

EECS/CSE 70A Network Analysis I

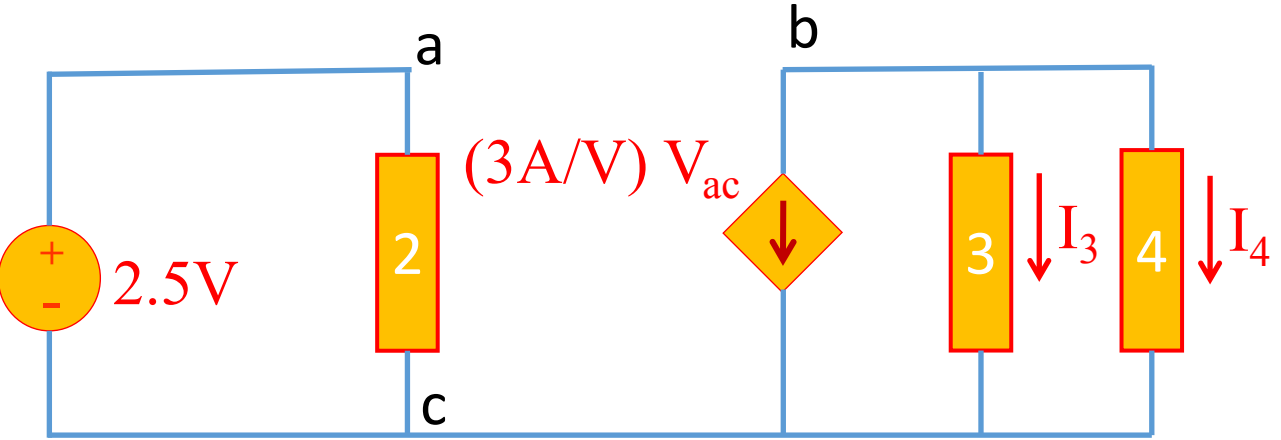
Homework #2

Due on or before

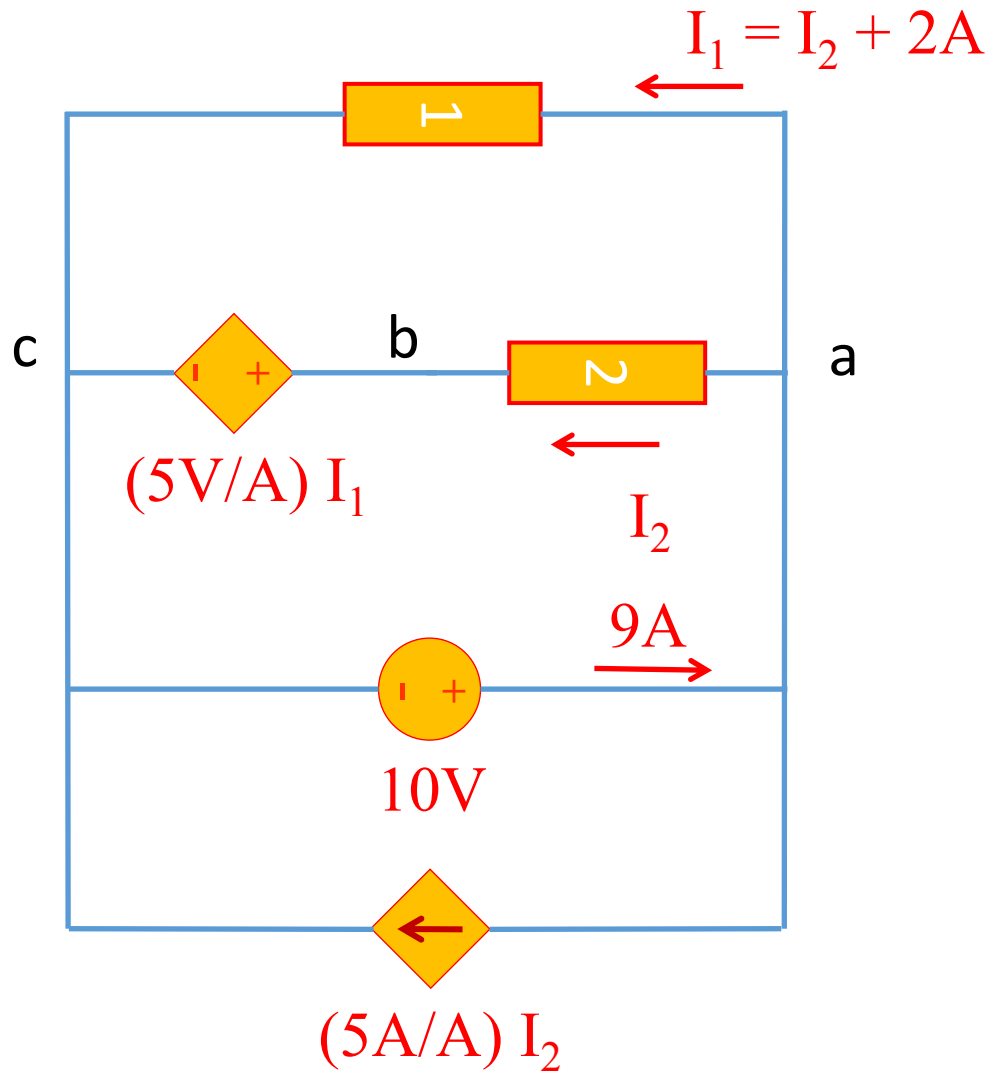
4/18/2017, Tuesday 6 pm

