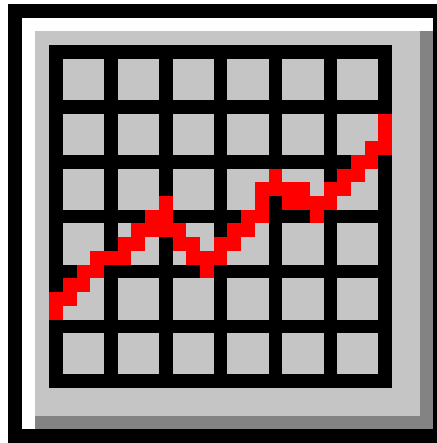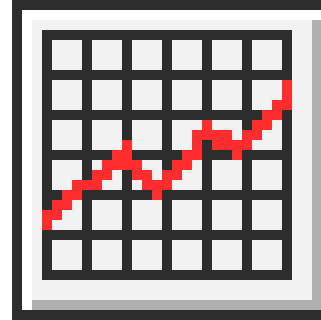# Graphs

Today I want you to help me make a graph.

★ I want to make a graph that shows the change in temperature throughout the day yesterday.

★ What kind of graphs could we make to show this?

Line Graph!!

Bar Graph vs Line Graph

- **What is the difference between a bar graph and a line graph?**

Line Graph

- A line graph is a graph used to show **change over time**!!

Time can be measured in…

Seconds - Minutes - Hours – Days - Weeks - Months – Years - Decades - Centuries - etc.

When to use a line graph?

Would we use a line graph
in the following situations:
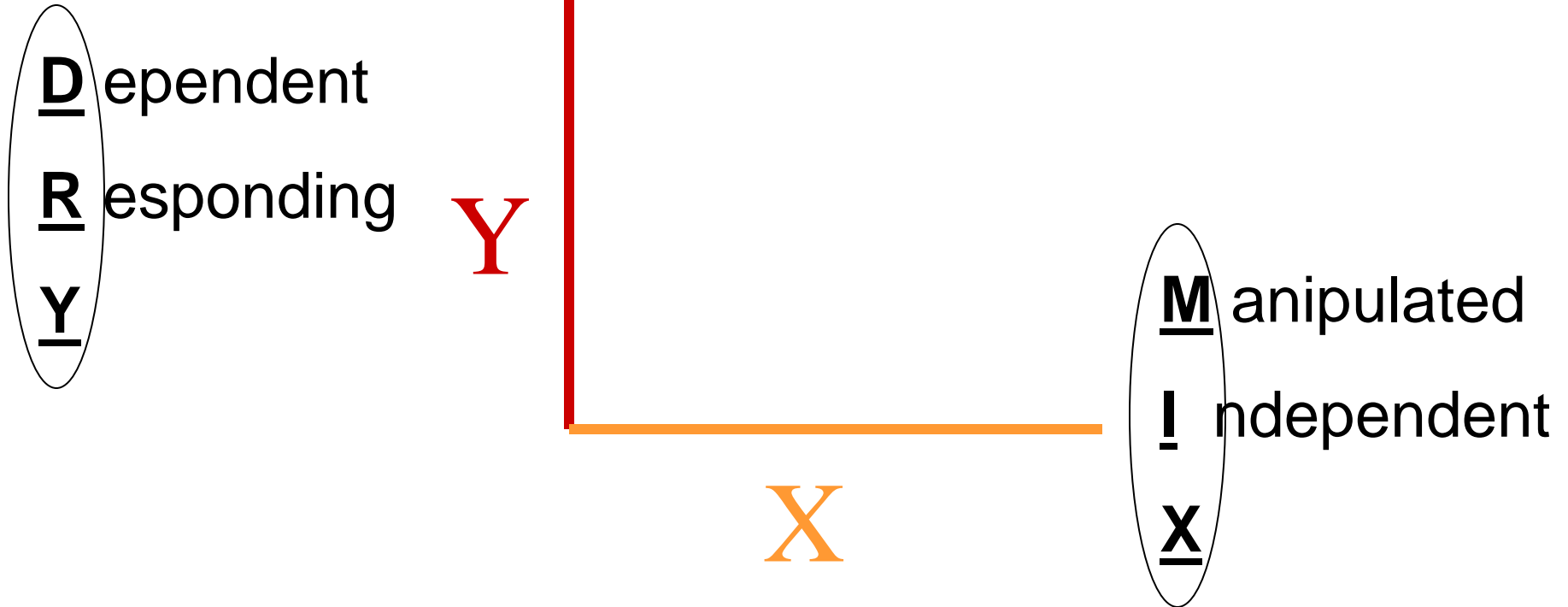
•To show how many people like pizza in
this class? NO

