Worksheet: Practising electrical energy calculations

This worksheet uses the following equation;

electrical energy (J) = current (A) x potential difference (V) x time (s)

For the first two questions, you can use the equation as it is written.

For the other questions, you should find the answer using the following method;

- Carry out any necessary conversions (type ***none*** in the conversion box if necessary).
- Then calculate the values that you know on the right hand side of the equation
- Finally, divide the energy by the number you have just found to give the final answer.

Device	Energy transferred	Current	Potential difference	Time
Pocket torch	(J)	1.3 A	6 V	75 s

Which quantity needs to be converted? Type the converted value

Device	Energy transferred	Current	Potential difference	Time
Laptop computer	(J)	2.31 A	19 V	30 minutes

Which quantity needs to be converted? Type the converted value

Device	Energy transferred	Current	Potential difference	Time
Laser printer	33005 J	4.1 A	230 V	(s)

Which quantity needs to be converted? Type the converted value

Device	Energy transferred	Current	Potential difference	Time
Electric fan	2691 kJ	(A)	230 V	3600 s

Which quantity needs to be converted? Type the converted value

Device	Energy transferred	Current	Potential difference	Time
Desk lamp	927360 J	0.56 A	(V)	2 hours

Which quantity needs to be converted? Type the converted value

Device	Energy transferred	Current	Potential difference	Time
Smartphone	3600 J	400 mA	(V)	1800 s

Which quantity needs to be converted? Type the converted value