**Health Science Pre-test   Ohm's Law**

1. **Which of these rules is known as Ohm's Law?**
   a) $I = V \cdot R$ **b)** $P = I \cdot V$ **c)** $R = I \cdot V$ **d)** $I = \dfrac{V}{R}$

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

   a) $-\!\!\sqrt{\wedge\!\wedge}\!-$ b) $\dashv\vdash$ c) $\overline{\underline{\underline{}}}$ d $\blacktriangleright\!\vdash$

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

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

4. **A 2 ohm, 3 ohm and 2 ohm are in parallel with one another. Their total resistance is:**
   a) 7 ohms b) $\dfrac{3}{4} ohm$ **c) not enough information given**

5. **A group of parallel resistors has a total resistance of 0.75 ohms and is series with a 2.25 ohm resistor. The total resistance is:**

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

6. **The current in a circuit that has a total resistance of 4 ohms and a voltage of 12 volts is:**

   a) 48 amps   b) 3 amps c) $\dfrac{4}{12} amps$ **d) not enough information given**

7. **If 4 amps of current are flowing through a 2.25 ohm resistor, the voltage drop is:**

   a) 10 volts b) $\dfrac{4}{2.25} volts$ **c)** $\dfrac{2.25}{4} volts$ **d) not enough information given**

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

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

9. **How much power in watts, is required for a circuit that has 3 amps of current and a 12 volt power supply and 20 cc of volume?**
   a) 4 watts b) 60 watts c) $\dfrac{3}{12} watts$ **d) 36 watts**