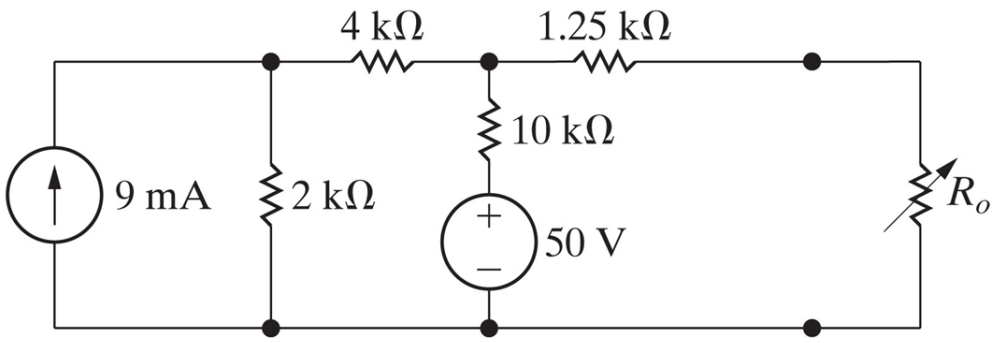
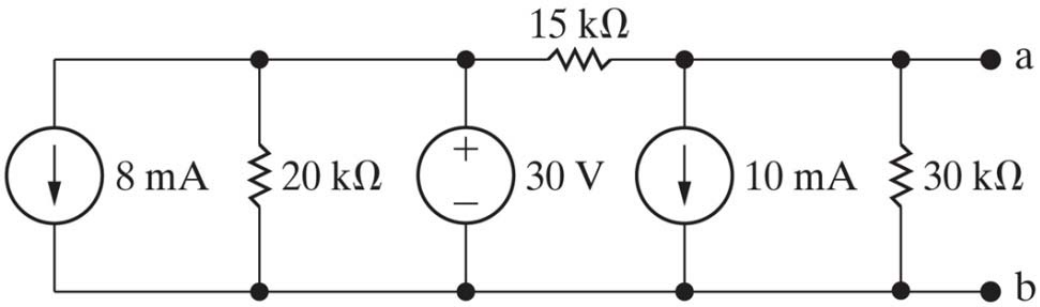
Electrical Circuits
Homework 05

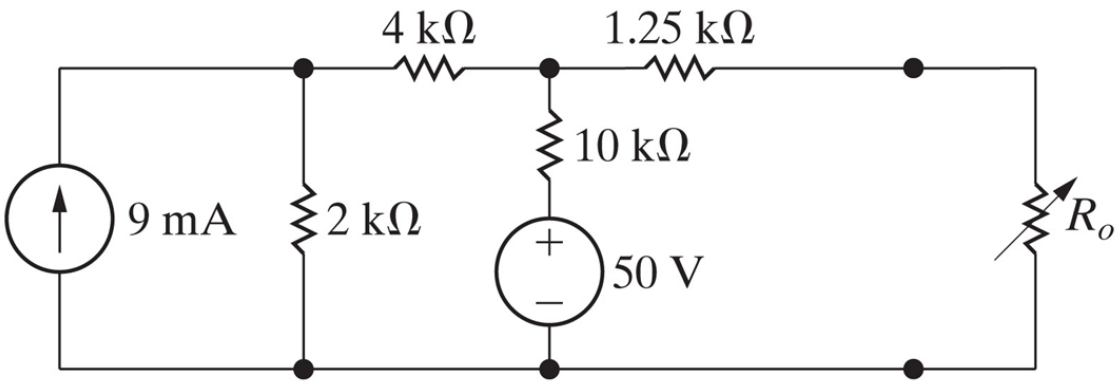
1. Solve for the open-circuit voltage across the load R_0 using the Node Voltage technique.



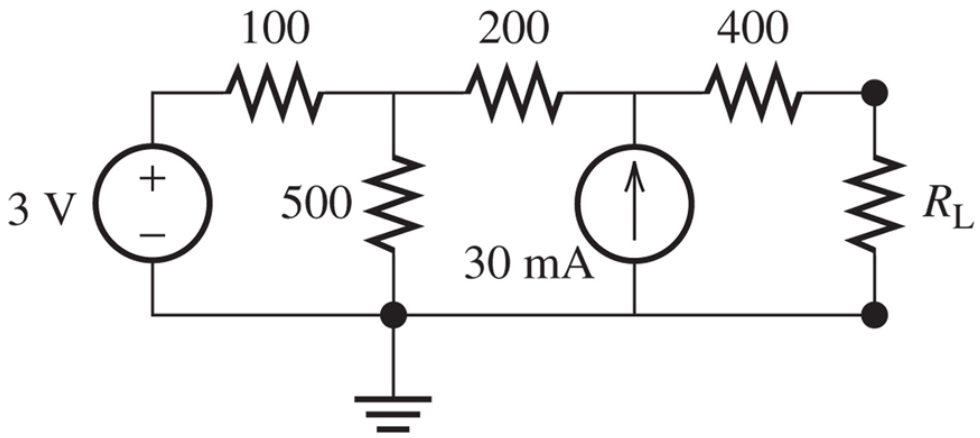
2. Determine v_{Th}, i_{sc} and R_{Th} independently and verify your results. Determine the maximum power the circuit can deliver to a load connected across a-b.



3. Determine the Norton equivalent of the circuit connected to the load, R_0.



4. Determine the R_L such that the circuit provides maximum power across the resistor, R_L. Determine the maximum power that can be delivered to R_L.



5. Determine v_{Th}, i_{sc} and R_{Th} independently and verify your results.