Lab #1
Instrument Familiarization - Multimeters

Name: _____ Date: _____ Student Number: _____

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	V	I	R = V/I	R Measured	R Indicated	Indicated Tolerance
R_1						
R_2						
R_3						
R_4						

1. From the information in the table, calculate the actual tolerances of measured resistance and the calculated resistance of the resistors compared to the indicated values. Are they within their indicated tolerance? If not explain. Why are the calculated and measured resistance values not exactly alike?

2. Compare the voltage readings across R2 and R3. Explain the relationship.

3. Compare the current flow through R1 and R4. Explain the relationship.

The following questions pertain to information found in the operating manuals:

4. When measuring voltage, a meter will introduce a parallel resistance to the circuit being measured. The amount of this meter resistance is designated as the input impedance. Compare the Philips PM2503 analog meter and the HP E2377A digital meter when measuring a 50 mV DC voltage. State which meter would have a less detrimental effect on the circuit being measured?

5. What is the purpose of the hold button on the HP E2377A?

6. What is the maximum current input that the Hewlett-Packard model E2377A can accept when selected to either the microamp or milliamp range?