

Uniform Circular Motion Lab

Physics AP 1 – UCM

Name _____

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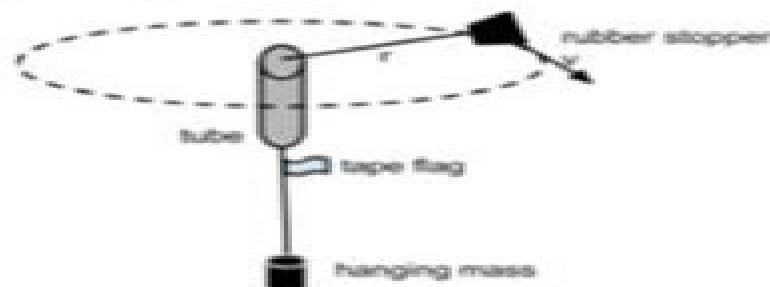
All answers and data must follow the Lab Report Format.

Objective

Determine g (acceleration due to gravity) using the apparatus below.

Materials

- Nylon line (about 1 meter)
- 10-15 cm tube (< 1 cm in diameter, a ballpoint pen tube for example)
- Set of hanging masses
- Meterstick (measuring tape can be used)
- Tape
- Balance or Scale (if you don't have it, use something which has known weight)
- Rubber stopper
- Stopwatch(phone timer can be a replacement)



A complete lab report must include:

The materials you used and how you used them

The design of your experiment

Data collected in tabular form (all variables needed to solve for g) using three different hanging masses

Use Newton's second law to derive a formula for g dependent on the hanging mass, the mass of the stopper and the centripetal acceleration.

Analysis of the data

Value of g

A conclusion:

summarizing your results and how close it was to the actual value of gravity (g) - 9.8 m/s^2

assessing any errors that may have affected your data

discussing how you might improve the experiment and / or describing what further experiments you might like to perform on this subject

Explore Learning Uniform Circular Motion Lab Answers

Padhraic Smyth



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