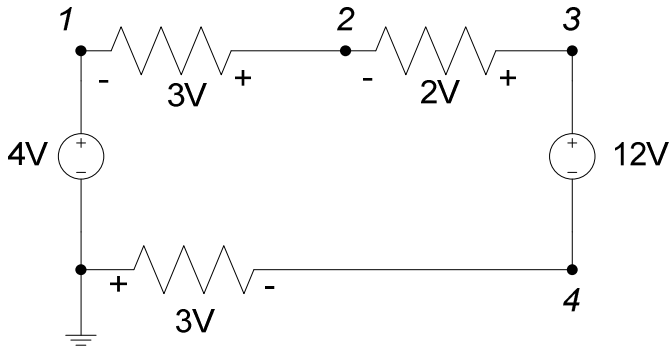


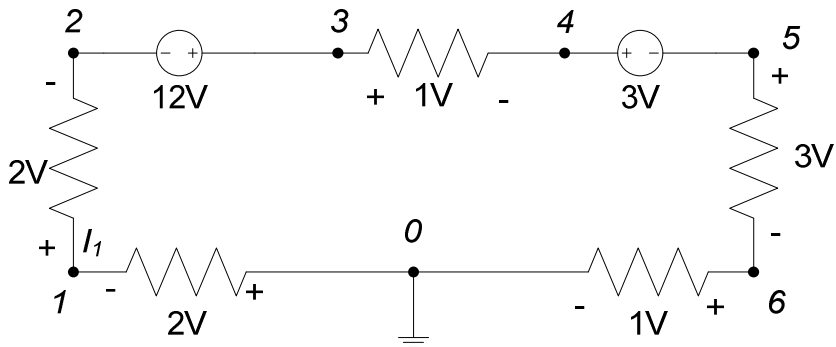
Problem Set 3 (Fall 2010)

Important: Signs!

3.1 Find V_{14} in the network below.



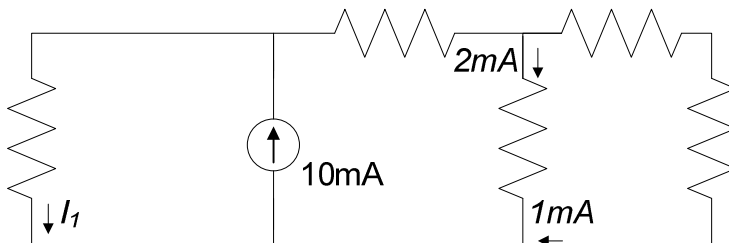
3.2 Find V_{20} and V_{64} in the circuit below.



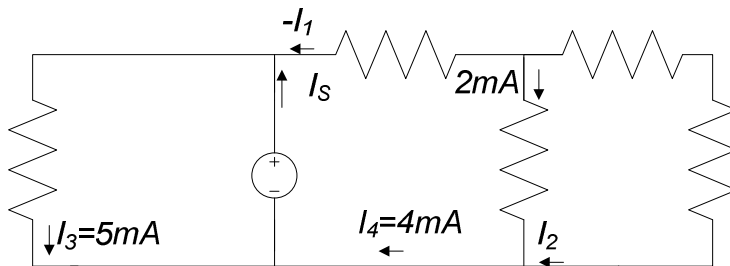
3.3 Repeat 2.12 and find the power in each:

- i) 6Ω resistor
- ii) 12Ω resistor
- iii) 9 volt source
 - a) when the source is +9v DC
 - b) when the source is $+9\sqrt{2} \sin 100t$

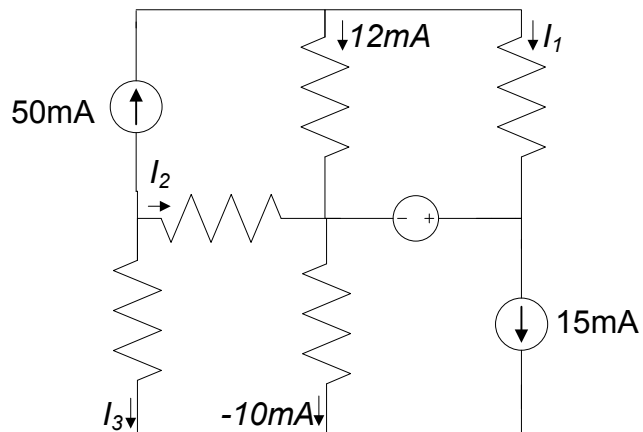
3.4 Find I_1 in the network below.



