

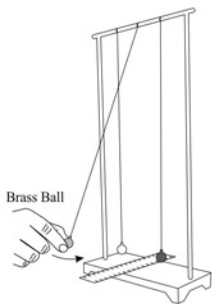
Expt 2:

Step 1: Keep the given scale strip below S.S. ball such that the zero mark of the scale coincide with the centre of the ball. Now give oscillations to the ball by pulling it 3 cm away from zero mark. Note down the time taken for 20 oscillations. Repeat the experiment for 6 cm distance and 9 cm distance you will observe that the time taken for 20 oscillations in all the 3 cases will be same. This proves that the time period of a simple pendulum is independent of amplitude of oscillation.

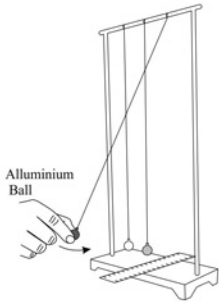
Step 2: Repeat the step 1 with brass bob and aluminium bob and record your observation.



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Brass Ball



Alluminium Ball

Experiment theme courtesy :
Prof. C. K. Desai, Pune

Bajaj Science Education Centre, Wardha



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SIMPLE PENDULUM

(DEPENDENCE OF PERIOD ON MASS AND AMPLITUDE)

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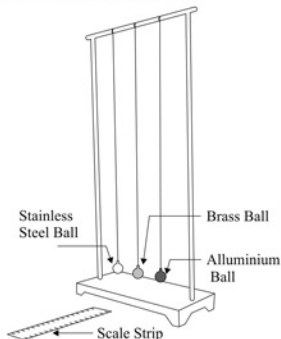
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SIMPLE PENDULUM (DEPENDENCE OF PERIOD ON MASS AND AMPLITUDE)

Assembly:

Consists of 3 pendulum bobs of different masses. They are brass, aluminium and S.S. All the 3 bobs are of same diameter but since they are of different materials their masses will be different. These pendulums are suspended to a frame made of 6mm ms rods using thread. The frame inturn is fixed on a ms metal base using screws. A scale strip with 9-0-9 cm marks is part of the assembly.



Stainless Steel Ball

Brass Ball

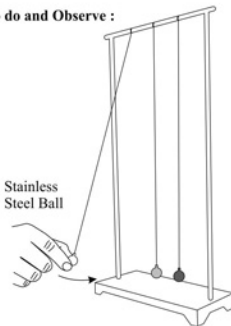
Alluminium Ball

Scale Strip



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To do and Observe :



Stainless Steel Ball

Expt No. 1

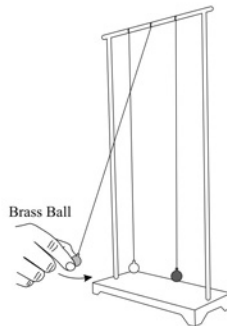
Step 1: Pull the S.S. ball and allow it to oscillate periodically with small amplitude. Note down the time required for 20 oscillations using either stop clock or mobile stop clock. Repeat it for another two times and calculate the mean of all the three reading. Calculate the time period using relation $\text{mean time}/20$ in sec.

Step 2: Repeat the step 1 with brass bob and aluminium bob and calculate the time period in each case.

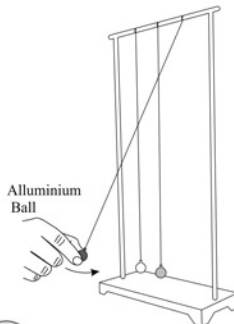
Now compare the time periods of all the 3 bobs. You will observe that it will be having same value for all the 3 bobs, which proves that time period of the simple pendulum is independent of its mass.



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Brass Ball



Alluminium Ball



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