Sarah Erwin

**Hooke’s Law Exploration**

**Goal:** The goal of the lab is to find K, the spring constant, of the spring.

**Data:**

x0=65.3 cm

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Mass (g)** | **Position (cm)** | **Mass (kg)** | **Displacement (m)** | **Force (N)** |
| 50 | 65.4 | 0.05 | 0.001 | 0.49 |
| 100 | 66.1 | 0.1 | 0.007 | 0.98 |
| 150 | 67.4 | 0.15 | 0.02 | 1.47 |
| 200 | 69 | 0.2 | 0.036 | 1.96 |
| 250 | 70.6 | 0.25 | 0.052 | 2.45 |

**Graph:**

Using the graph and the slope calculated by the best fit line, I found that K=36.496 N/m.