I pledge on my honor that I have not given or received any unauthorized assistance on this test.

Name & date _____

1. In a series circuit, the total resistance is calculated by ____.

a. adding the reciprocal of each resistor's value
b. adding the values of all resistors
c. multiplying the resistor values.
d. dividing the voltage by the current

2. Kirchhoff's Voltage Law (KVL) states that the ____.

a. total current in a circuit is constant.
b. power generated is less than power dissipated
c. sum of voltage rises equals the sum of voltage drops
d. resistance is inversely proportional to voltage

3. When measuring voltage from point A to point B (V_{AB}), the ____ lead of the voltmeter is placed on point A.

a. black b. red c. either lead d. ground

4. In a series circuit with multiple voltage sources, you determine the net voltage by ____.

a. multiplying the voltages
b. adding the voltages if they are in the same direction
c. subtracting the voltages if they are in opposite directions
d. b and c

5. If a voltage source has current flowing into its positive terminal, it is ____.

a. acting as a resistor b. being charged c. short-circuiting d. is generating maximum power

6. The current in a series circuit ____.

a. splits between the resistors
b. changes depending on the resistance
c. is the same through all resistors
d. is zero.

7. If the voltage across a 250-Ω resistor is 2.5 V and the voltage across a 750-Ω resistor is 7.5 V in a series circuit, the total voltage applied is ____.

a. 10 b. 7.5 c. 2.5 d. 12.5

8. If the current flowing through a 1kΩ resistor is 10 mA, the voltage drop across the resistor is ____ V.

a. 0.1 b. 10 c. 100 d. 1,000

9. In a series circuit, the total power generated by the voltage source must be equal to the ____.

a. sum of the currents
b. sum of the voltages
c. sum of the resistances.
d. total power dissipated by the resistors

10. Reversing the polarity of one voltage source in a series circuit with two voltage sources, the ___.

a. total current doubles
b. total resistance increases
c. net voltage becomes zero if the sources are equal
d. total power increases