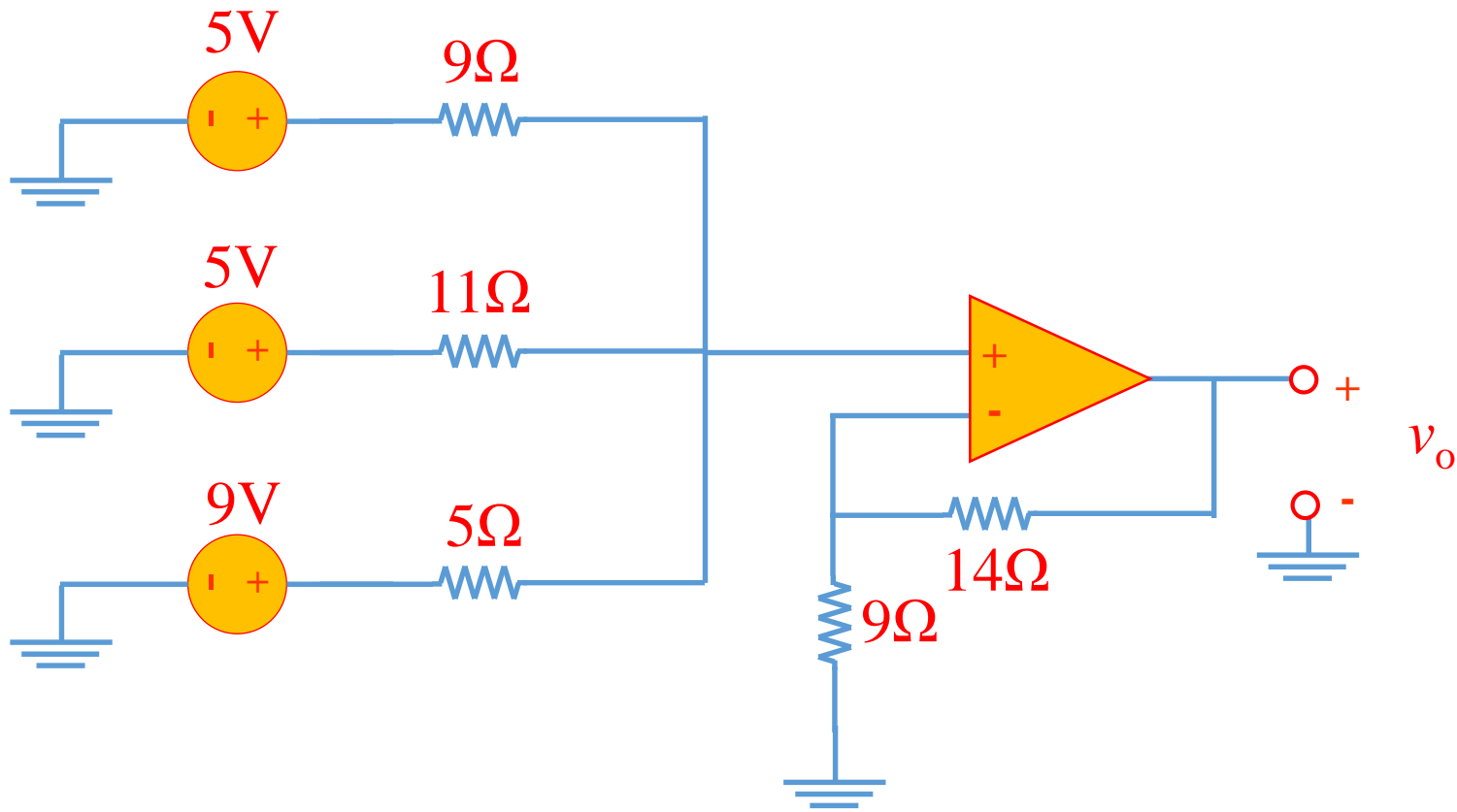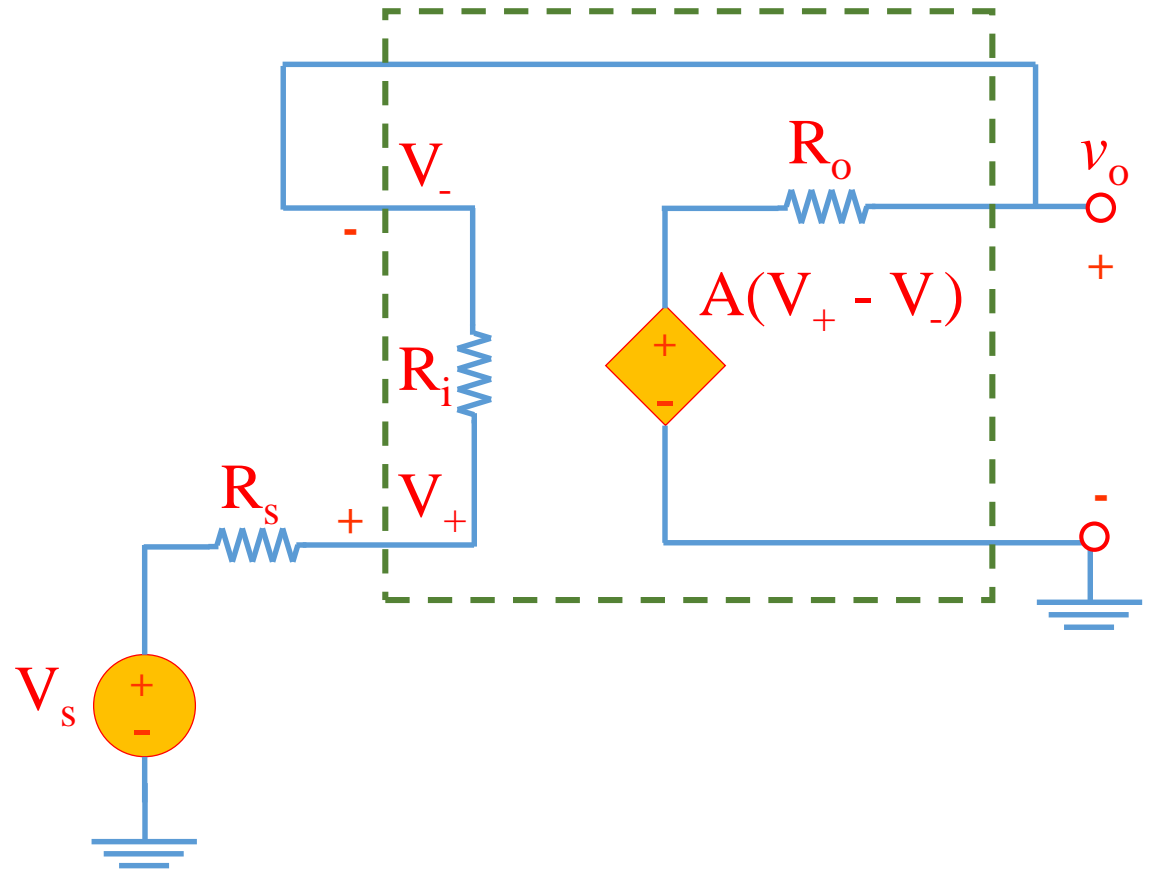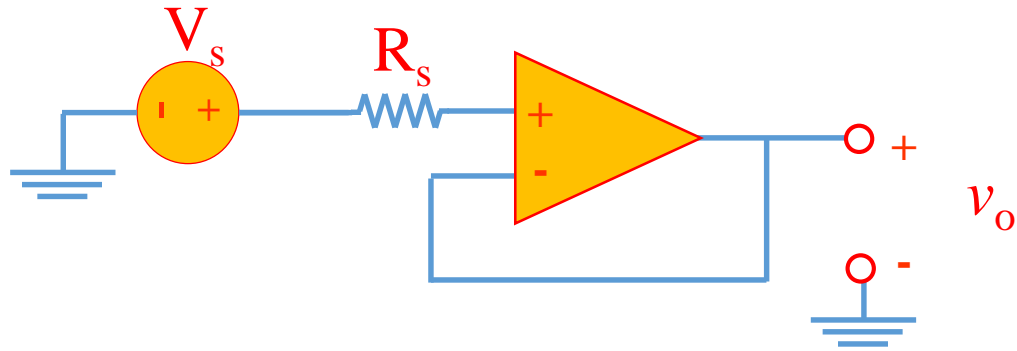# EECS/CSE 70A Network Analysis I