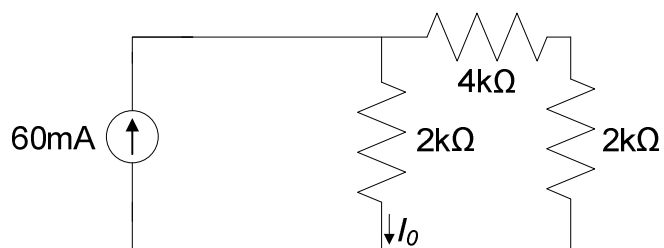
3.5 Find I_1 and I_2 in the network below.



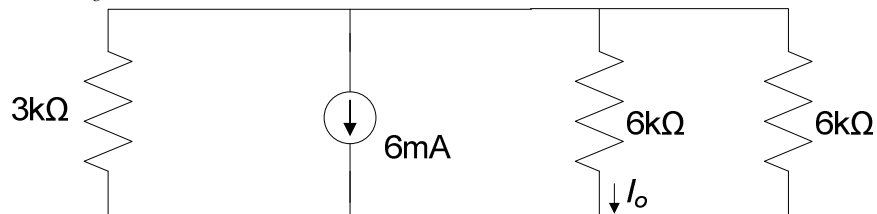
3.6 Find I_1 , I_2 and I_3 in the network below.



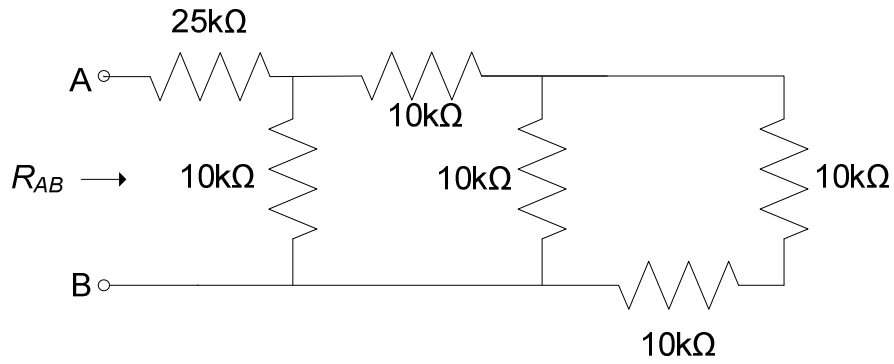
3.7 Find I_o in the network below.



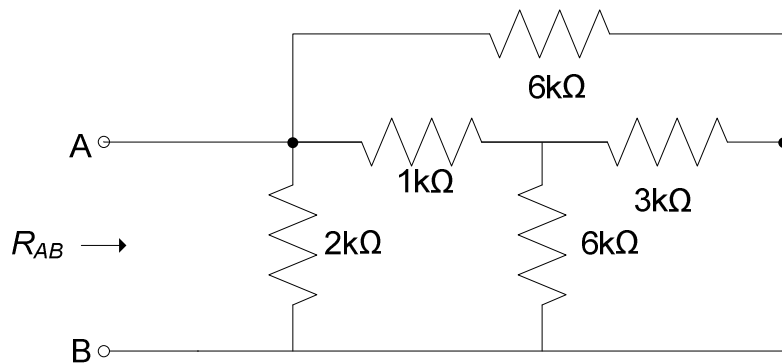
3.8 Find I_o in the network below.



