

# EECS/CSE 70A Network Analysis I

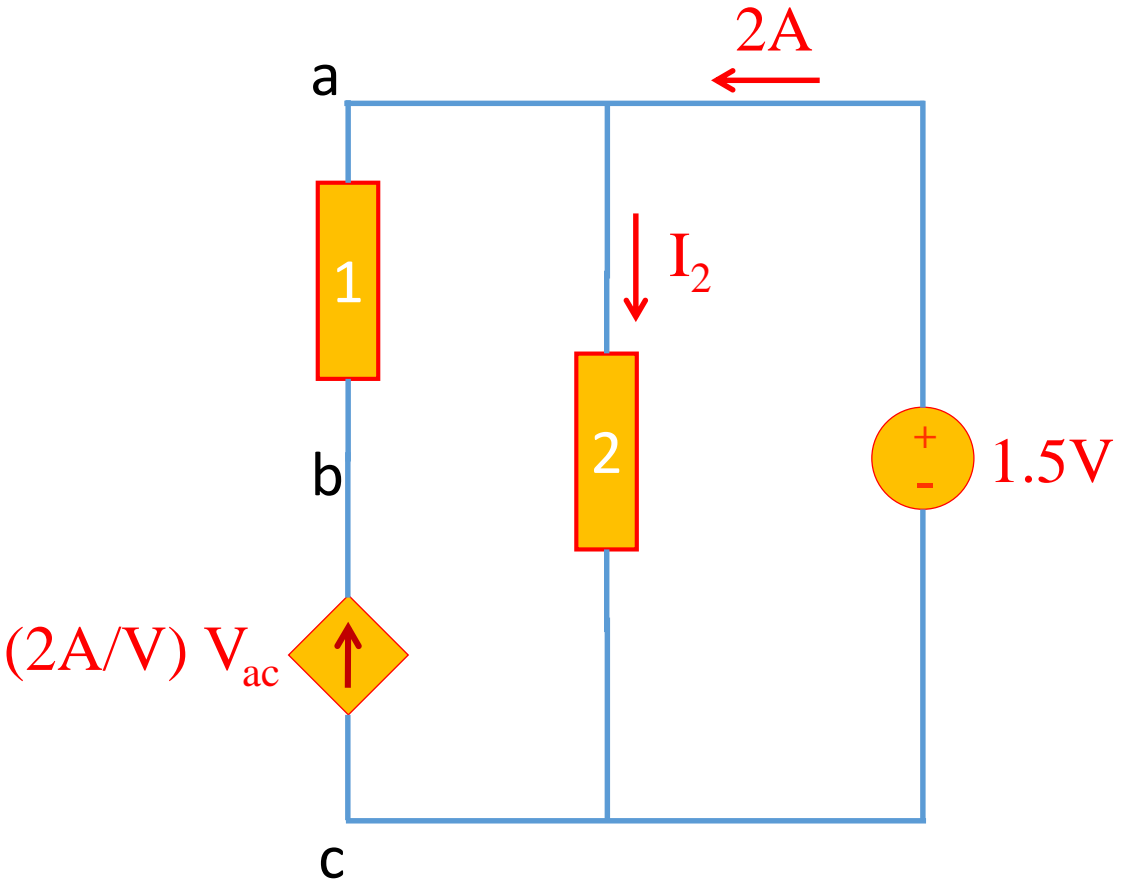
## Homework #2

Due on or before

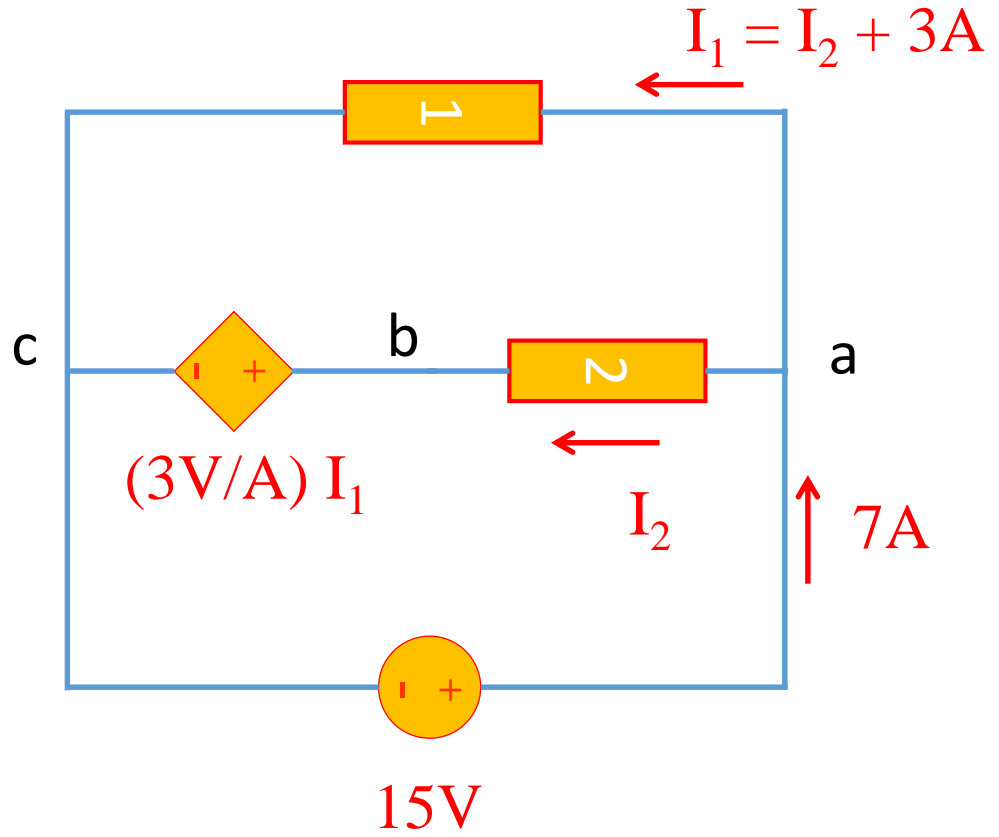
