

Problem 1.2 - Testing Bridge Length

Directions:

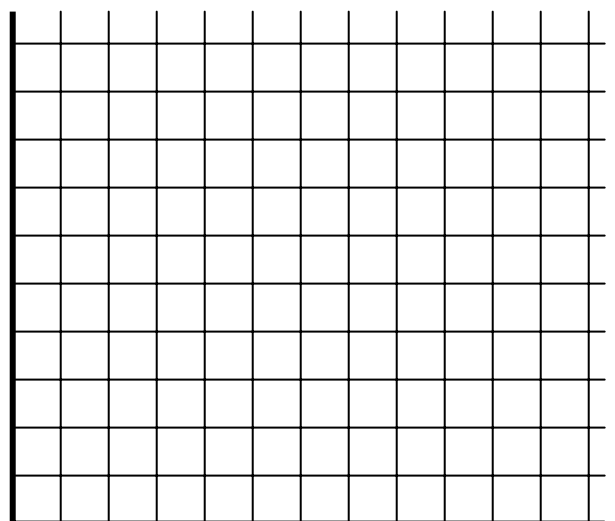
- Start with the 4-inch bridge.
- Suspend the bridge by overlapping each book by 1 inch. Place the cup in the center.
- Put pennies in cup one at a time. The number of pennies in the cup when the bridge collapses represents the *breaking weight*.
- Repeat the process to find the breaking weights of a 6, 8, 9, and 11-inch bridge.

1.) Use the Table to record your Data

2.) Use the Graph to plot the Data.
Label scale for the y-axis.

Length	Pennies
4	
6	
8	
9	
11	

Bridge Length & Breaking Weights



1 2 3 4 5 6 7 8 9 10 11 12

Length (inches)

3.) a) Describe the relationship between the bridge length and breaking weight?

b) How is this shown in the table?

c) How is this shown in the graph?

Name _____ Date _____ Hour _____

4.) Use your data to predict the breaking weight of bridges:

- a) 3 inches long
- b) 5 inches long
- c) 10 inches long
- d) 12 inches long
- e) Explain how you made your predictions.

5.) Compare your data from this experiment with the data from the bridge thickness experiment.

- a) How are the two relationships similar?
- b) How are the two relationships different?