Preparation for Circuits

Concept Questions: The Node-Voltage Method

In nodal analysis, the following 4 steps should be followed:

(1) Label all nodes (label one of them as the reference)

(2) Define currents in each resistive branch

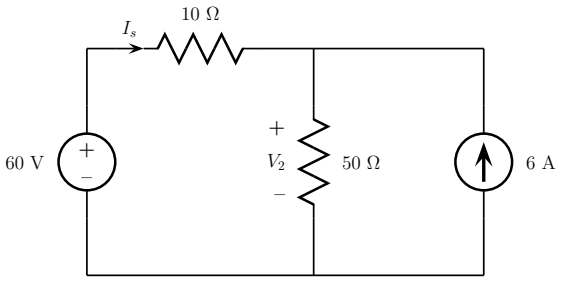
(3) Write KCL only at non-reference nodes nodes with no voltage sources present

(4) Express all currents in terms of node voltages ($I = \frac{V}{R}$)

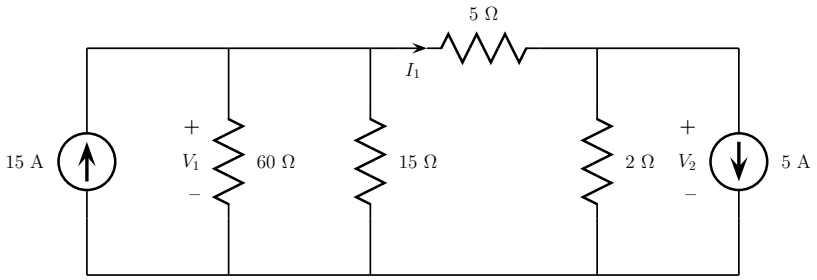
(5) Solve for unknown node voltages

The **goal** is to find all **node voltages** - the voltage from a specifice node to the reference node.

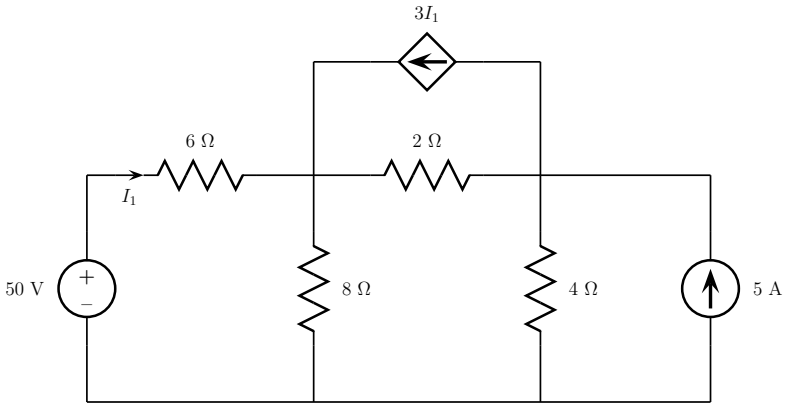
1. What is I_s and V_2?



2. Find V_1, V_2, and I_1.



3. Find the power associated with each source.



4. Find I_0.