

# Graphing round objects essay



**ASSIGN  
BUSTER**

AP Physics Lab 2 - Graphing Round Objects Objective: Our objective for this lab is to discover what the relationship is between the diameter and the circumference of a round object. Procedure: •Gather the needed materials. A notebook, a pen, and 7 round objects, string, and a meter stick •For each round object, take the string and rap it around the outer edge making sure you do not overlap •Take the string that fit around the edge, measure it, and mark it as the object's circumference •Take the meter stick and measure the round object at any two points but making sure it goes through it center. Mark this reading as the diameter •Plot the points on a graph with a respective scale. Circumference on the y-Axis, Diameter on the X-Axis •Calculate the slope of the best fit line and then enter the data into Excel and make a CG graph Data: 0. 140.

42 0. 050. 315 0. 150.

479 0. 040. 135 0. 0550. 175 0.

0740. 26 0. 311 Sources of Error: Miscalculated slopes led to a faulty representation of the graph. This was corrected.

The use of non-precise methods to obtain the data (Circumference and Diameter) may have to led to an imprecise graph and an improper value of Pi when C/D is calculated. Incorrect conversion of numbers and their units severely affected the outcome though this was corrected. Conclusion: The relationship between the circumference and diameter of round objects is rather simple. The larger the diameter, the larger the circumference will be. However, they increase proportionately by a ratio of 3.

4 or  $22/7$ . This value is infamously known as the value Pi (  $\pi$  ) and is the exact proportion between the circumference and diameter of any perfectly round object. Links: <http://www.inservice.ua.edu/asim/physdocs/Introduction%20to%20Graphing%202006.doc>

<http://asae.frymulti.com/request.asp?JID=5&AID=23000&CID=min2007&T=2> <http://sysdyn.clexchange.org/gsp98/GSP-VensimHelp.pdf>

<http://literacy.kent.edu/illinois/discoverpi.pdf> <http://www.cohort.com/coplotgraphobjects.html>

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