

1 The period T of a simple pendulum of length L is given by the following equation

$$T = 2\pi\sqrt{\frac{L}{g}}$$

where g is the acceleration of free fall.

In an experiment to measure the acceleration g , the length L is measured as (6.25 ± 0.05) cm.

What is the maximum percentage uncertainty in T such that g can be determined with a maximum uncertainty of $\pm 2\%$?

A 0.6%

B 1.2%

C 1.4%

D 2.8%

2 The motions of two objects P and Q along a straight line are shown in the following velocity-time