EECS/CSE 70A Network Analysis I

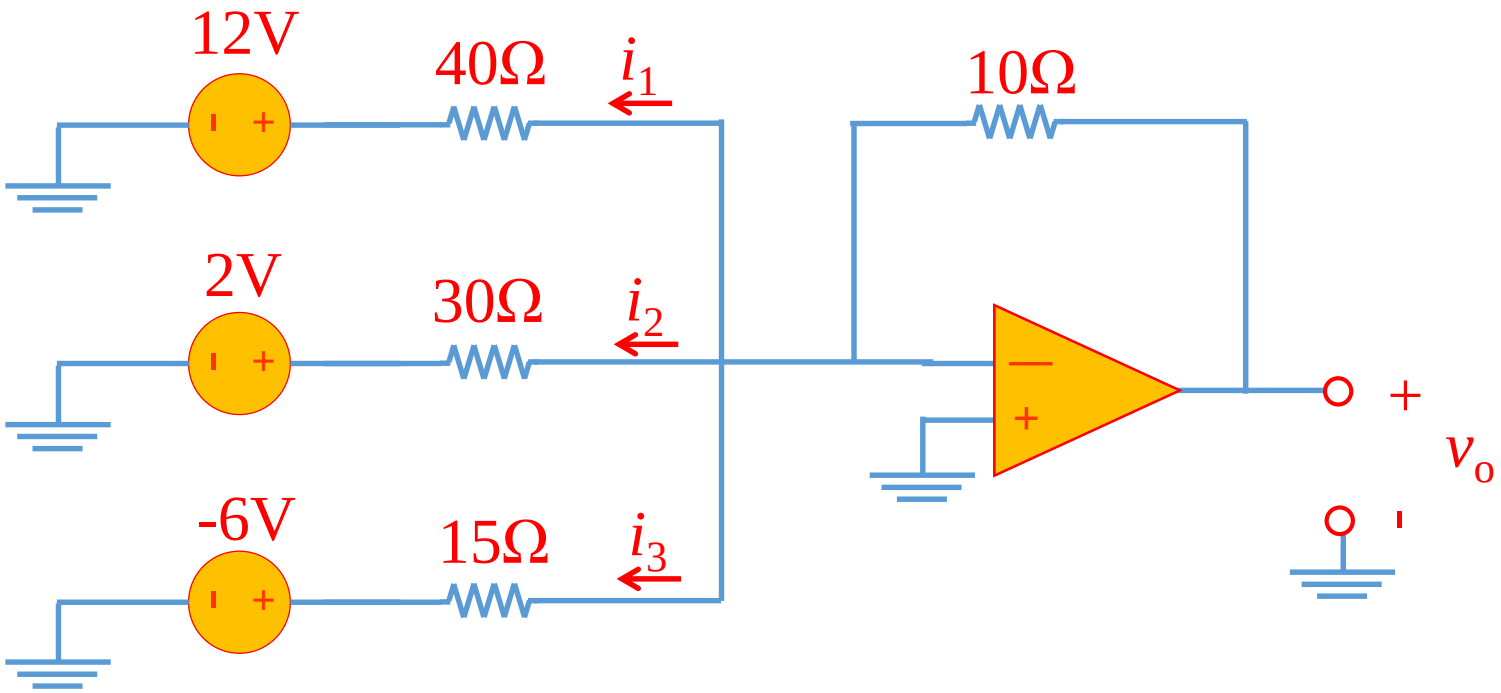
Homework #4

Due on or before

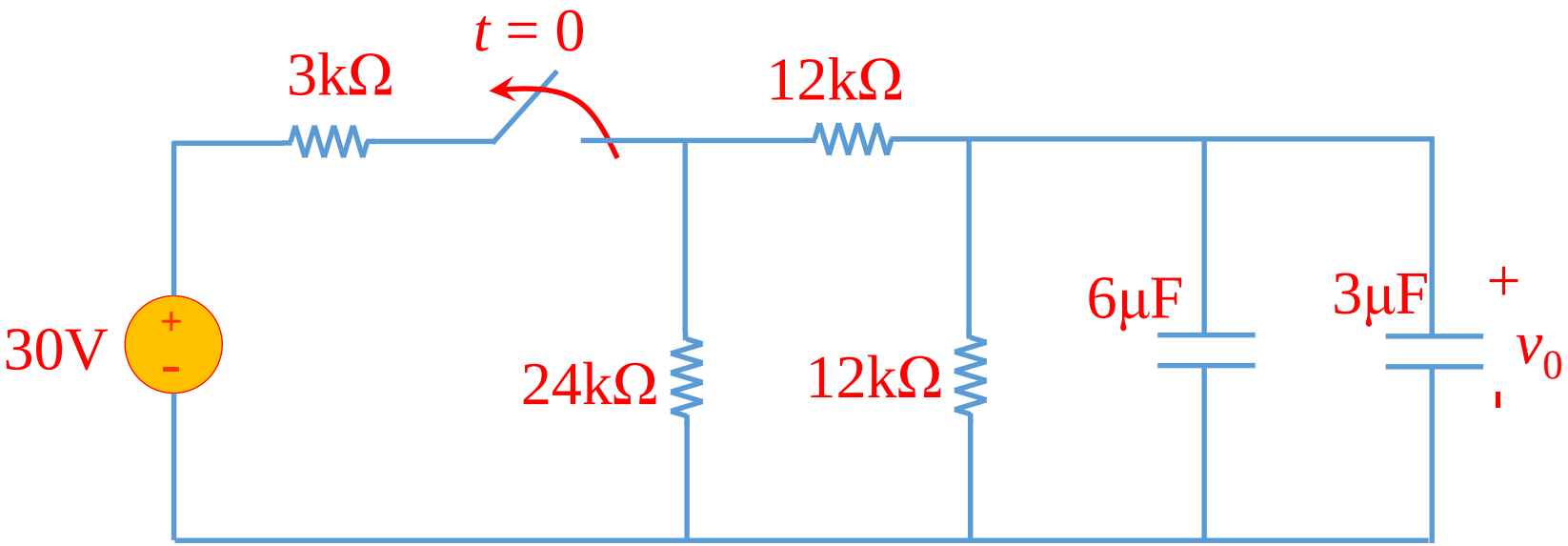
5/17/2016, Tuesday 6.00pm at ELH 110

(You can turn in homework assignments during any of the discussion sessions and office hours before the deadline)

Problem 1: (Ideal Opamp) Find currents i_1, i_2, i_3 and the output voltage v_o (30pts.)



Problem 2: (RC circuit) Write the expression for the voltage v_0 for $t>0$. Please clearly show the time constant calculation, initial and steady state voltage across the 3μF capacitor (35pts.)



Problem 3: (RL circuit) Write the expressions first for the current i_0 and then the voltage v_0 for $t>0$. Please clearly show the time constant calculation, initial and steady state current through the inductor. (35pts.)