

- 4 A wave has a frequency of 5 GHz.

What is the period of the wave?

- A 20 000 μs
- B 20 ns
- C 2 ns
- D 200 ps

- 5 In an experiment to determine the acceleration of free fall g , the period of oscillation T and length l of a simple pendulum were measured. The uncertainty in the measurement of l is estimated to be 4%, and the uncertainty in the measurement of T is estimated to be 1%.

The value of g is determined using the formula

$$g = \frac{4\pi^2 l}{T^2}.$$

What is the uncertainty in the calculated value for g ?

- A 2%
- B 3%
- C 5%
- D 6%

Space for working