

Nov 8, 2011

1) Ohm's Law

Test Next Tuesday

Ohm's Law

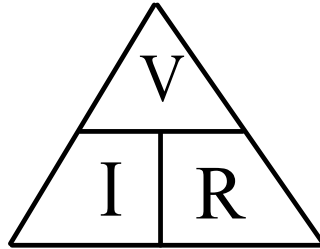
When electrons flow through a conductor, the electrical resistance (R) causes a loss of electrical potential (V).

Ohm's Law states that the potential difference (V) across a conductor is proportional (directly related) to the electric current (I) flowing through the conductor.

$$V = I \times R$$

Formulas

- $V = I \times R$ (voltage = electrical current x electrical resistance)



Sample Problem 1 Ohm's Law

What is the voltage drop across the tungsten filament in a 100-W light bulb? The resistance of the filament is 144Ω and a current of 0.8333 A is flowing through it.

Sample Problem 2:

If an electric toaster is connected to a 120 V outlet in the kitchen and the heating element in the toaster has a resistance of 14Ω , calculate the current flowing through it.

Sample Problem 3:

The current required to operate an electric can opener is 1.5A. What is its resistance if supply voltage is 120V?

Complete

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Ohms Law WS

do the book questions first because you cannot take the books home!!

This is going to be marked as an assignment so place it on a separate sheet of paper to be passed in.