•To show how much it rained each month
this year? YES- because months and years deal with time.

•To show how many people live in
Bellmore? NO

YOU TELL ME….

What color is the y-axis?

Dependent

Responding

Y

Y

Manipulated

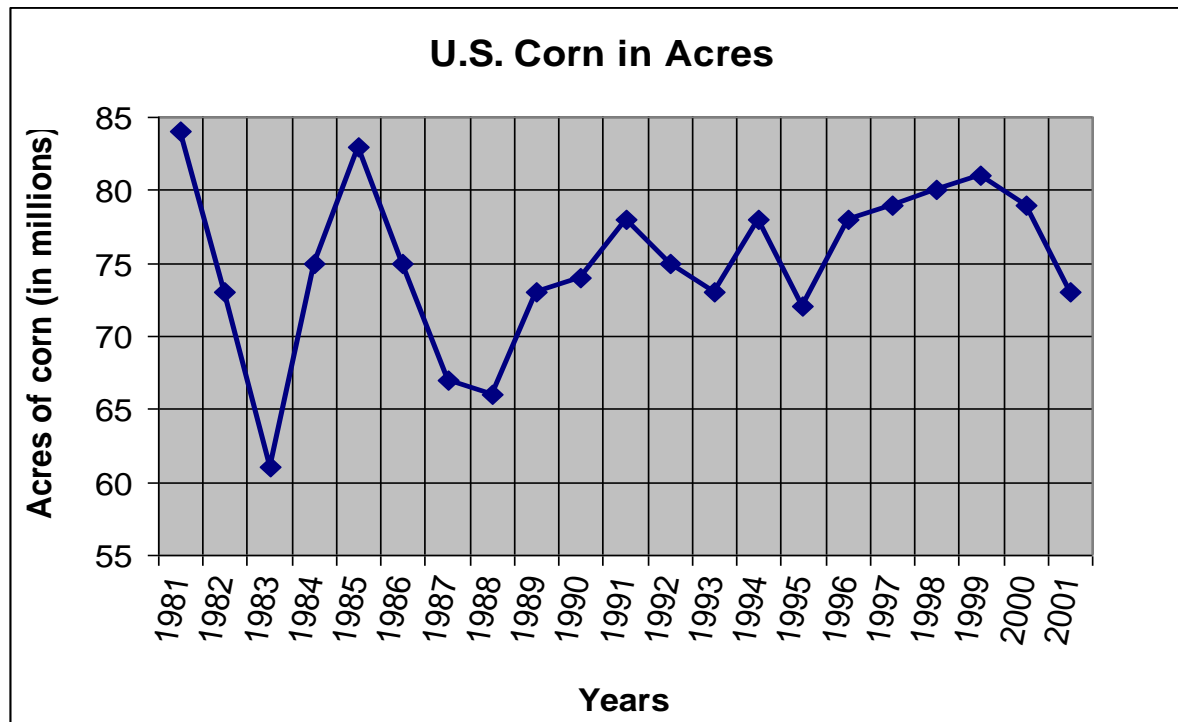**I**ndependent

X

X

What color is the x-axis?

