

Practice for all formulas

Give the unit and symbol for the following:

	Unit (s)	Symbol
Current intensity		
Potential difference		
Voltage		
Resistance		
Power		
Energy		
Time		

In the table below fill in the appropriate triangle(s) used for each unknown.

Voltage	Power	Energy - 2 formulas

How would you convert the following time units:

Minutes to seconds _____ W to kW _____
 J to kJ _____ J to kWh _____
 Seconds to hours _____ Seconds to minutes _____
 Hours to seconds _____

Using the above formulas and conversions, solve the following problems. Show all work.

1. What is the current intensity of a circuit with a resistance of 25Ω and a potential difference of 25 V ?

2. What is the resistance of a circuit with a current intensity of 4 A and a potential difference of 50 V?

3. What is the power in kW when a dishwasher used 200 V and 2.5 A?

4. A radio is on for 3 hours and has 400 W of power. What is the energy in kWh?

5. How much time elapsed in hours if a TV used 550 000 J of energy and needs 400 W of power?

6. A toaster takes 200 seconds to toast a piece of bread. If it uses 100 W of power how much energy will be used in J?

7. A hairdryer is used for 30 minutes a day 5 days a week. It uses 220 V and 3.5 A. Calculate the energy used in J for the five days?

8. How much energy in J does a computer use if it is on for 2 hours and uses 220 V and 2.0 A.

9. If a TV used 700 000 J of energy and 100 W of power. How many hours did you watch TV for?

10. What is the potential difference when a microwave runs on 1.2 A and uses 300 W of power

11. An oven is used for 40 minutes to bake cookies. Its voltage is 100 V and its intensity is 4.5 A. How much energy was used in kJ to bake the cake?

12. How much time passed in minutes when a computer did 500 000 J of work and had 250 W of power?

13. What is the power needed for a compute to be on for 4 hours which produced 5 000 J of energy?

14. What is the voltage of a circuit if it is using a 10 Ω resistor and 0.5 A of current?

15. What is the voltage if an overhead 300 W of power and 1.5 A?

16. What is the energy in kJ, if a blow dryer is used for 25 minutes and needs 2.5 A and 120 V?

17. Explain why a 90 W light bulb will produce less energy than a 120 W light bulb, but more energy than a 60 W light bulb.