Name _____ Date _____ Score _____

Free sample

Electric Circuits

Six questions to try. Then check your answers on page 2.

Remember

V = IR, **P = IV**, **E = Pt**. Series: resistances add, same current. Parallel: same p.d., currents add, **$1/R = 1/R_1 + 1/R_2$**.

1 6 V across a 2 Ω resistor. What is the current?

2 4 Ω and 2 Ω in series. Total resistance?

3 6 Ω and 3 Ω in parallel. Total resistance?

4 12 V and 2 A. What is the power?

5 Why does a lamp's I–V graph curve?

6 2 kW for 3 h. Energy in kWh?

Name _____ Date _____ Score _____

Answers

1. **3 A** — I = V ÷ R.

2. **6 Ω** — Series resistances add.

3. **2 Ω** — 1/R = 1/6 + 1/3 = 1/2.

4. **24 W** — P = IV.

5. **Its resistance rises as it gets hotter.** — Hotter metal ions vibrate more.

6. **6 kWh** — E = Pt = 2 × 3.

In the full pack

16 questions in 5 parts (1 · charge, current and V = IR, 2 · series and parallel, 3 · I–V characteristics, 4 · power and energy, 5 · EMF and internal resistance), a notes page, a full answer key, a 14-slide teaching deck with an Ohm's law practical, and a 22-question online practice set (10 questions are free online).

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