

$$P = 2\pi\sqrt{\frac{L}{9.8}}$$

$L$  = length of Pendulum in metres

$P$  = Period in seconds needed to complete  
a full swing

$$2 = 2\pi\sqrt{\frac{L}{9.8}}$$

$$\frac{2}{2\pi} = \sqrt{\frac{L}{9.8}}$$

$$\left(\frac{1}{\pi}\right)^2 = \left(\sqrt{\frac{L}{9.8}}\right)^2$$

$$\left(\frac{1}{\pi}\right)^2 = \frac{L}{9.8}$$

$$9.8\left(\frac{1}{\pi}\right)^2 = L$$

$$\frac{9.8}{\pi^2} = L$$

$$L = 0.99294\dots$$

$$L \approx 1\text{m}$$