Line Graphs

- comparison <u>between 2 variables</u>
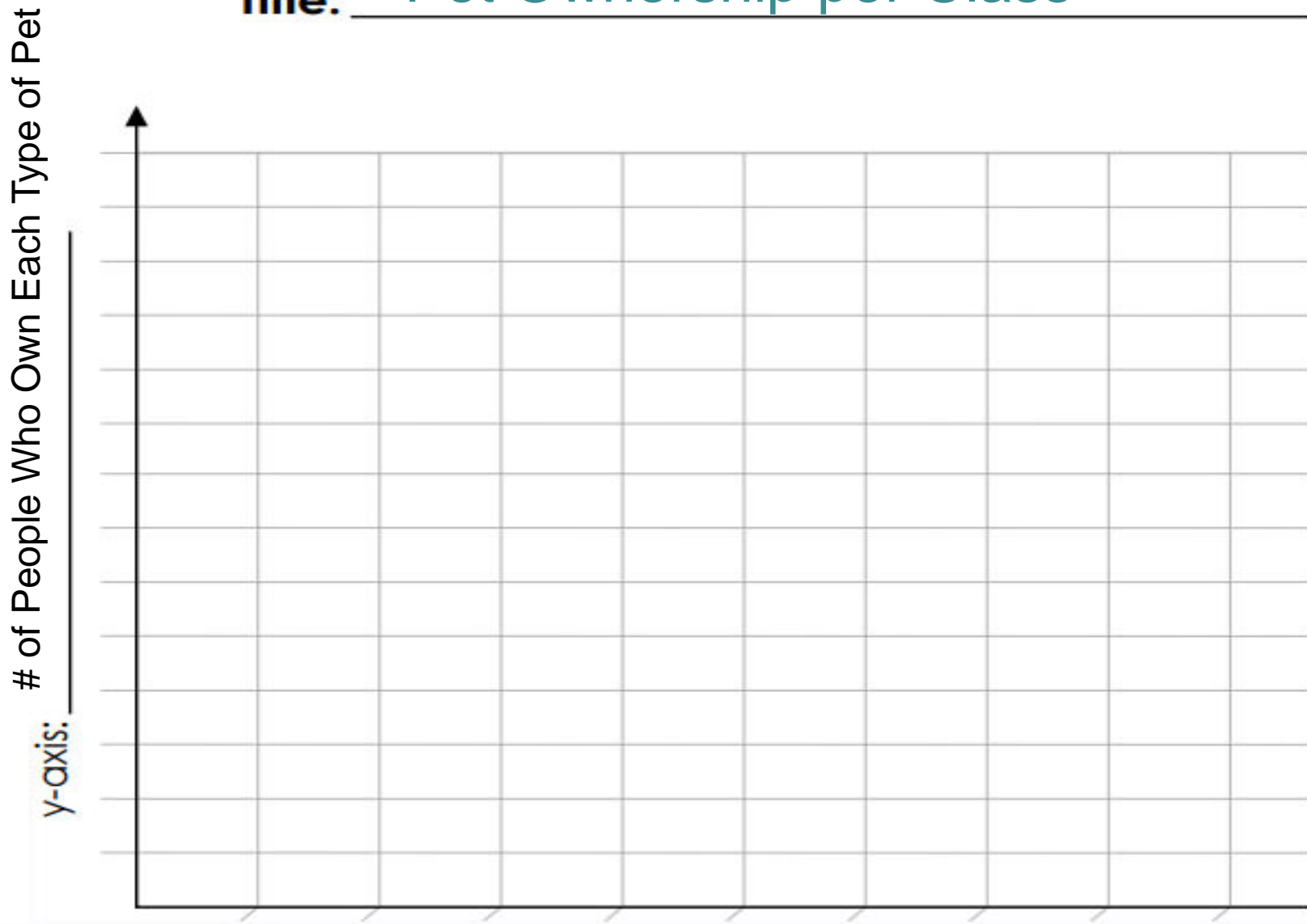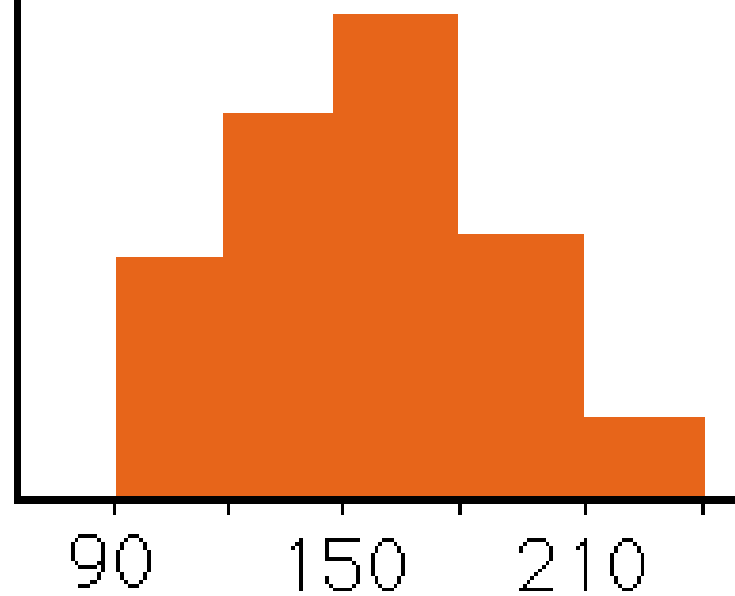