Ohm's Law and its Applications

Spoken Tutorial Project
https://spoken-tutorial.org
National Mission on Education through ICT
http://sakshat.ac.in

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Learning Objectives

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- **Verify Ohm's law**

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- **Solve a numerical based on Ohm's law**

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- **Verify Ohm's law**
- **Solve a numerical based on Ohm's law**
- **Draw a graph to find the relation between voltage and current**

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- **Solve numerical based on series and parallel combination**

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- **Calculate the value of current in the circuit**

System Requirements

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- **Ubuntu Linux OS v 16.04**

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- **Firefox Web Browser v 62.0.3**

Pre-requisities

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- **Learner should be familiar with Apps on Physics**

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- For pre-requisities tutorials please visit this site https://spoken-tutorial.org

Apps on Physics

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- **Ohm's Law**

Apps on Physics

- **Ohm's Law**
- **Combinations of Resistors**

Numerical

Numerical

- **The value of current is 0.0300 A and resistance in the circuit is 200 ohms**
- **Using Ohm's law find the voltage through the circuit**

Tabular Column

Tabular Column

Voltage (Volts)	Current (Ampere)

Tabular Column

Tabular Column

Voltage (Volts)	Current (Ampere)
10	0.05
20	0.10

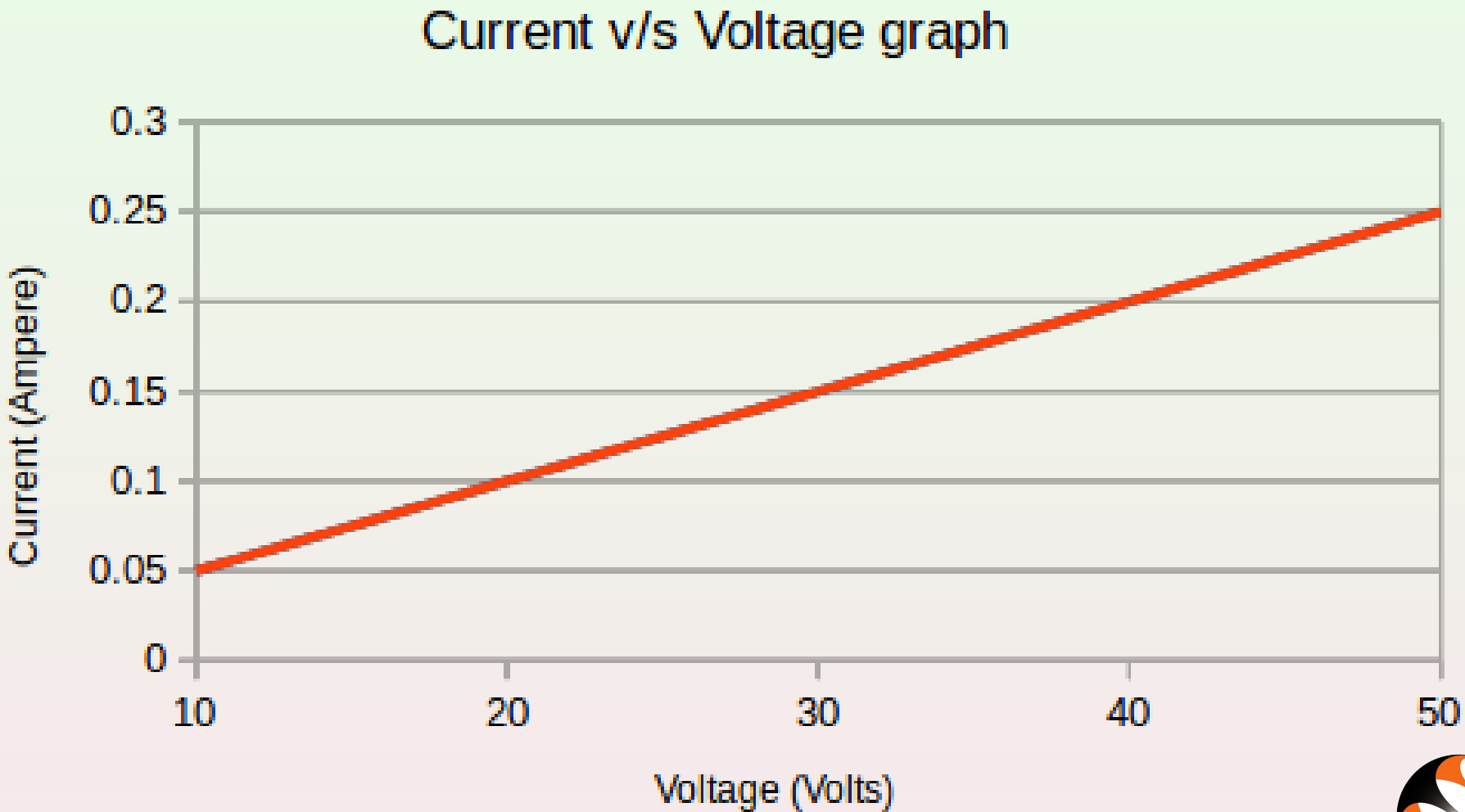
Tabular Column

Tabular Column

Voltage (Volts)	Current (Ampere)
10	0.05
20	0.10
30	0.15
40	0.20
50	0.25

Current v/s Voltage Graph

Current v/s Voltage Graph



Assignment

Assignment

- **Change the Maximal voltage to 1000 V and Maximal amperage to 10 A**

Assignment

- **Change the Maximal voltage to 1000 V and Maximal amperage to 10 A**
- **Make a tabular column to note the values of voltage and current**

Assignment

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- **Change the voltage in steps of 100 V**

Assignment

- **Change the voltage in steps of 100 V**
- **Draw the graph and explain your observation**

Numerical

Numerical

- **Consider a series circuit with three resistors of resistances 110 ohms, 50 ohms and 180 ohms with a 20 volts battery**
- **Calculate the equivalent resistance and current in the circuit**

Assignment

Assignment

- **In a circuit three resistors of resistances 10 ohm, 30 ohm, and 60 ohm are connected in parallel**
- **The voltage of the battery is 15 V**
- **Calculate the equivalent resistance and current in the circuit**

Summary

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- **Verified Ohm's law**
- **Solved a numerical based on Ohm's law**
- **Drawn a graph to find the relation between voltage and current**

Summary

Summary

- **Solved a numerical based on series and parallel combination**
- **Calculated the value of current in the circuit**

Acknowledgement

- **These Apps were created by Walter-fendt and his team**

About the Spoken Tutorial Project

- **Watch the video available at https://spoken-tutorial.org/What_is_a_Spoken_Tutorial**
- **It summarises the Spoken Tutorial project**

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Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- **Conducts workshops using spoken tutorials**
- **Gives certificates to those who pass an online test**
- **For more details, please write to contact@spoken-tutorial.org**

Forum for specific questions

- Questions in THIS Spoken Tutorial?
- Visit https://forums.spoken-tutorial.org
- Choose the minute and second where you have the question
- Explain your question briefly
- The Spoken Tutorial project will ensure an answer

You will have to register to ask questions

Acknowledgement

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