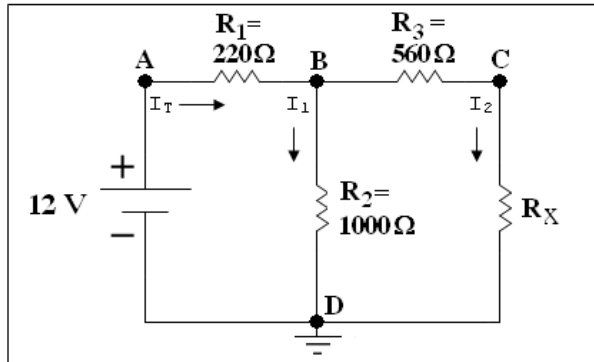


Name: _____ Section: _____ Bench Number: _____

You have **30 minutes** to complete this exam. You may **not** use a calculator to answer any portion of this exam. Construct the following DC circuit. Answer the questions below using any instrument on your lab bench. Be sure to use the proper units in your answers.



Instructor Assistance

1st help (-2 pts)

2nd help (-4 pts)

3rd help (-6 pts)

1. Set up above circuit. Setup the left DMM to measure the output of the power supply and adjust the output to exactly 12 volts. Setup the right DMM to measure the total current through the circuit.

STOP! HAVE THE INSTRUCTOR OR LAB ASSISTANT VERIFY YOUR SETUP.



Correct Circuit	(4 pts)	YES	NO
Correct Supply Voltage	(1 pt)	YES	NO
Correct Voltage DMM Setup	(2 pt)	YES	NO
Correct Current DMM Setup	(3 pt)	YES	NO

- | | |
|---|-------------------|
| 2. (2 pts) Measure the total resistance of the circuit. | $R_{TOT} =$ _____ |
| 3. (2 pts) Measure the unknown resistor's resistance. | $R_X =$ _____ |
| 4. (2 pts) Measure the voltage at node C. | $V_C =$ _____ |
| 5. (3 pts) Measure the voltage drop between nodes A and B | $V_{AB} =$ _____ |
| 6. (3 pts) Measure the voltage drop between nodes D and A | $V_{DA} =$ _____ |
| 7. (3 pts) Measure the total current through the circuit. | $I_T =$ _____ |
| 8. (3 pts) Measure the current through branch one. | $I_1 =$ _____ |
| 9. Additional knowledge questions may be asked about your measurements. | |

DISCLAIMER: The above are similar to the types of measurements you will be required to take. The actual practical exam will have a different circuit and different equipment setup.