Hooke’s Law Exploration

Objective: Find “k” of a spring.

Procedure: Add equal increments of weight to the spring, and then measure its displacement. Next, to find “k”, one must find the slope of the line.

Data:

|  |  |
| --- | --- |
| displacement (m) | mg (Newton) |
| 0.185 | 0 |
| 0.215 | 1.47 |
| 0.222 | 1.666 |
| 0.231 | 1.862 |
| 0.237 | 2.058 |
| 0.245 | 2.254 |

Graph: Weight vs. Displacement

Analysis: mg=-kx

k= slope of line

k is 37.542 Newtons per meters