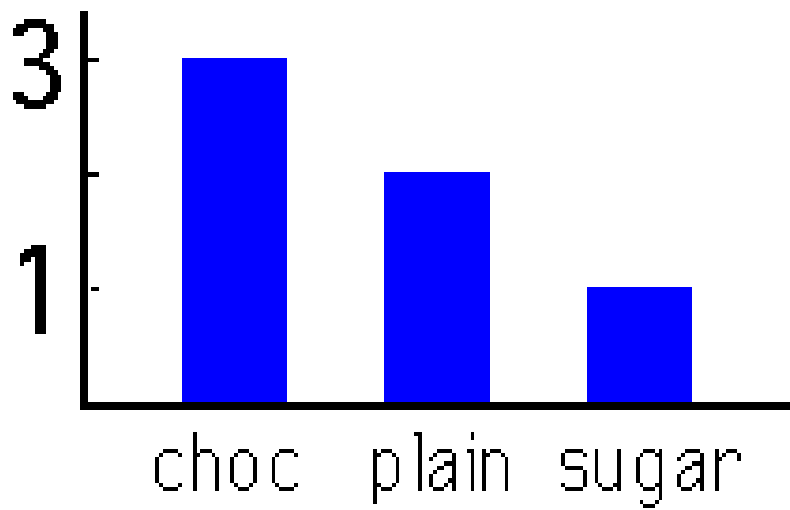- show how the <u>independent v. affects the dependent v.</u>