(Please submit your assignments in PDF format using online dropbox on EEE or in hardcopy before the discussion session)

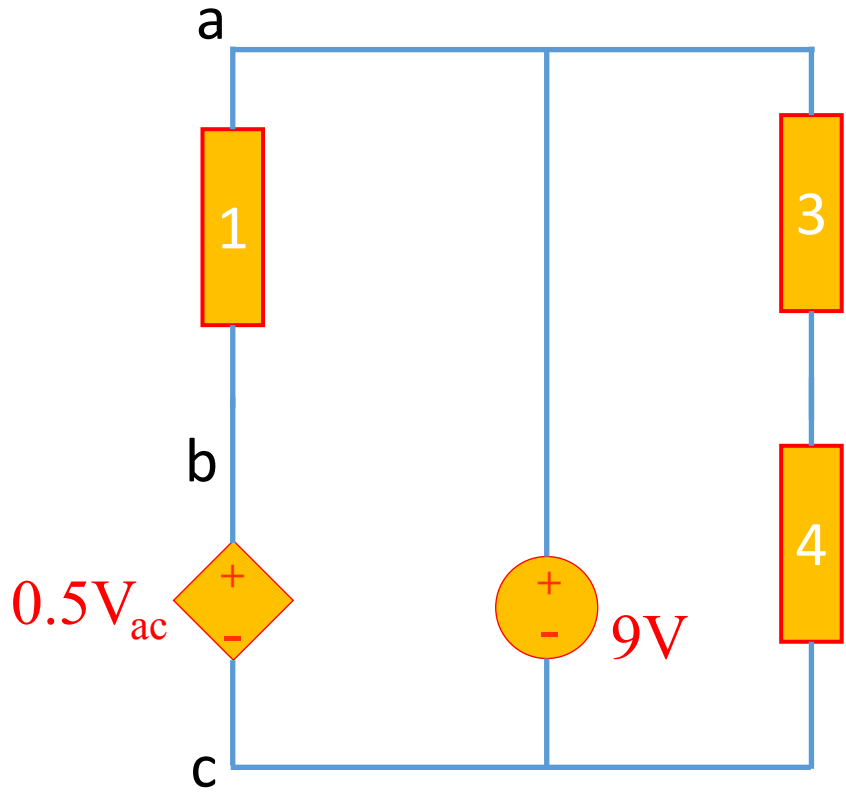
Problem 1: (VCCS) Find $I_3 + I_4$.