4/12/2016, Tuesday 6.00pm at ELH 110

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

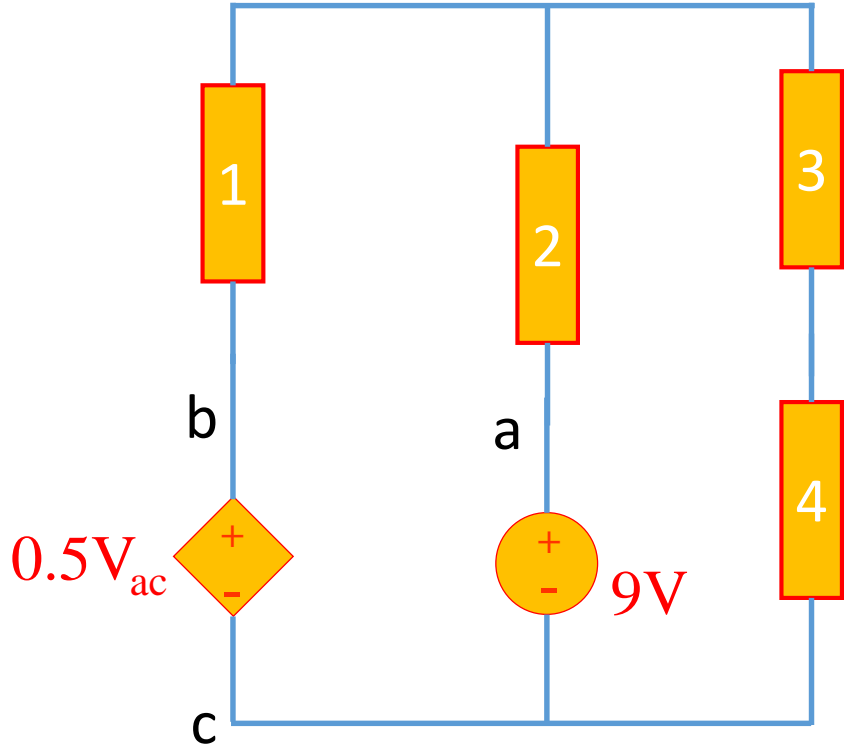
Problem 1: (VCCS) Find  $I_{cb}$  and  $I_2$ .