U.S. Corn in Acres

A line graph titled "U.S. Corn in Acres" showing Acres of corn (in millions) on the y-axis ranging from 55 to 85, and Years on the x-axis ranging from 1981 to 2001.

Bar Graphs

- Are descriptive and compare amounts or categories
- Are best for comparisons

Title: ___Pet Ownership per Class___

# of People Who Own Each Type of Pet

y-axis: _____

Bar Graph
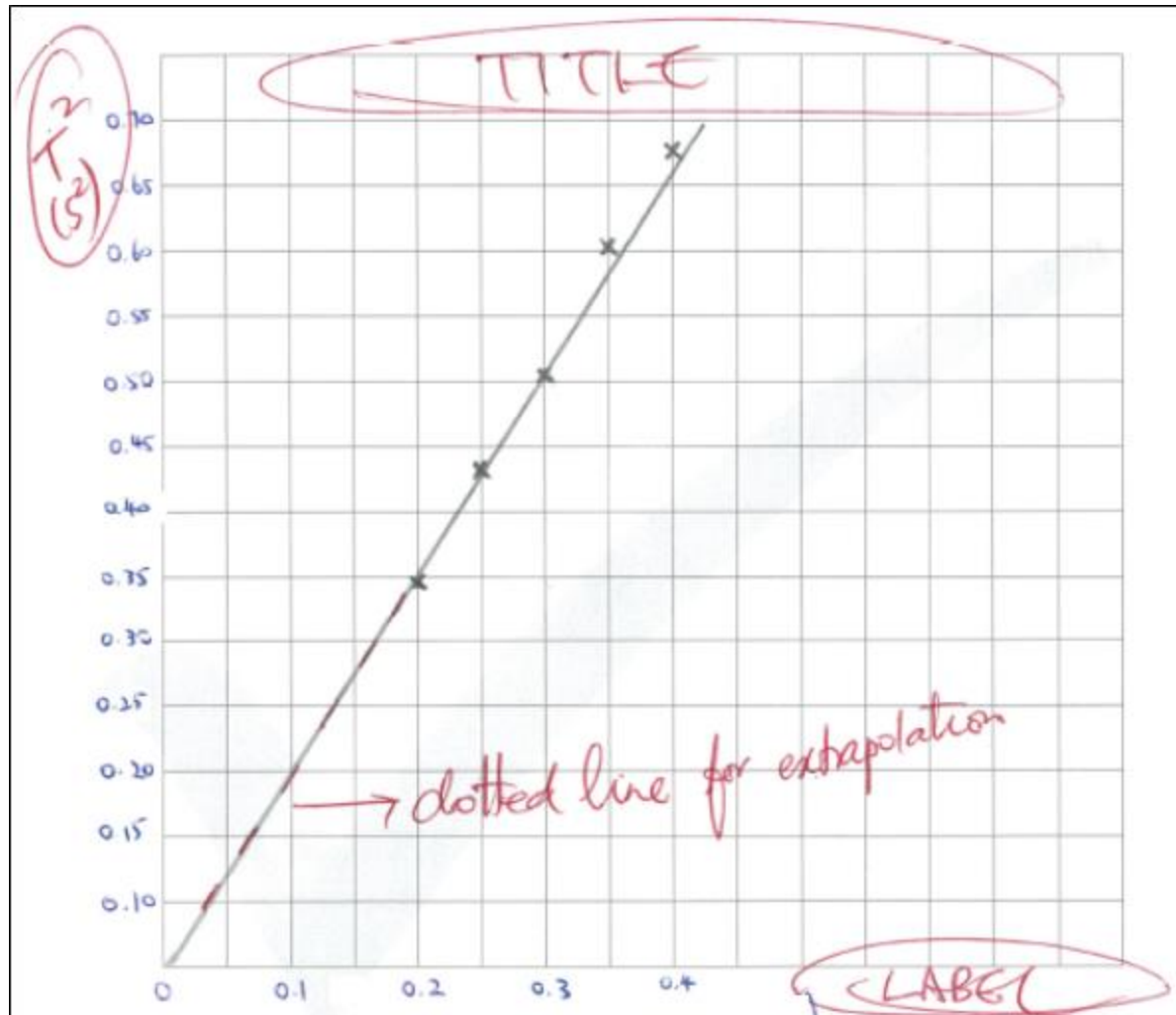Presents "categorical data," data that fits into categories
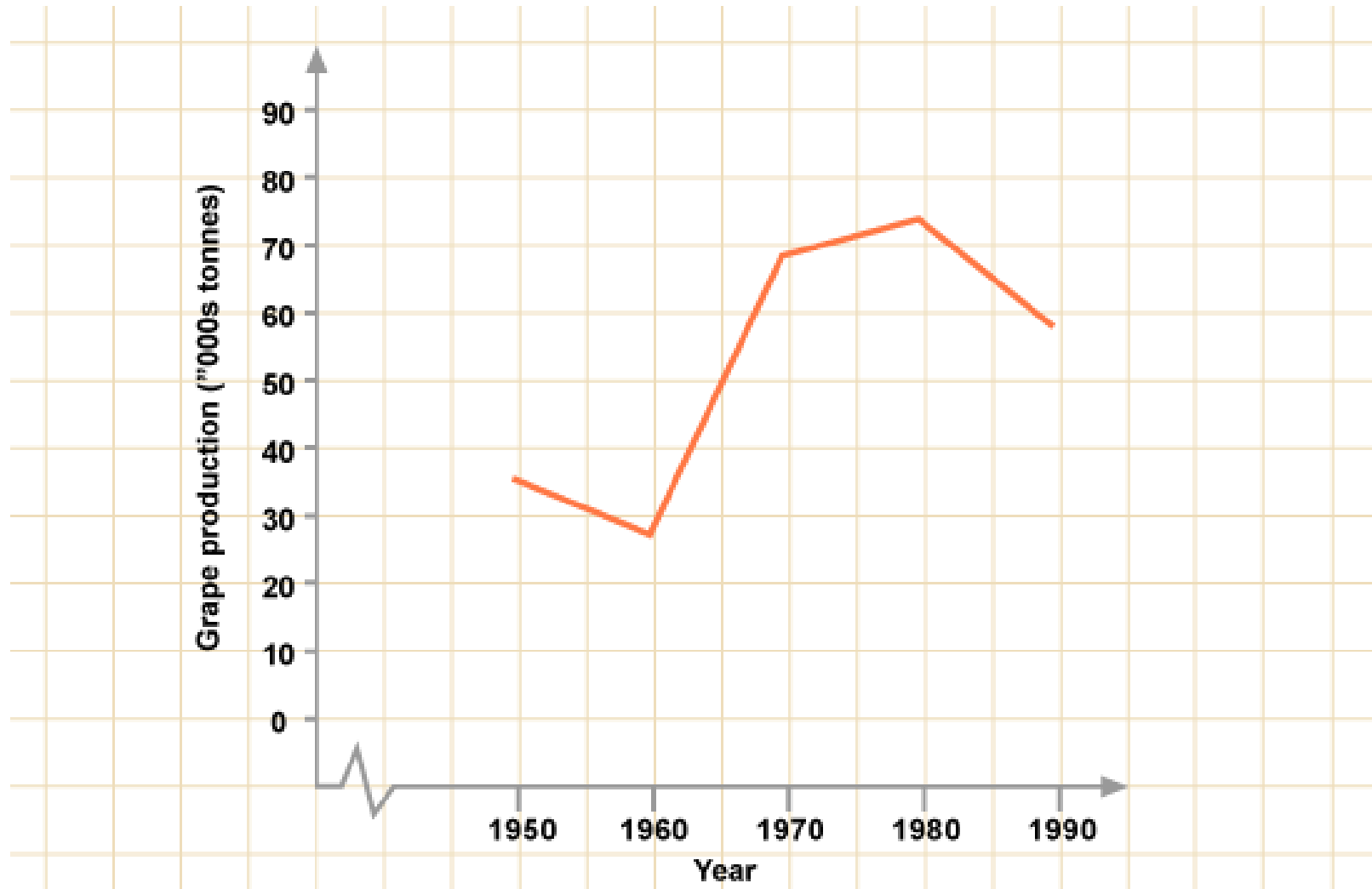Ex. Type of donut