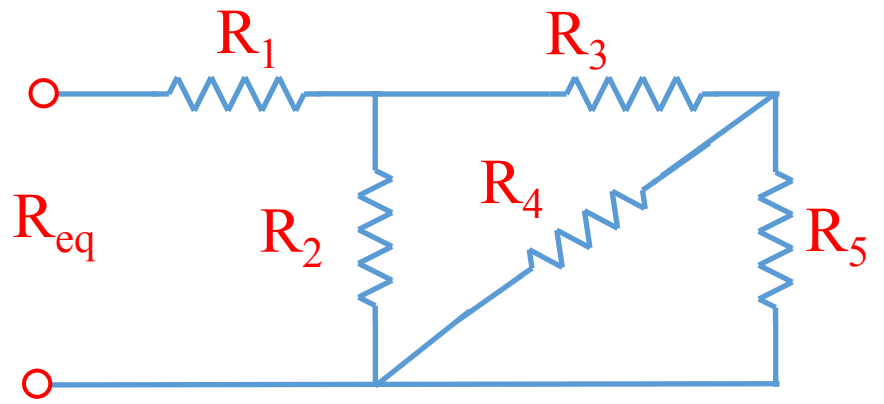
Problem 2: (CCVS/CCCS) Find I_1 , I_2 and V_{bc}



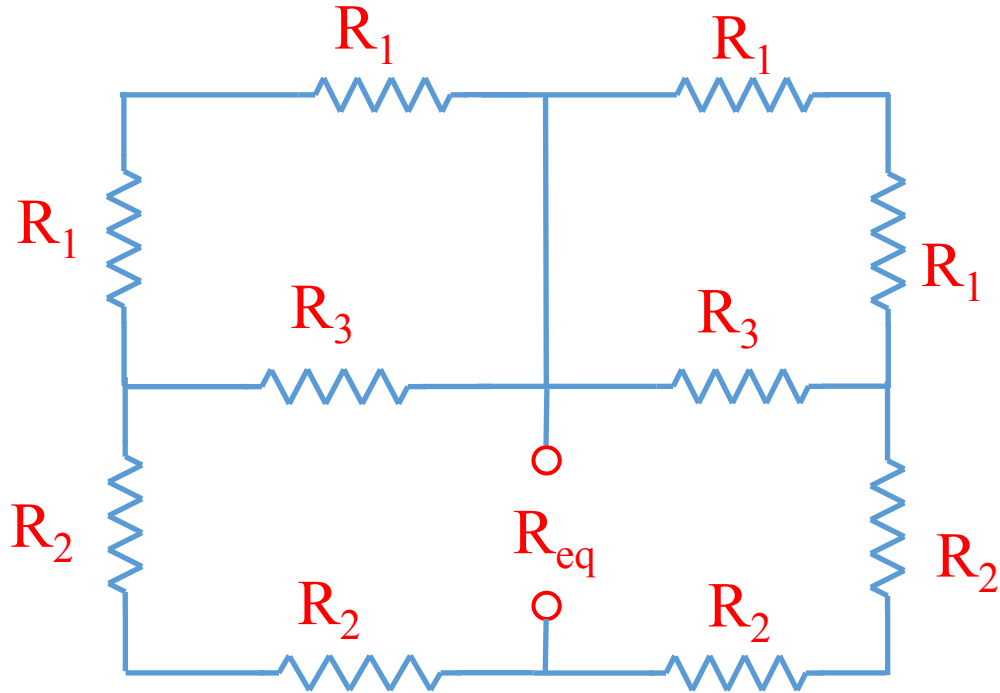
Problem 3: (VCVS) Find V_{bc} and V_{ab} .



