

Hooke's Law Program

Robert Hooke 1635-1703

Quiz

No.	Answer	Comments
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Discussion

What everyday objects obey/do not obey Hooke's Law?

Obey	Do Not Obey

Hooke's Law Worksheet

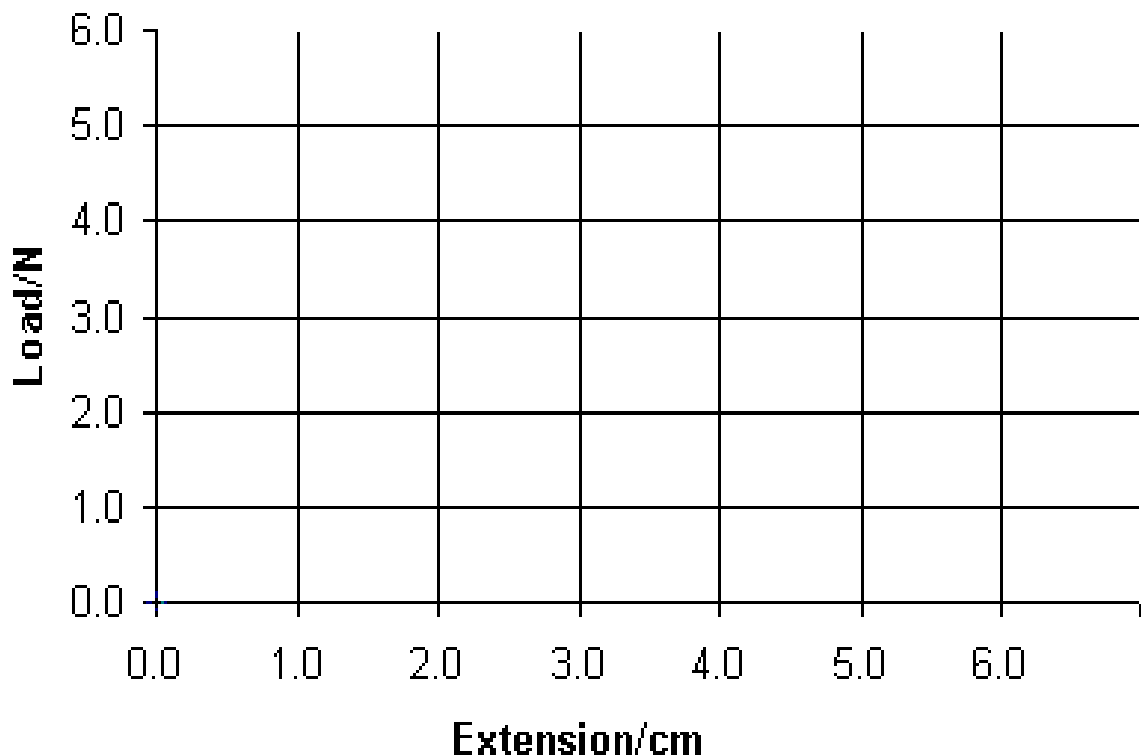
1. Define Hooke's Law

2. Use the program to fill in the values

Load/N	Extension/cm

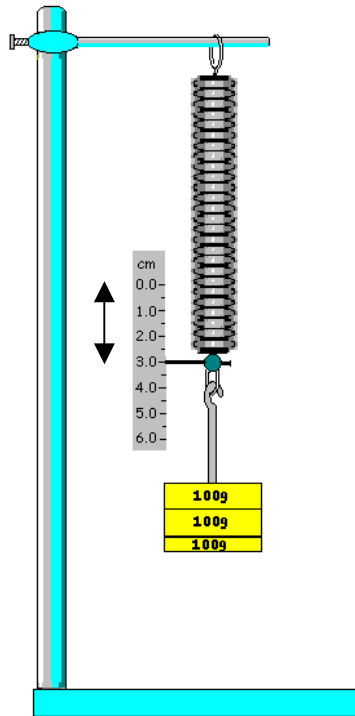
3. Now try plotting a graph of Load against Extension

A Graph of Load Against Extension



Hooke's Law Experiment

Diagram (Please label the apparatus)



Method

Results

Mass/g	Extension/cm
0.0	0.0

Graph

Please use graph paper.

Conclusion

Hooke's Law Problems/Homework/Test

Take $g = 10 \text{ m/s}^2$ and use $F = kX$

1. A spring extends by 10 cm when a mass of 100 g is attached to it. What is the spring constant?
2. What will be the extension of this spring if the load is 75 g?
3. If an identical spring were connected in parallel (do a sketch), what mass would need to be attached to produce an extension of 15 cm?
4. What mass would be needed if two of these springs were placed in series (do a sketch) and an extension of 30 cm was required?
5. What is the weight of this mass?