

PREP 2 • LESSONS 3–4

Potential difference and resistance

Volts • energy per coulomb, $E = QV$ • resistance, $V = IR$ SCORE
/10

Name _____ Class _____ Due _____

Do Now REMEMBER

From earlier lessons • 1 mark each

- 1 Define electric current. [1]

- 2 State the standard units of charge, current and time. [1]

- 3 State the function of a fuse. [1]

Key ideas LESSONS 3–4

Show your working

- 4 A voltmeter is connected in with the component it measures. [1]
- 5 15 C of charge passes through a lamp. The potential difference across the lamp is 12 V. Use $E = QV$
Calculate the energy transferred. [2]

- 6 The potential difference across a resistor is 6.0 V. The current through it is 0.30 A. Use $V = IR$
Calculate the resistance of the resistor. [3]

- 7 For an ohmic conductor at a constant temperature, the current is [1]
 to the potential difference.