First Name: _____
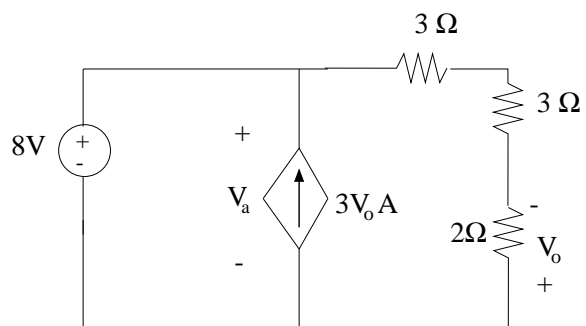
Last Name: _____

There are 4 problems.
The problems are worth different numbers of points, as listed here.

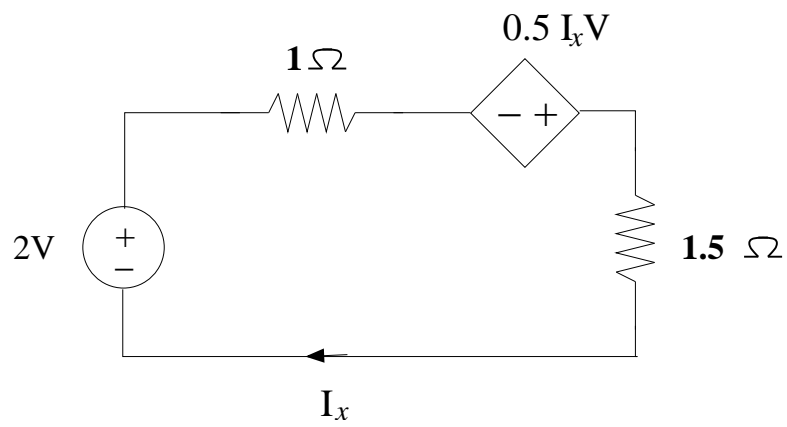| Problem	Possible	Score
1	7	
2	10	
3	10	
4	13	
Total	40	

This quiz is CLOSED BOOK, NO CALCULATORS ALLOWED.
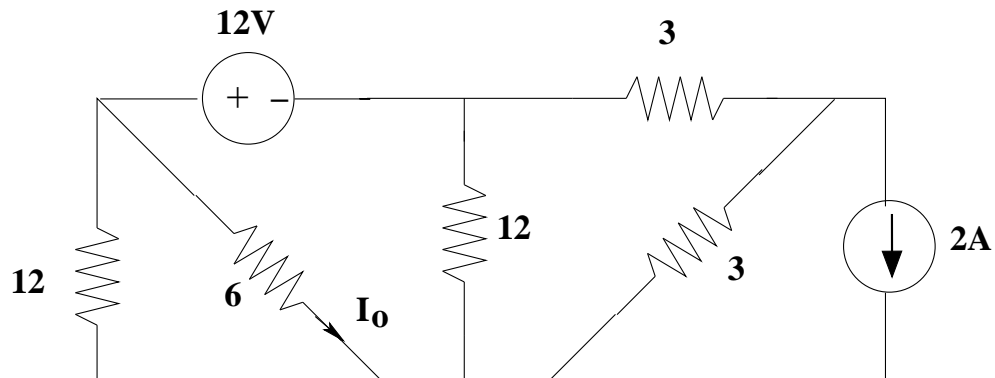You need to show your work for all problems.

Problem 1: Find V_a and V_0 in the following circuit:

Problem 2: Find the current I_x, and find the power absorbed by each of the four components in the following network. Note that the dependent source is a current-dependent voltage source with value $0.5I_x$ Volts.

Problem 3: find I_o in the following circuit using source transformations. That is, use source transformations to reduce the following circuit either to a circuit having only one mesh, or to a current divider circuit with one source and two resistors. Calculate I_o from this reduced circuit.

Problem 4: Find I_0 in the following circuit by using Thevenin's theorem. That is, treat the 3Ω resistor as the load resistor, and find the Thevenin equivalent circuit for the remainder of the circuit, exclusive of the load. Draw the Thevenin equivalent circuit, re-attach it to the load resistor, and use it to find the current in the 3Ω resistor.