TWMM Problem 1.1

Bridge-Thickness Experiment

Group 1 Results
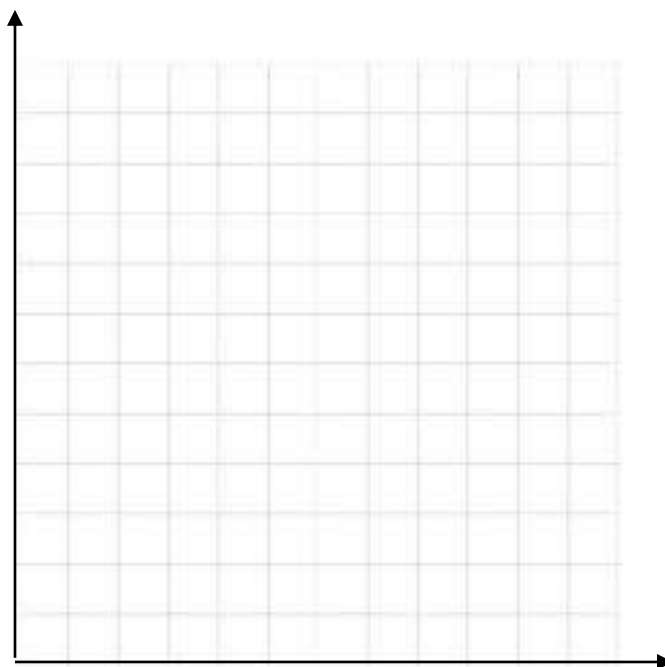
Thickness (layers)	1	2	3	4	5	6
Breaking Weight (# of pennies)	9	16	24	34	42	

Group 2 Results

Thickness (layers)	1	2	3	4	5	6
Breaking Weight (# of pennies)	8	16	24	32	40	

Group 3 Results

Thickness (layers)	1	2	3	4	5	6
Breaking Weight (# of pennies)	8	18	26	30	44	

Use the coordinate grid above. Graph each group's results in a different color. Then use the data and the graph to answer the following questions. Make sure to write your answers in complete sentences.

1. Does the relationship between bridge thickness and breaking weight seem to be linear or nonlinear? How is this shown in the table? How is this shown in the graph?
2. For each of the groups above, predict the breaking point for a bridge 6 layers thick. Add your predictions to the tables above. Explain how you determined your predictions.
3. Suppose you could split layers of paper in half. What breaking weight would you predict for a bridge 2.5 layers thick? Explain.