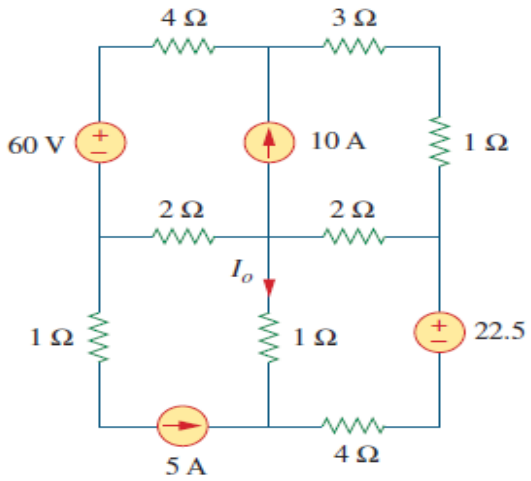
Basic Electrical and Electronics Engineering – EEE102L

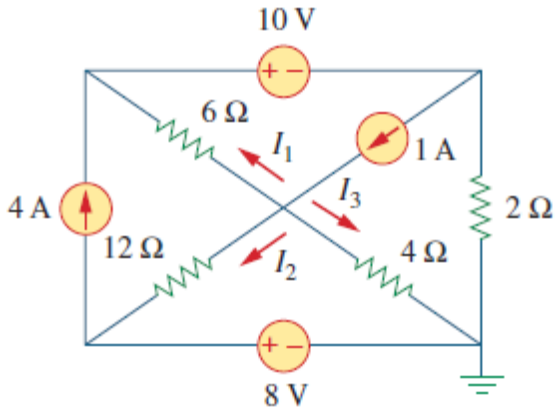
DIGITAL ASSIGNMENT -1

Submit DA1 on or before 8th November 2022

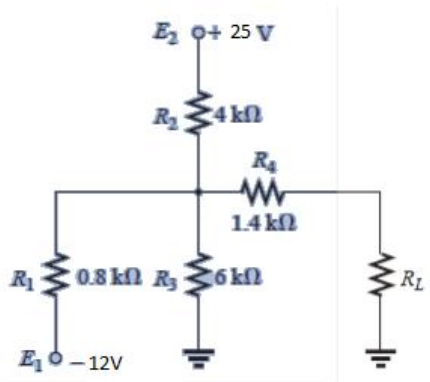
1. Find Io using Mesh analysis



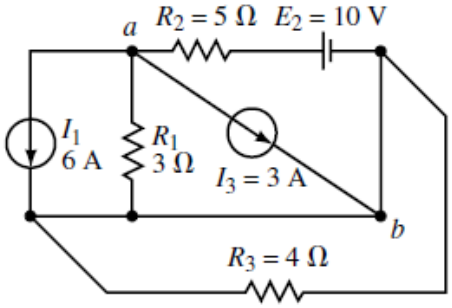
2. Find I1, I2 and I3 using mesh analysis



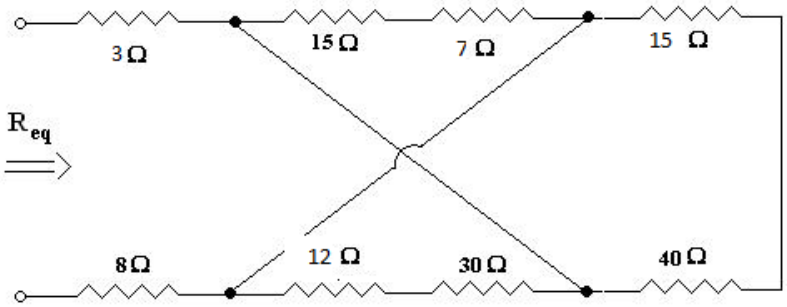
3. Determine R_L for maximum power



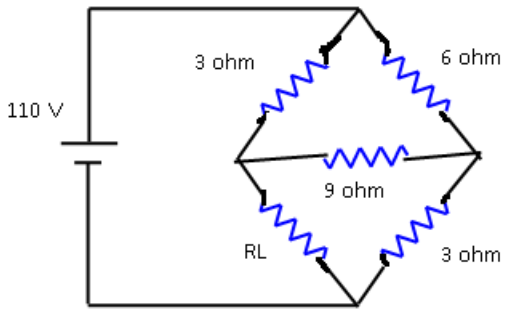
4. Write nodal equations and solve for V_{ab} for the circuit shown below.



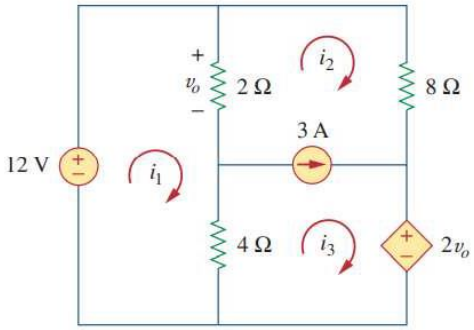
5. Find R_{eq} for the circuit shown below.



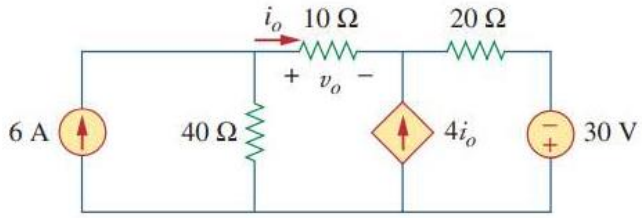
6. Find R_{th} and the maximum power dissipated for the circuit shown below



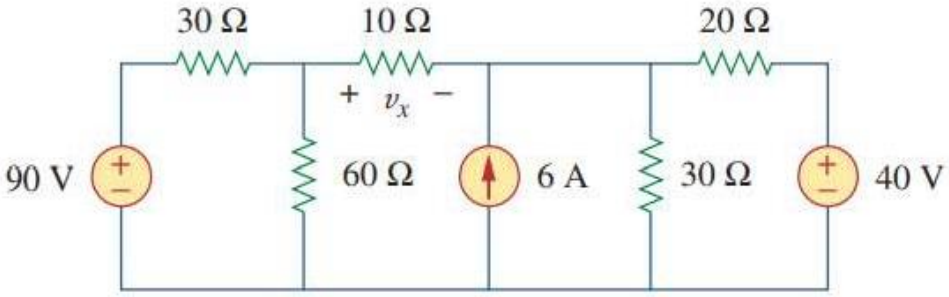
7. Find v_0 using nodal analysis



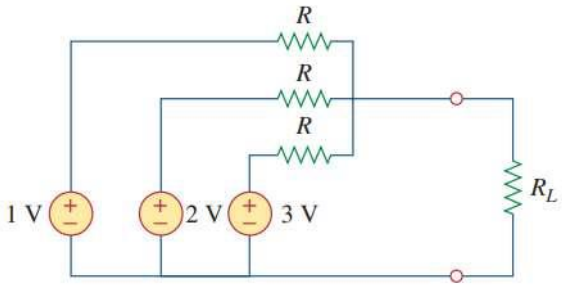
8. Find v_0 and i_0 using superposition theorem



9. Find v_x using superposition principle and source transformation



10. Determine the value of R such that the maximum power delivered to the load is 3mW.



11. Find R_T using Y-Δ transformation