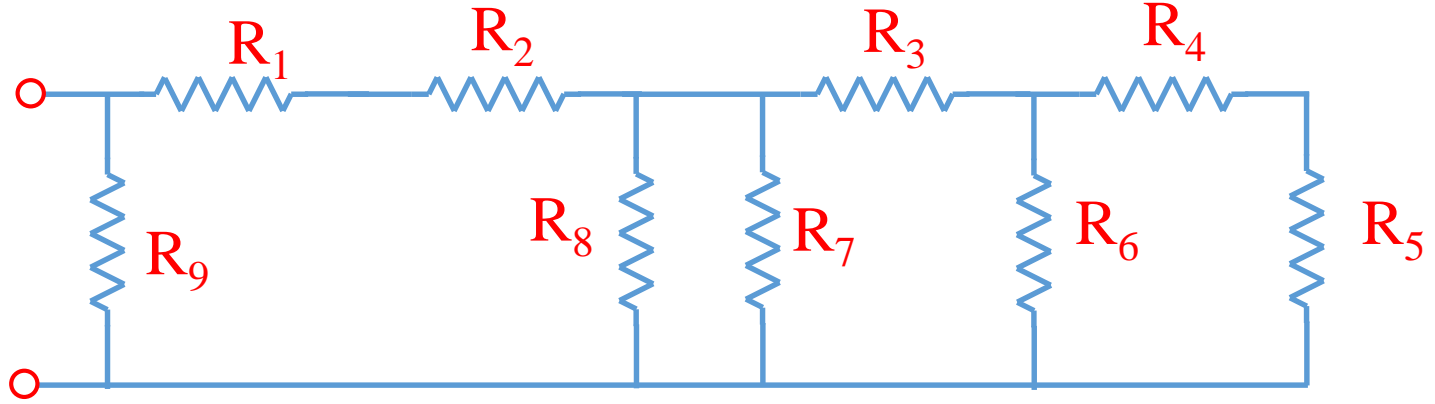
Problem 2: (CCVS) Find  $I_1$ ,  $I_2$  and  $V_{bc}$



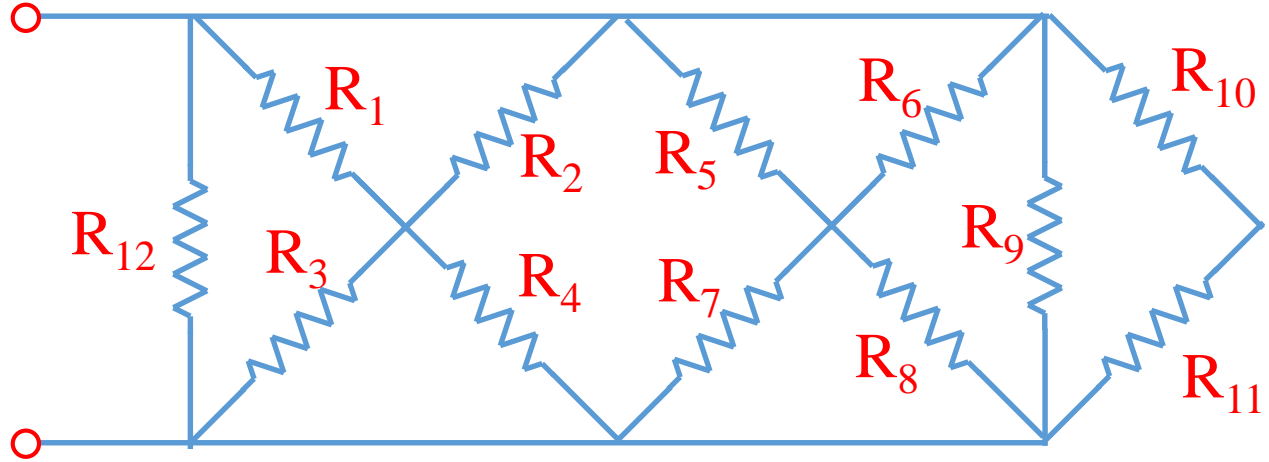
Problem 3: (VCVS) Find  $V_{bc}$  and  $V_{ab}$ .



