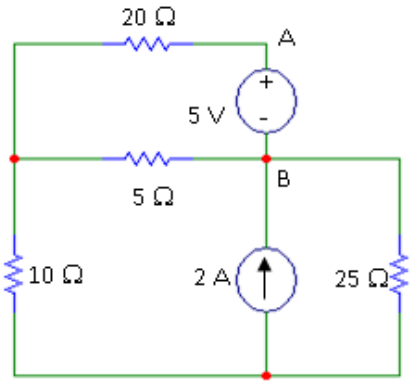
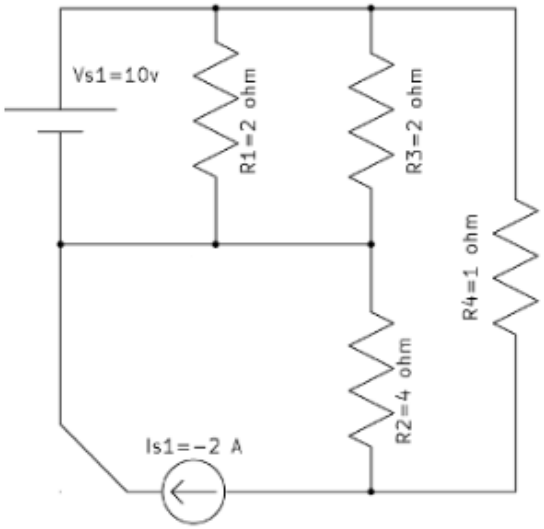
Assignment-2

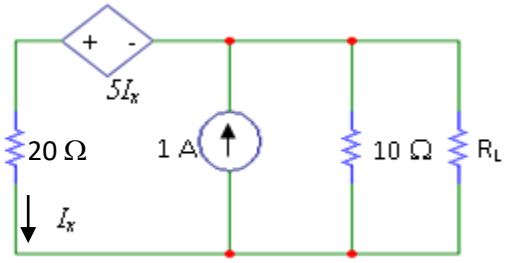
1. Determine the power supplied by the 5V source using
a. Mesh analysis
b. Nodal analysis
c. Superposition principle
d. Thevenin's equivalent circuit between terminals A and B.



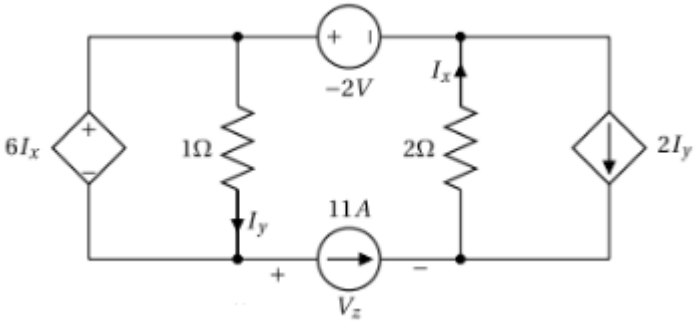
2. Solve the circuit by nodal analysis and find the power through the current source IS1.



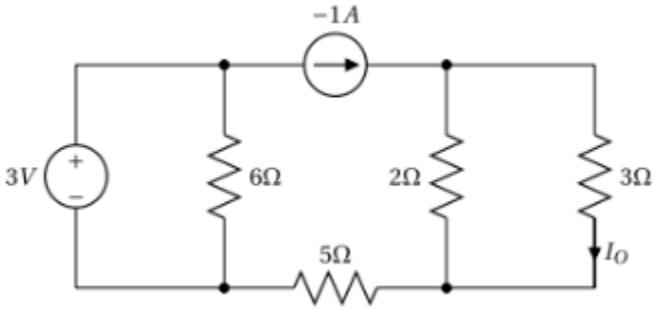
3. Determine the value of R_L in the following circuit such that maximum power is delivered into R_L. Calculate the value of the maximum power.



4. Determine I_x, I_y and V_z using superposition:



5. Use Thevenin's theorem to determine Io.



6. Determine V_R in the following circuit at t=0- and 0+, if the device X is (a) an inductor and (b) a capacitor. The switch is closed at t=0.