

## Lab - Ohm's Law

Answer the following questions based on electricity and Ohm's Law. Show all steps when solving problems.

- What are the four basic units of electricity? Provide the variable name and symbol, and unit name and symbol.  
I=Current in amperes. V=Voltage. W=Watts and Ohm=Ohms
- Write the equation for Ohm's Law.  
 $V=IR$
- Re-arrange the Ohm's Law equation to solve the following:  
 $I = V/R$   $R = V/I$
- Power is equal to voltage multiplied by current. Add the missing information in each of the following power equations.  
 $P = V I$   $P = R I^2$   $P = V^2 / R$
- The yellow wire connected to a power supply carries 12V. If the power supply provides 60W of power to the yellow wire, how much current is passing through the yellow wire?  
5 Amps
- There are 3.3V passing through an orange power supply cable, and there are 0.025 ohms of resistance in the orange wire. How much power is supplied to the orange wire by the power supply?  
435.6 watts
- A wire from the power supply is carrying 120W of power and 24A of current. Which color(s) of cable is the wire?  
Red