

1.3.21-00 Mathematical pendulum



What you can learn about ...

- Duration of oscillation
- Period
- Amplitude
- Harmonic oscillation

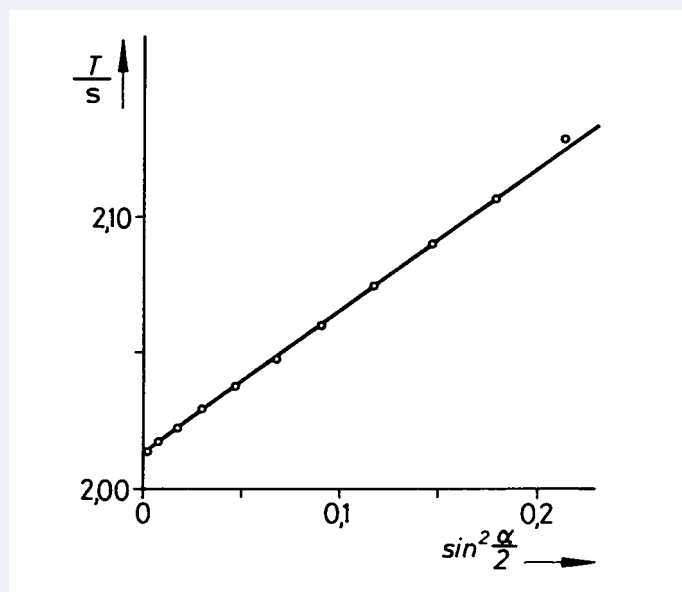
Principle:

A mass, considered as of point form, suspended on a thread and subjected to the force of gravity, is deflected from its position of rest. The period of the oscillation thus produced is measured as a function of the thread length and the angle of deflection.

What you need:

Light barrier with Counter	11207.30	1
Power supply 5 V DC/0,3 A	11076.99	1
Steel ball with eyelet, $d = 24.4$ mm	02465.01	1
Steel ball with eyelet, $d = 32$ mm	02466.01	1
Meter scale, demo, $l = 1000$ mm	03001.00	1
Cursors, 1 pair	02201.00	1
Fish line, $l = 100$ m	02090.00	1
Right angle clamp -PASS-	02040.55	2
Clamping pads on stem	02050.00	1
Support rod -PASS-, square, $l = 1250$ mm	02029.55	1
Tripod base -PASS-	02002.55	1

Complete Equipment Set, Manual on CD-ROM included
Mathematical pendulum P2132100



Period of the pendulum as a function of the angle of deflection.

Tasks:

1. For small deflections, the oscillation period is determined as a function of the cord length.
2. The acceleration due to gravity is determined.
3. The oscillation period is determined as a function of the deflection.