

**Goal** • Practise making calculations related to electricity.

### What to Do

Use the knowledge you gained in Chapter 10 to calculate the answers to the questions below.

### Questions

1. A portable hair dryer, plugged into a 110 V outlet, has a current of 10 A flowing through it. What is the power rating of the hair dryer?

*Calculations:*

2. A current of 0.50 A flows through a light bulb connected to a 110 V outlet. How much power is dissipated by this bulb?

*Calculations:*

3. A gasoline-powered generator consumes 15 000 J of energy in 5.0 min. How much power did it produce in this time?

*Calculations:*

4. A toaster connected to a 110 V power source has 6.0 A of current flowing through it. How much power is dissipated as heat?

*Calculations:*

5. A light bulb draws 1.25 A of current from a 120 V gasoline-powered generator.

(a) How much power does the generator produce?

*Calculations:*

(b) If the generator runs for 5.0 min, how much energy will the lamp convert into heat and light?

*Calculations:*

6. A clothes dryer has a power rating of 4356 W. It takes an average of 45 min to dry a load of clothes. If the dryer used 8820 kJ of energy during this time, how efficient is this dryer?

*Calculations:*