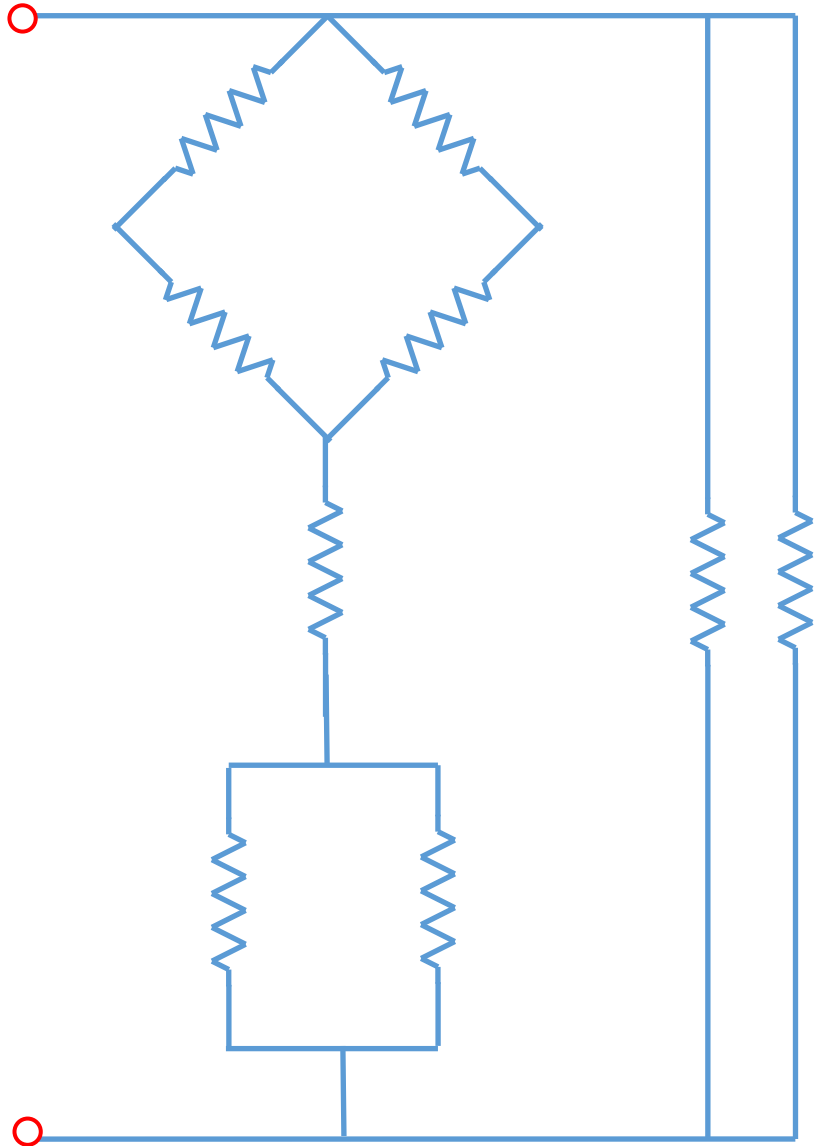
Problem 4: Find R_{eq} . Please use the parallel sign “//” as discussed in class.



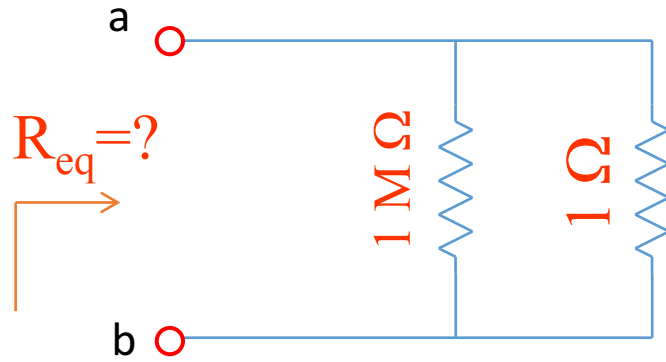
Problem 5: Find R_{eq} .



Problem 6: All of the resistors below are $R_0 \Omega$. Find R_{eq} .



Problem 7: Find R_{eq} using Taylor series approximation of the appropriate function to the second order accuracy.



Problem 8: (Potentiometer) In the circuit below, the wiper divides the potentiometer resistance R between two resistances $R(1-\alpha)$ and $R\alpha$ where $0 < \alpha < 1$. α is a parameter modeling the wiper's position. Find the value of α such that the output voltage V_{out} becomes one-third of V_s

