

Worksheet: Series and Parallel Circuits

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

voltage (V) = energy (J) / charge (C) and **current (A) = charge (C) / 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 followings 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.)