Hands-On Lab - Module 1 RESULTS

Your Name: _____ **Seat** _____ **Date** _____

Turn *this* sheet in at end of class (*even if not finished*)
Keep ALL Instruction Sheets

MEASURING THE RESISTANCE OF A RESISTOR

Measure the resistance of a resistor marked 1KΩ (1000 ohms, ***brown black red gold***).
1a. What value of resistance do you measure? _____ **Ohms**
Measure the resistance of this resistor after inserting into the Console Breadboard.
1b. Repeat your resistance measurement (A25 to F25) _____ **Ohms**

MEASURING THE RESISTANCE OF MULTIPLE RESISTOR CIRCUITS

Measure the resistance of two series 1KΩ resistors on the breadboard.
1c.) Resistance of two 1KΩ resistors in series _____ **Ohms**
Measure the resistance of two parallel 1KΩ resistors on the breadboard.
1d.) Resistance of two 1KΩ resistors in parallel _____ **Ohms**
Measure the resistance of four series 1KΩ resistors on the breadboard.
1e.) Resistance of four 1KΩ resistors in series _____ **Ohms**

DO NOT REMOVE THE RESISTORS! – Instructor Check Point 1A

MEASURING THE VOLTAGE OF THE AC ADAPTER

Plug your "9V" cube adapter into the connector plug and then into 120VAC.The connector's **RED** wire is the **+ VOLTAGE** wire, the **BLACK wire is "Ground**." Measure the 'Unloaded' voltage using the 20 V range (upper left) **-** will be above 9V.
1f.) 9V cube adapter unloaded voltage (*13-17V expected without a load*) _____ **volts**

MEASURING RESISTOR VOLTAGE DROPS

Connect your 9V source (*whatever the actual voltage*) to a series circuit of
1g.) A **"four series 1KΩ resistor - 4000Ω load", BLACK** at **T21:** _____ **volts**

1h.) A **"three series 1KΩ resistor - 3000Ω load", BLACK** at **P21:** _____ **volts**

1i.) A **"two series 1KΩ resistor - 2000Ω load", BLACK** at **K21:** _____ **volts**

1j.) A **"1KΩ resistor - 1000Ω load", BLACK** at **F21:** _____ **volts**

VOLTAGE DIVIDER PROOF

Measure the voltage drop across each of the 1KΩ resistors in Figure 1.6**:**
1k1.) R_1: A21 to **F21:** _____ **volts** **1k2.) R_2: F21** to **K21:** _____ **volts**
1k3.) R_3: K21 to **P21:** _____ **volts** **1k4.) R_4: P21** to **T21:** _____ **volts**
1k5.) Does adding voltages **1k1** through **1k4** equal the voltage of **1g**? (**Yes** __ **No** __?)

DO NOT REMOVE THE RESISTORS! – Instructor Check Point 1B

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