



Name \_\_\_\_\_

## Scientific Cents Analyzing Data & Drawing Conclusions

**Background Information:** After data is recorded it must be analyzed. Often scientists have so many numbers, that the data needs to be **REDUCED** to make sense. Reducing data often includes finding a measure of central tendency, or one number that can represent many numbers. The mean, median, and mode are measures of central tendency.

Graphing the reduced data helps scientists observe patterns and relationships between variables quickly. Bar graphs allow scientists to compare data, line graphs show trends - especially over time, and scatter plots show correlations between variables.

1. Reduce your data to find the means, and then graph the means in a bar graph.

Why is a bar graph the best type of graph for this data?

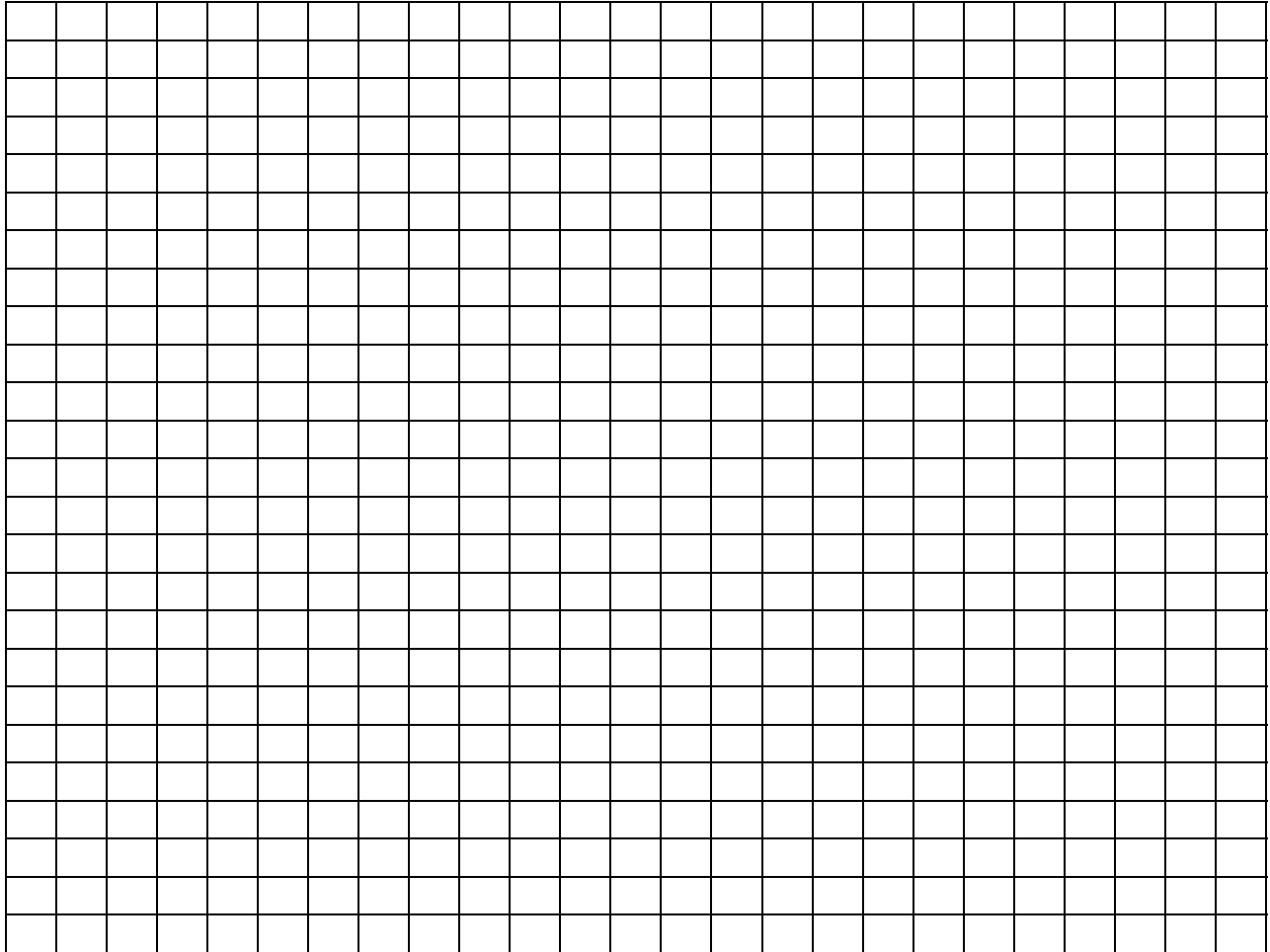
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# NOTICE

T - Title  
A - Axis  
I - Intervals  
L - Labels  
S - Scale

D - Dependent  
R - Responding  
Y - Y-axis  
  
M - Manipulated  
I - Independent  
X - X-axis



Look for **RELATIONSHIPS** - two variables are related if one of them changes whenever the other one changes. There are two kinds of relationships:  
**DIRECT RELATIONSHIP:** When one variable increases the other variable increases.  
**INDIRECT RELATIONSHIP:** When one variable decreases the other variable increases.

What relationship(s) do you see?

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