Homework #4

Due on or before
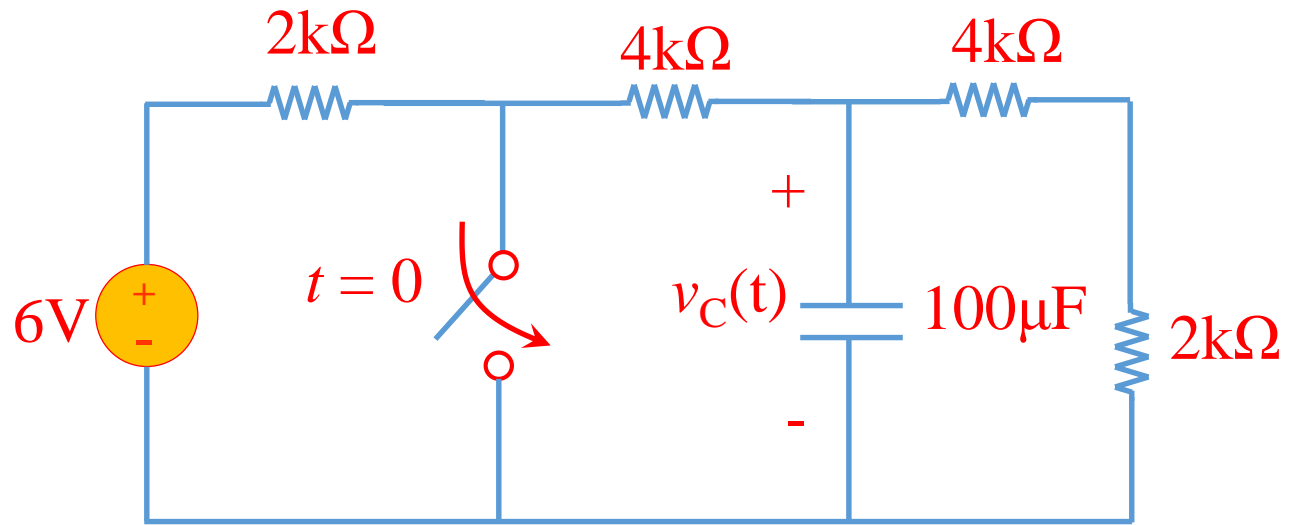5/16/2017, Tuesday 6 pm ONLINE ONLY

Problem 1: (Ideal Opamp) Find the output voltage v_o (20pts.)

Problem 2: Find the equivalent Thevenin output resistance if the opamp is modeled as the circuit in the green box in terms of R_i, R_o and A (10pts.)

Problem 2: (RC circuit) Find the expression of $v_C(t)$ for t > 0. What is the circuit time constant after switch is closed? Plot the $v_C(t)$ for $-\infty$<t< ∞ (35pts.)

Problem 3: (RL circuit) Find the expression of $i_L(t)$ for t > 0. What is the circuit time constant after switch is closed? Plot the $i_L(t)$ for -∞<t< ∞ (35pts.)