

LAB TITLE

SPRINGS

PLEASE GRAB YOUR LAB NOTEBOOK

PURPOSE

Investigate the relationship between spring force and stretch length.

HYPOTHESIS

What is the relationship between spring force and stretch length.

Direct	Linear
Inverse	Quadratic
	Exponential

MATERIALS

- 1) Meter Stick
- 2) Two Springs
- 3) Various masses

PROCEDURE

- ① First, measure the equilibrium length of the long spring.
- ② Hang mass from the end of the spring and measure the change in the springs length. Record the mass and corresponding length change in a data table.
- ③ Repeat step 2 with 8 different mass values.
- ④ Repeat steps 1-3 with the shorter spring.
- ⑤ Calculate the spring force for each trial. ($F_{\text{spring}}=mg$)
- ⑥ Use the data to create a plot of spring force (y) vs. stretch length (x).
- ⑦ Plot the data for the long spring and the short spring on the same graph.
- ⑧ Calculate a linear regression (line of best fit) for each set of data.

LAB REPORT

- Title
- Purpose
- Hypothesis
- Materials
- Data and Calculations
 - « Data Table
 - « Graph with regression lines
 - « Equations for lines
- Conclusion (RSVCP)