COMPLETE THE FOLLOWING QUESTIONS

1. What is the frequency of your microwave?

2. What is the frequency of your microwave in Hz?

Hz

3. What is the distance between 2 hot spots in cm?

cm

4. Work out the wavelength in metres.

m

Wavelength (λ) = 2 x distance between hot spots

5. Use this formula to work out the speed of light in metres per second

m/s

$$c = f\lambda$$

Speed of light (c) = frequency (f) x wavelength (λ)

6. The measured speed of light in a vacuum is 299,792,458 m/s. How close is your result to the true answer? Why might there be a difference?

EXTRA TASK

The speed of light is sometimes approximated and written in scientific notation as 3×10^8 m/s. Can you write your result using scientific notation?