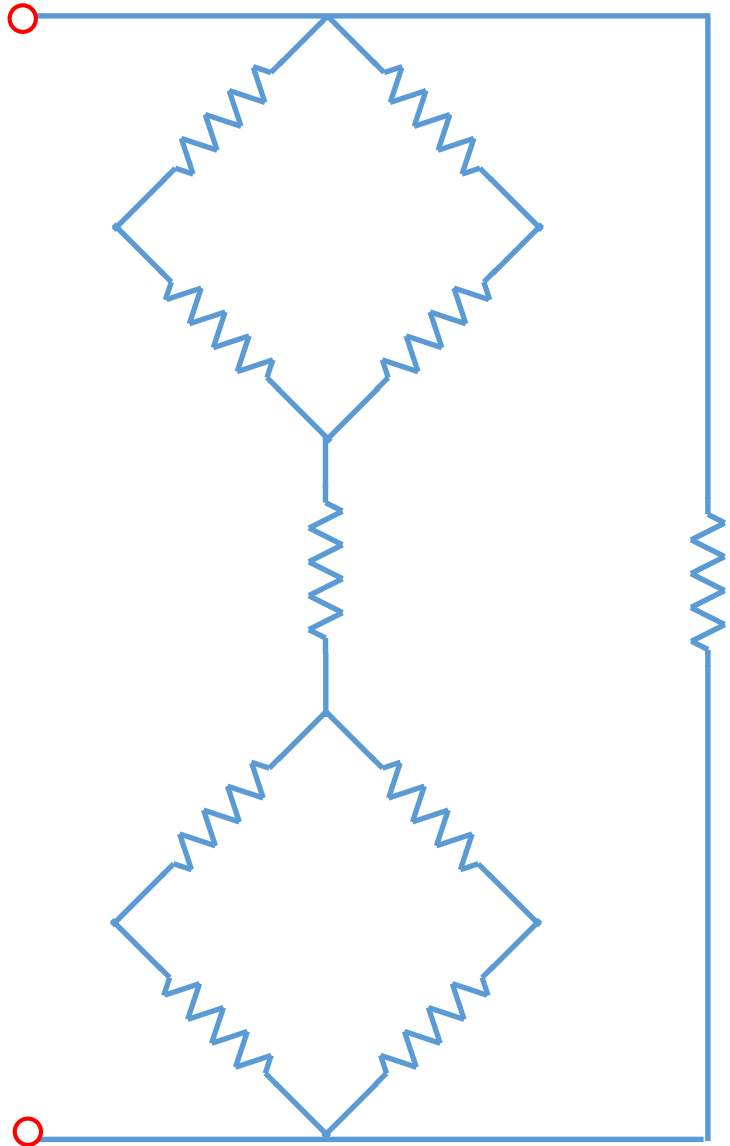
Problem 4: Find  $R_{eq}$ . Please use the parallel sign “//” as discussed in class.



Problem 5: Find  $R_{eq}$ .



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



Problem 7: (Potentiometer) In the circuit below, the wiper divides the potentiometer resistance  $R_p$  between two resistances  $R_p(1-\alpha)$  and  $R_p\alpha$  where  $0 < \alpha < 1$ .  $\alpha$  is a parameter modeling the wiper's position. Find the output voltage  $V_{out}$  as a function of  $V_s$ ,  $R_s$ ,  $R_p$  and  $\alpha$ .

