

Name \_\_\_\_\_

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

1) What would current (amperes) do if the resistance in the circuit were doubled?

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2) What would current (amperes) do if the voltage were doubled in a circuit?

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3) Why does the current through a circuit with a light bulb test lower than when calculated using an ohmmeter to measure the bulb resistance?

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4) What is the formula for voltage drop?

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5) What is Kirchhoff's voltage law?

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## Answer Key

Testname: AEE6\_SHORT6

1) If the resistance is doubled in a circuit, the current in amperes would decrease to one-half.

Page Ref: 72

2) If the voltage was doubled, the current flow in amperes would also double, assuming that the resistance in the circuit remains the same.

Page Ref: 72

3) Using Ohm's law to calculate current flow does not take into account the differences in temperature of the components during actual operation.

Page Ref: 76

4) The formula for determining voltage drop is  $E = I \times R$  where the letter E represents the voltage drop, the letter I represents the current in amperes through the resistance (load), and the letter R represents the resistance of the load.

Page Ref: 75

5) Kirchhoff's Voltage Law states, "The voltage around any closed circuit is equal to the sum (total) of the voltage drops across the resistances."

Page Ref: 73