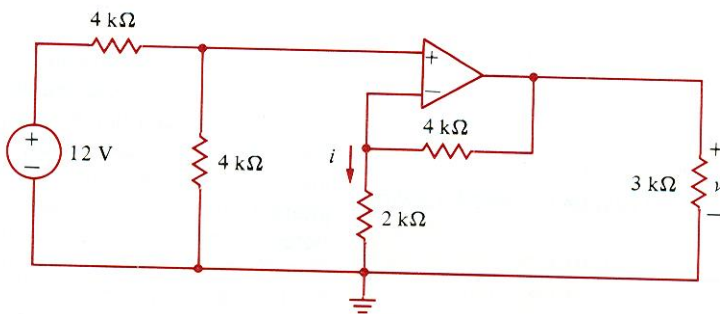
Find  $v$  using superposition.



Find  $v_o$ .

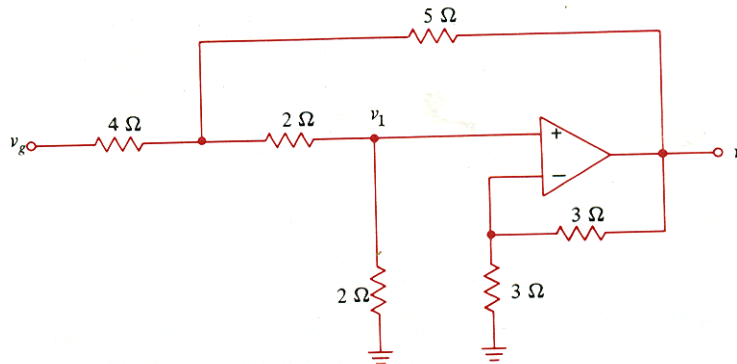


Find  $v$  and  $i$ .



Find  $v$  if  $v_g = 8 \cos 3t$  V. (Hint: Note that  $v_1 = v/\mu$ , where  $\mu = 2$  is the gain of the VCVS.)

**PROBLEM 4.13**



Find  $i$  if  $v_g = 6 \cos 1000t$  V.

