Name _____

Health Science Post-test Ohm's Law

1. **Which of these rules is known as Ohm's Law?**

   a) $I = \frac{V}{R}$ **b)** $P = I \bullet V$ **c)** $R = I \bullet V$ **d)** $I = V \bullet R$

2. **The symbol for a battery is:**

   a)  **b)**  **c)**  **d** 

3. **Which rule is used to add resistors that are in parallel with one another?**

   a) $R = R_1 + R_2 \ldots\ldots + R_n$ **b)** $\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} \ldots\ldots + \frac{1}{R_n}$ **c)** $R = \frac{V}{I}$

4. **A 3ohm, 2 ohm and 3 ohm are in parallel with one another. Their total resistance is:**

   a) 8 ohms b) $\frac{7}{6} ohm$ **c) not enough information given d)** $\frac{6}{7} ohms$

5. **A group of parallel resistors has a total resistance of 1.75 ohms and is series with a 2.25 ohm resistor. The total resistance is:**

   a) 3 ohms b) $\frac{1.75}{2.25} ohms$ **c) 4 ohms d) not enough information given.**

6. **The current in a circuit that has a total resistance of 3 ohms and a voltage of 12 volts is:**

   a) $\frac{3}{12} amps$ **b) 4 amps c) 36 amps d) not enough information given**

7. **If 8 amps of current are flowing through a 2.25 ohm resistor, the voltage drop is:**

   a) $\frac{2.25}{8} volts$ **b)** $\frac{8}{2.25} volts$ **c) 18 volts d) not enough information given**

8. **The <u>definition</u> of electrical current is:**

   a) $I = \frac{\text{charge}}{time}$ **b)** $I = \frac{Volume}{time}$ **c)** $I = \frac{Power}{Voltage}$ **d)** $I = \frac{V}{R}$

9. **How much power in watts, is required for a circuit that has 4 amps of current and a 12 volt power supply and 20 cc of volume?**

   a) 3 watts b) 48 watts c) $\frac{4}{12} watts$ **d) 80 watts**