

Worksheet: Series and Parallel Circuits

The first part of this worksheet uses the following two equations;

$$\text{voltage (V)} = \text{energy (J)} / \text{charge (C)} \quad \text{and} \quad \text{current (A)} = \text{charge (C)} / \text{time (s)}$$

You will have to select the correct equation, rearrange it if necessary and convert any non-SI values.

NOTE: To remind you about unit conversions, there are separate boxes below each question that prompt you about this step. (Type **none** in the conversion box if no conversions are required.)

Device	voltage	energy	charge
Pocket torch	V	5.76 kJ	960 C

Which quantity needs to be converted?

Type the converted value

Device	current	charge	time
Pocket torch	A	960 C	5 minutes

Which quantity needs to be converted?

Type the converted value

Device	voltage	energy	charge
LED pocket calculator	4500 mV	J	8000 C

Which quantity needs to be converted?

Type the converted value

Device	current	charge	time
LCD pocket calculator	70 μ A	0.0021 C	s

Which quantity needs to be converted?

Type the converted value

Part 2: Enter the correct word to complete the following sentences about series and parallel circuits.

1. The brightness of two lamps arranged in series is the same two lamps in parallel.
2. In a series circuit, the current in the first lamp is the current in the second lamp.
3. In a parallel circuit, the current from the power supply is the current through one lamp.
4. In a series circuit, if one lamp fails then the other lamp
5. Lights wired in a house are most likely to be arranged in

Explain why the answer you gave to Q5 is the most likely correct answer. (Type your answer in the box below.)