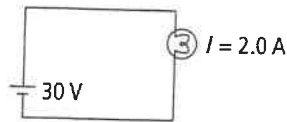


## Power calculations

**State the formula that you will be using for each question. Show all your work below. Write down your answer with the correct units.**

<p>1. The current in a clothes dryer is 20 A when it is plugged into a 240 V outlet. What is the power rating of this clothes dryer?</p>	<p>2. A countertop convection oven is plugged into an outlet that provides a potential difference of 120 V. What is the power rating of the oven if the current is 12 A?</p>
<p>3. A DVD player that is not being used still uses energy at a rate of 15 W. What current is passing through it if the DVD player is plugged into a 120 V electrical outlet?</p>	<p>4. Determine the amount of current flowing into a 210 W computer plugged into a 120 V outlet.</p>
<p>5. A flashlight bulb has 2.4 W of power when the current in the bulb is 0.8 A. What is the voltage drop across the bulb?</p>	<p>6. Calculate the power of the light bulb in the circuit shown below.</p> 

## Energy calculations

State the formula that you will be using for each question. Show all your work below. Write down your answer with the correct units.

1. A microwave oven operates on 1200 W of power and is used for 30 minutes. How much electrical energy is used by the microwave oven?

2. A refrigerator operates on average for 12 hours a day. If the power rating of the fridge is 700 W, how much electrical energy does the fridge use in one day?

3. A kitchen light is left on for 6 h. If the amount of electrical energy used is 0.6 kW·h, what is the power rating of the light bulb?

4. A hair dryer that has a power rating of 1000 W uses 1.75 kW·h in one week. For how many hours (or minutes) is the hair dryer used daily on average?

5. How much energy did the light bulb in the circuit below use if it was left on for 2 hours?

