

## Ohm's Law Study Guide

What is cause of charge movement and the associated units?

What is the opposition of charge movement and the associated units?

What is charge movement and the associated units?

Write the pyramid relationship for Ohm's Law.

Solve for current in terms of voltage and resistance.

Solve for voltage in terms of current and resistance.

Solve for resistance in terms of voltage and current.

Use the passive sign convention to draw a circuit with a single source and a single element with current traveling in the clockwise direction. Indicate rises and drops.

What does a negative magnitude and indicated direction of current mean?

Where is the reference lead typically placed to measure a voltage drop?

Draw a series circuit consisting of two resistors. Identify the resistors with component numbers. Identify the nodes with letters.

Use component notation to identify the voltage drop across individual components.

Use two subscript notation to identify the voltage drop across each component.

Use a common reference point to employ single subscript notation and note how this changes voltage measurements.

Solve for current for a 24V drop exhibited by a  $120\Omega$  resistance.

Solve for the voltage drop across a  $1.8k\Omega$  resistance with 30mA of current traveling through it.

Solve for the resistance that limits current to 100mA when supplied by a 15V source.

Describe troubleshooting in your own words

Can you anticipate additional sources of troubles and their resolution for a circuit consisting of a single source, a single resistor, and instrumentation like an ammeter, voltmeter, and ohmmeter?

Describe in your own words each point of troubleshooting advice for lab environments.

Can you recommend any additional lab practices to minimize errors?