Quiz A: Solve Ohm's Law
Level 1
Prerequisite: None
Points To: Solve Ohm's Law and the Power Formula

$$V = IR$$

Objectives of this quiz:

- Solve the formula above algebraically.

- You will be given two of the variables, and you need to find the other one.

- You need to know the SI units of voltage, current, and resistance.

- You should know how to solve the formula carefully by filling out boxes of information on how you solve it.

- The equation will be on the quiz, so you don't need to memorize it. But you should! (Seriously, it's three letters.)

Part A: Ohm's Law

$$V = IR$$

Symbol	Quantity	SI Unit	
V	Voltage	Volt (V)	
I	Current	Ampere (A)	
R	Resistance	Ohm (Ω)	Ω is the Greek letter omega.

A.1 What is the name of this letter: **Ω ?** _____

What does it stand for in physics? _____

A.2 What does "I" stand for? _____

A.3 I hook up a circuit with a 10 V battery and a 5 **Ω** light bulb. What is the current?

Looking For	Formula	
Already Know		
Answer as a complete sentence *with unit*:		

A.4 I hook up a circuit with a 30 V battery and a 6 **Ω** light bulb. What is the current?

Looking For	Formula	
Already Know		
Answer as a complete sentence *with unit*:		

A.5 When I hook up a 12 V battery, I get 3 A of current. What is the resistance of my circuit?

Looking For	Formula	
Already Know		
Answer as a complete sentence *with unit*:		

A.6 I have 5 A of current going through a 10 Ohm resistor. What is the voltage of my circuit?

Looking For	Formula
Already Know	
Answer as equation *with unit*:	

A.7 I have 3 A of current going through a 5 Ohm resistor. What is the voltage of my circuit?

Looking For	Formula
Already Know	
Answer as a complete sentence *with unit*:	

A.8 I hook up a 12 V battery to a 36 **Ω** resistor. What is the current in my circuit?

Looking For	Formula
Already Know	
Answer as a complete sentence *with unit*:	

Part B: Ohm's Law table

Each row of the following table contains two numbers given and one number still unknown. Fill in the unknown number so that each row satisfies the equation
V = IR.

Voltage (Volts)	**Current (Amps)**	**Resistance (Ohms)**
24		4
15	5	
24		12
20	4	
	2	9
	3	12
10		20

Answers:

A.1 omega; it stands for Ohms
A.2 current
A.3 2 Amps
A.4 5 Amps

A.5 4 Ohms
A.6 50 Volts
A.7 15 Volts
A.8 0.33 Amps

Part B:

Voltage (Volts)	**Current (Amps)**	**Resistance (Ohms)**
24	6	4
15	5	3
24	2	12
20	4	5
18	2	9
36	3	12
10	0.5	20