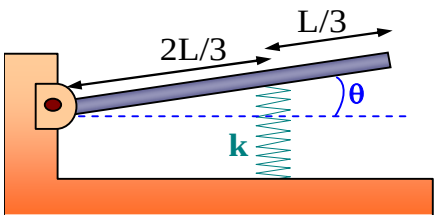
Example

The figure shows a horizontal planks of length **L=50** cm, and mass **M= 1 Kg**, pivoted at one end. The planks' is also supported by a spring at 2/3 of its length, as shown in the figure; the spring constant has a value of k=10 N/cm. The spring is neither compressed nor stretched when the plank is horizontal. Assuming that the plank undergoes small amplitude oscillations, calculate the frequency of those oscillations.



Example

The figure below shows a frontal view of a thin ring, a solid sphere and a solid cylinder which are undergoing SHM (simple harmonic motion.) All of them have the same radius R=25 cm, but different mass (the length of the cylinder is L= 0.5 R). The axis of rotation is perpendicular to this page. Evaluate the correspondent period of oscillation.

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