



Power up! maths quiz

Here's a maths quiz about things in, and outside of, the home that are powered by electricity – you're a real bright spark if you get all of them right! Have a go!

Q1: A TV can carry up to 250 volts.

How much greater is the voltage running through the overhead lines than running through the TV?

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Q2. An Xbox console carries 232 volts.

A railway electrical substation carries 132,000 volts – what's the difference in volts between the Xbox and the substation?

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Q3. A mobile phone charger carries 24 volts.

The electrified third rail carries 750 volts – what's the difference in volts between the charger and the rail?

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Q4. How many times more powerful are the electrified overhead lines (25,000 volts) than the electrified rail (750 volts)?

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Answers: 1. Approximately 100 times greater voltage 2. 131,768 volts 3. 726 volts 4. 33 times.



RAILWAY ELECTRICITY IS 100 TIMES MORE POWERFUL THAN ELECTRICITY IN THE HOME.

It is very dangerous so remember the Rail Life 'Safety Top 3':

- **STAY CLEAR OF THE TRACKS.** Is it worth putting your life on the line?
 - electricity can jump up to three metres.
 - don't play with kites or balloons near overhead power lines.
- **USE THE LEVEL CROSSING.** Shortcuts across the railway can kill.
- **KNOW THE SIGNS.** Be alert to railway signs, they could save your life.

