

Scatter Plot Scavenger Hunt

Are you ready for an adventure that involves math and detective work?
Here's your mission, should you choose to accept it.

Step 1: Choose Your Variables and Make a Prediction

Think about two things you can count or measure, around school or on people, that might be related. Here are some ideas to get you thinking:

- Height vs. Shoe Size: Is it true that taller people have bigger feet?
- Backpack Weight vs. Number of Books: Do heavier backpacks really mean more books?
- Arm Span vs. Height: Is it true that the greater a person's arm span, the taller they are?

The two variables we will measure are:

- 1.
- 2.

We predict that the relationship between these two variables is:

Step 2: Gather Your Data

Time to become a data detective! Measure *at least* 10 pairs of data points for your two variables. **For example**, if you're measuring height and shoe size, you'll need both measures for at least 10 people. Be precise in measuring.

Variable 1	Variable 2

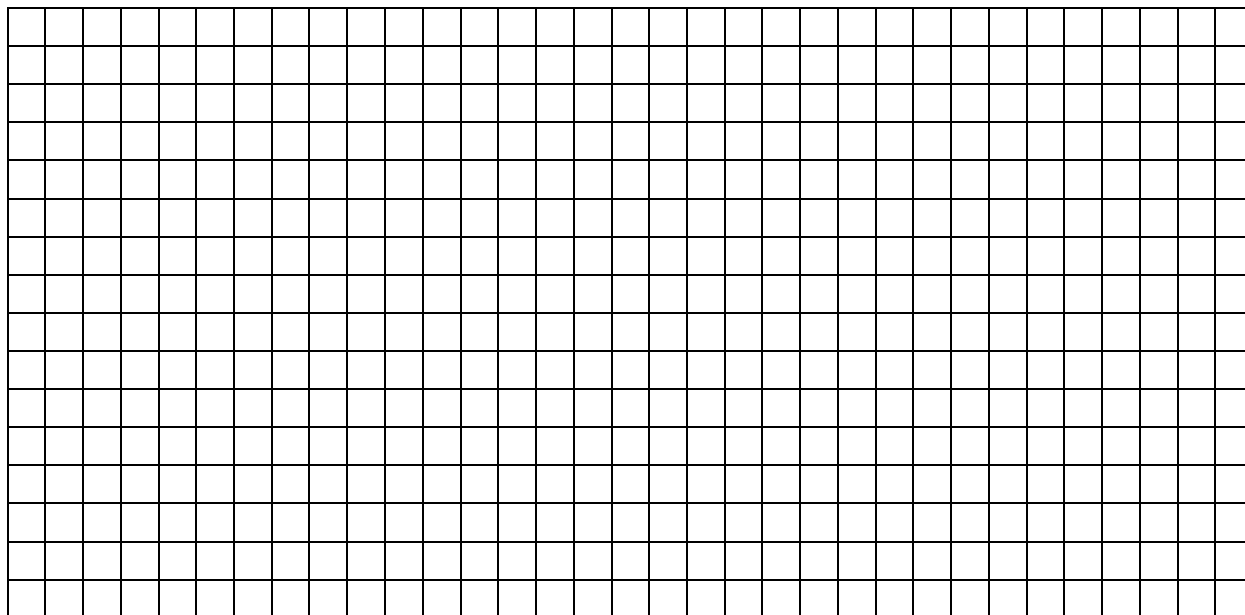
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Step 3: Plot Your Points

Now, it's time to create your scatter plot. Be sure to include a title and to label the axes.



Step 4: Draw the Line of Best Fit

Use technology (e.g., the *Sample Excel Sheet with Formulas*) to generate a line of best fit. What do you notice about your line?

Step 5: Determine the Correlation

Based on the trend of your data, the slope of the line of best fit, and your intuition, does there appear to be a correlation between the two variables?

Use technology to calculate the correlation coefficient (from the *Sample Excel Sheet*). Does this value match your prediction?

Describe the relationship in words. Why do you think this relationship might exist? What connects the variables?