

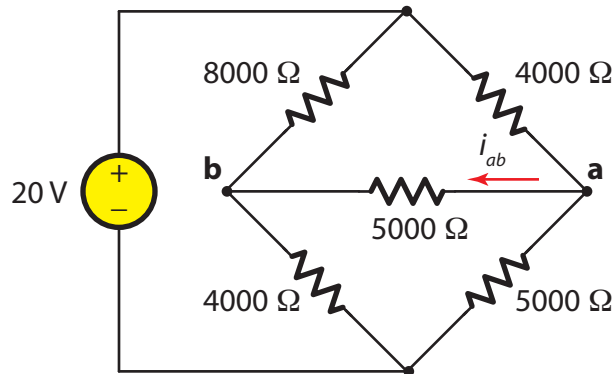
University of Calgary
Department of Electrical and Computer Engineering

ENGG 225 - Fundamentals of Electrical Circuits and Machines
Winter, 2017

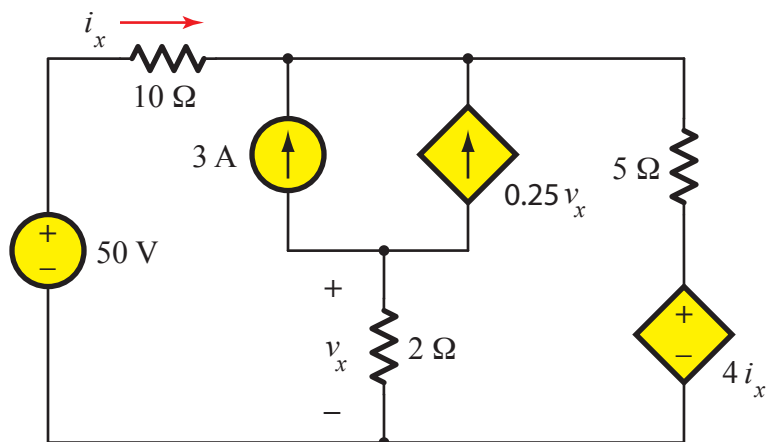
Problem Assignment #3

Use either the node-voltage method or the mesh-current method, as directed, to solve the problems below.

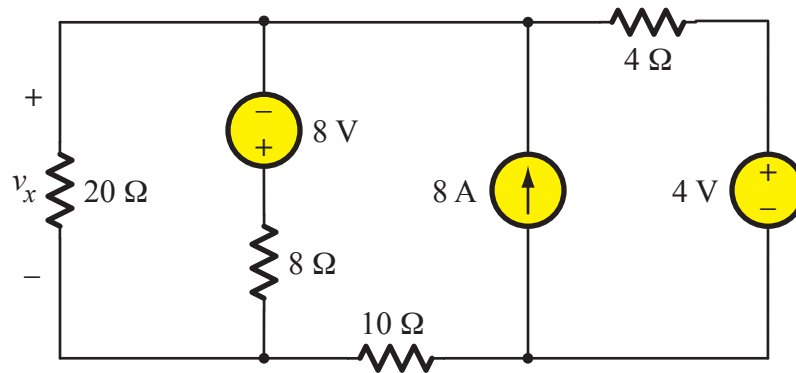
1. [2 marks.] Use the node-voltage method to solve for the current i_{ab} . Give your answer in *millAmperes (mA)*.



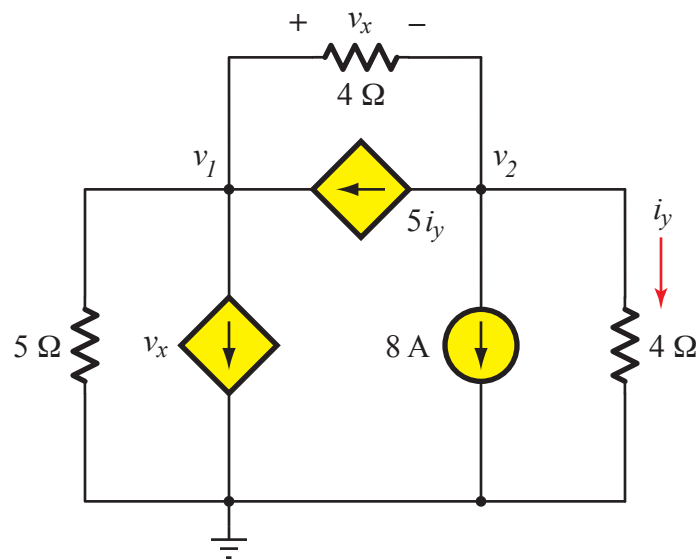
2. [2 marks.] Use the node-voltage method to solve for i_x in the circuit below. Give your answer in *Amperes (A)*.



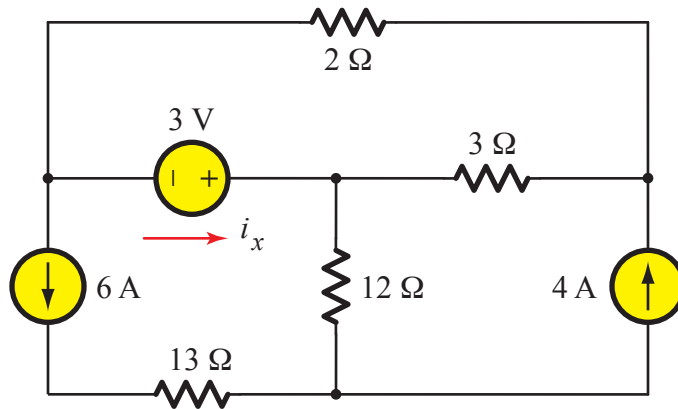
3. [2 marks.] Use the node-voltage method to solve for v_x in the circuit below. Give your answer is *Volts (V)*.



4. [2 marks.] Use the node-voltage method to solve for v_x in the circuit below. Give your answer is *Volts (V)*.



5. [2 marks.] Use the node-voltage method to solve for i_x in the circuit below. Give your answer in Amperes (A).



6. [2 marks.] Find v_x using mesh-current analysis.

