EE2210 Electric Circuits, Spring 2017
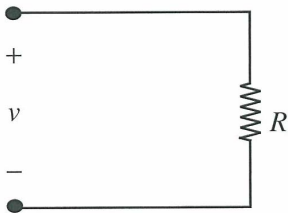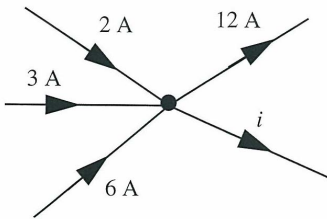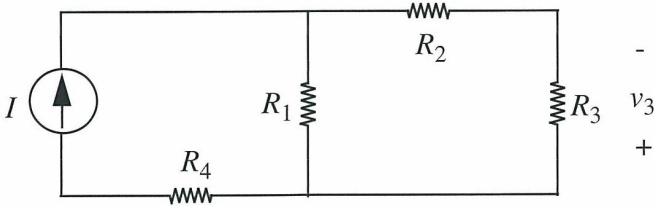
Practice problems (Lecture1-Lecture3)

1. Consider the circuit in the following figure. The voltage across the resistor, v, is equal to $V_A \times \cos\omega t$. What is the average power dissipated on the resistor?
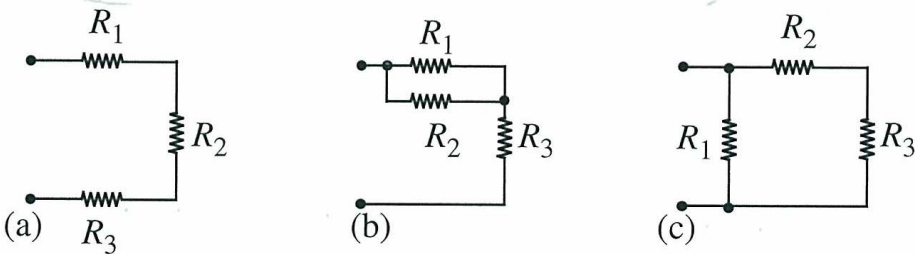

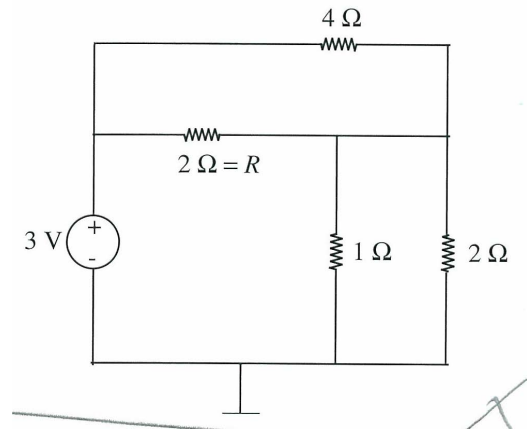2. Consider the circuit in the following figure. Find the current i in the following figure.

3. Consider the circuit in the following figure. Find the voltage across R_3.

4. Find the equivalent resistance at the indicated terminal pair for the following networks.
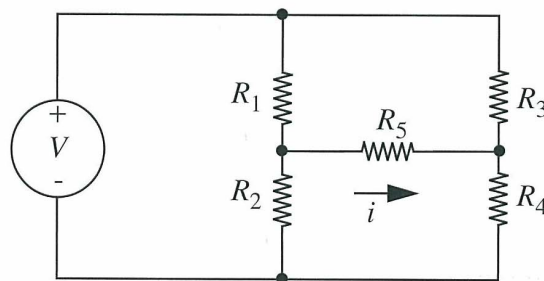
5. Consider the circuit in the following figure. Find the voltage across the resistor R.
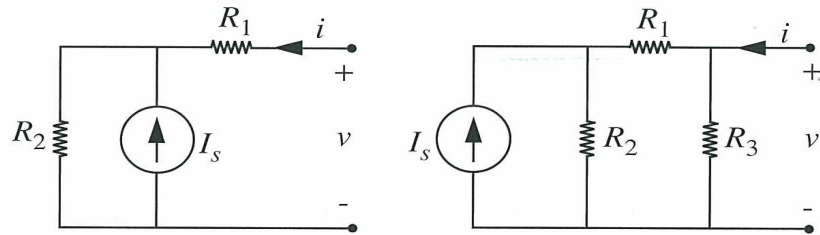

6. Consider the circuit in the following figure. Find the voltage v_o as a function of v_i in the following circuit using the superposition method.
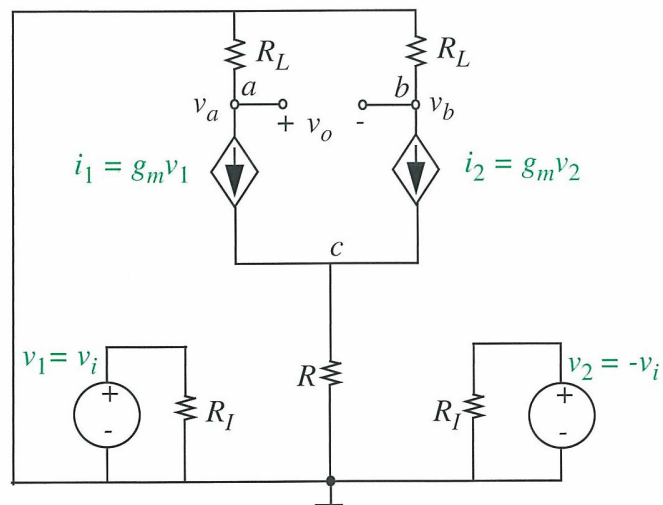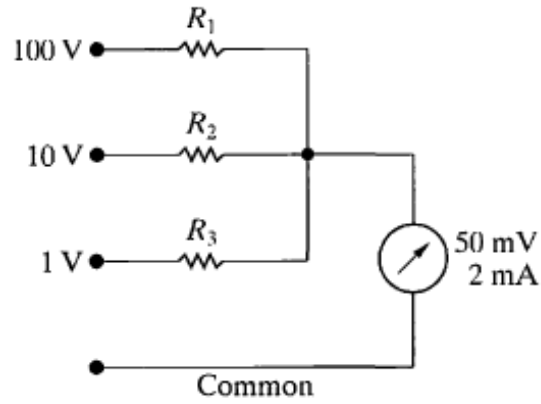

7. Find the current i in the following circuit using the node method. $V = 2$ V, $R_1 = R_4$ $= 2$ Ohms, $R_2 = 4$ Ohms, $R_3 = 3$ Ohms and $R_5 = 1$ Ohms.

8. Find the Norton and Thevenin equivalent for the following networks.

9. Find R_1, R_2, and R_3 in the following circuit.

10. Find v_1 and v_2 in the following circuit.