isaac You work it out.

Problem Solving III

ELECTRICITY

Lisa Jardine-Wright

Julia Riley

This symposium is generously funded by

The Ogden Trust

making physics matter

Overview: Problem Solving Electricity

1. Summary of key ideas
2. Have a go at the questions
3. Vote for the questions you would most like to discuss.

Mechanics questions
tinyurl.com/ipts25ps3

This symposium is generously funded by The Ogden Trust making physics matter

Key formulae

Physics

Ohm's Law, $V = IR$

Power, $P = \frac{E}{t}$

Resistors in parallel: $\frac{1}{R_T} = \frac{1}{R_1} + \frac{1}{R_2}$

Resistors in series: $R_T = R_1 + R_2$

Kirchoff's Current Law:

Sum currents into junction = sum currents out of junction

Kirchoff's Voltage Law:

Sum of the EMFs = Sum of the potential differences across components

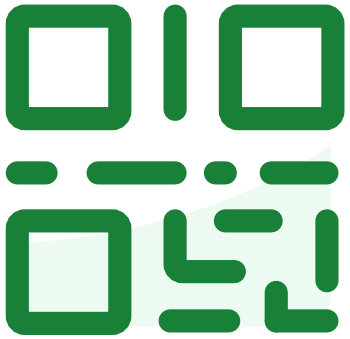
Potential Divider: $\frac{V_o}{V_i} = \frac{R_o}{R_T}$

Resistivity: $\rho = \frac{RA}{l}$

Charge on a capacitor: $Q = VC$

Charging a capacitor: $Q = Q_{max}\left(1 - \mathrm{e}^{-\frac{t}{RC}}\right)$

Energy stored capacitor: $E = \frac{1}{2}QV$



Join at slido.com
#9165962

Which of the following questions would you most like to discuss?