

The mass of a simple pendulum oscillates at a period of 2.0-s. What is the length of the rod?

Given:

Period Of oscillation of simple pendulum:  $T = 2.0 \text{ s}$

Determine: length of the rod:  $l$

Use formula:

$$T = 2\pi \times (l / g)^{1/2} \text{-----(1)}$$

Rearranging (1) & substituting for T & g in (1):

$$l = gT^2 / 4\pi^2 = [ 9.8 \times (2.0)^2 ] / [ 4 \times (3.14)^2 ] = 0.99 \text{ m}$$