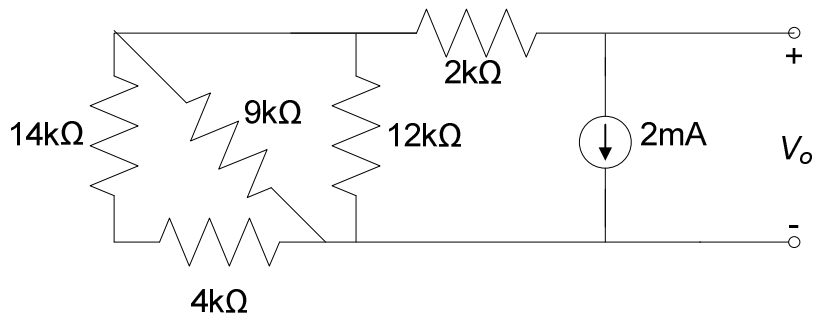
3.9 Find R_{AB} in the network below.



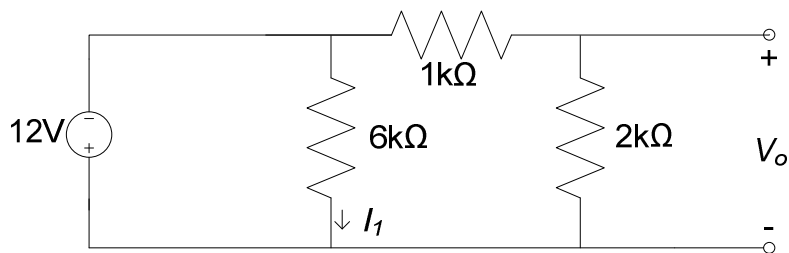
3.10 Find R_{AB} in the network below.



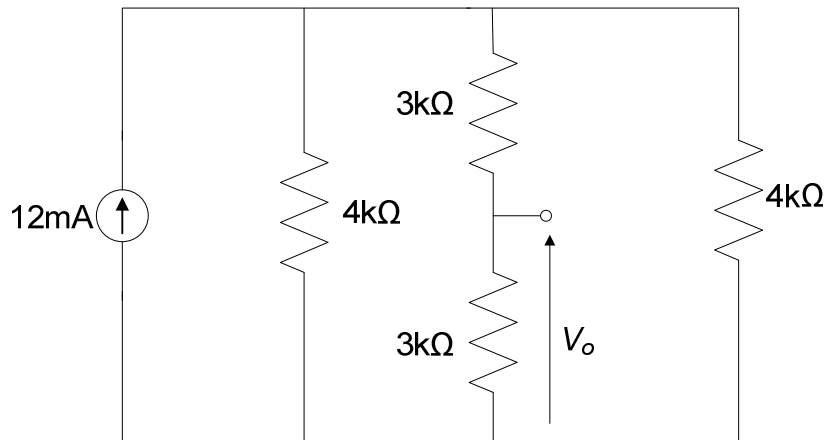
3.11 Find V_o in the network below.



3.12 Find I_I and V_o in the network below.



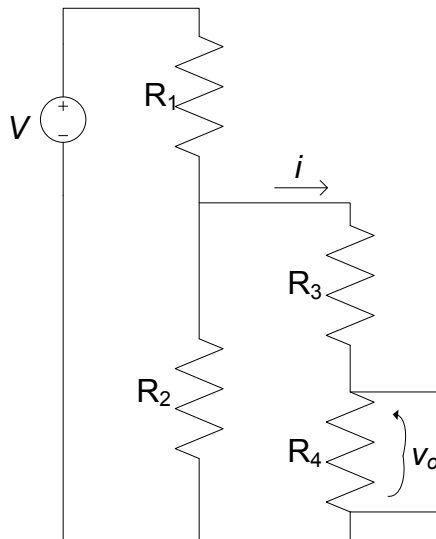
3.13 Find V_o in the network below.



TAs: Voltage divider: $v_x = v \frac{R_x}{R_x + R_y}$

Current divider (parallel circuit) $i_x = i \frac{R_y}{R_x + R_y}$

Watch out!



Applying voltage divider rule to R_1 and R_2 MUST include $R_3 + R_4$ in parallel with R_2 .