Histogram
Presents "continuous data", numbers be any value in a certain range Ex. weights of individuals
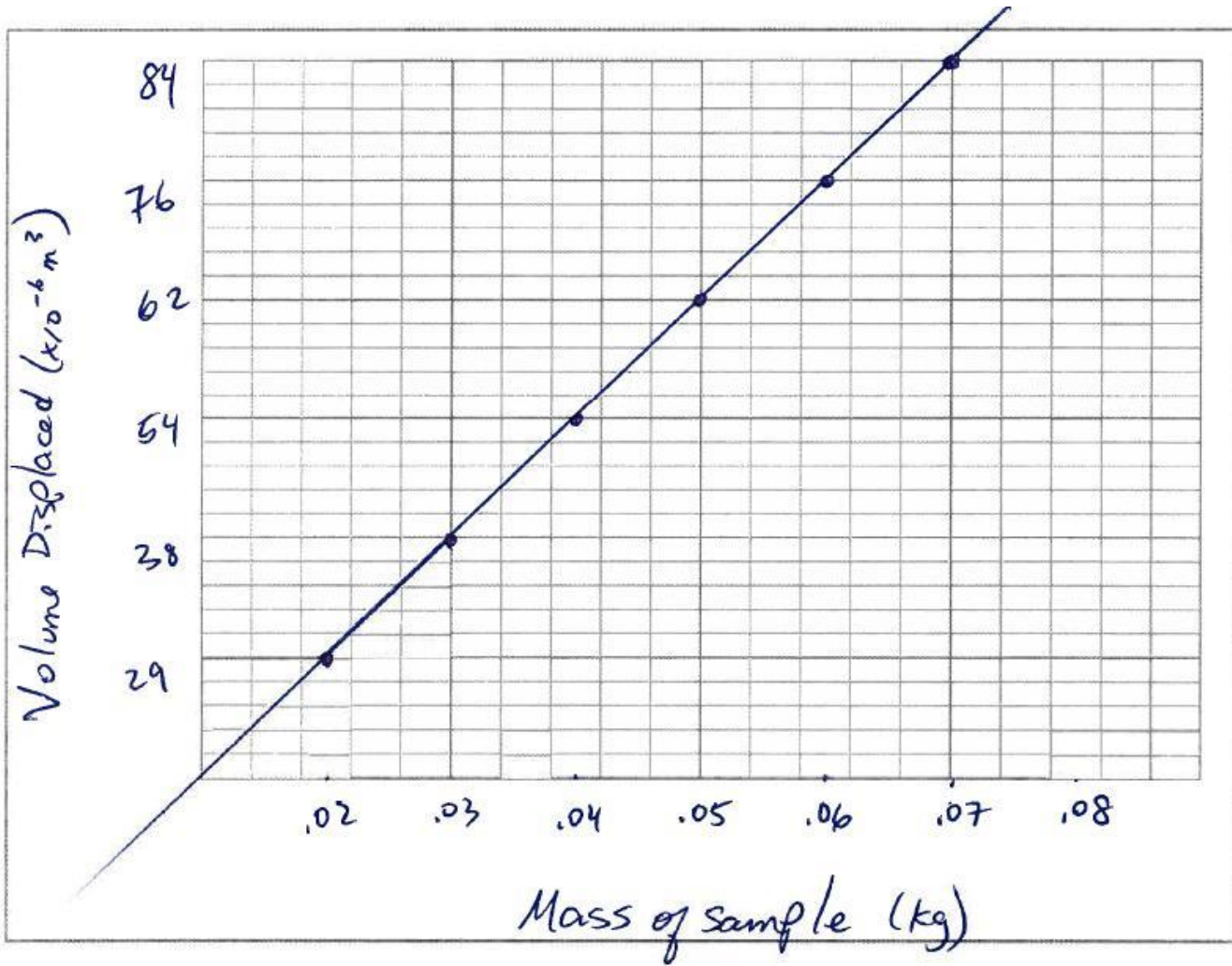
Graphing Rules to Live By!

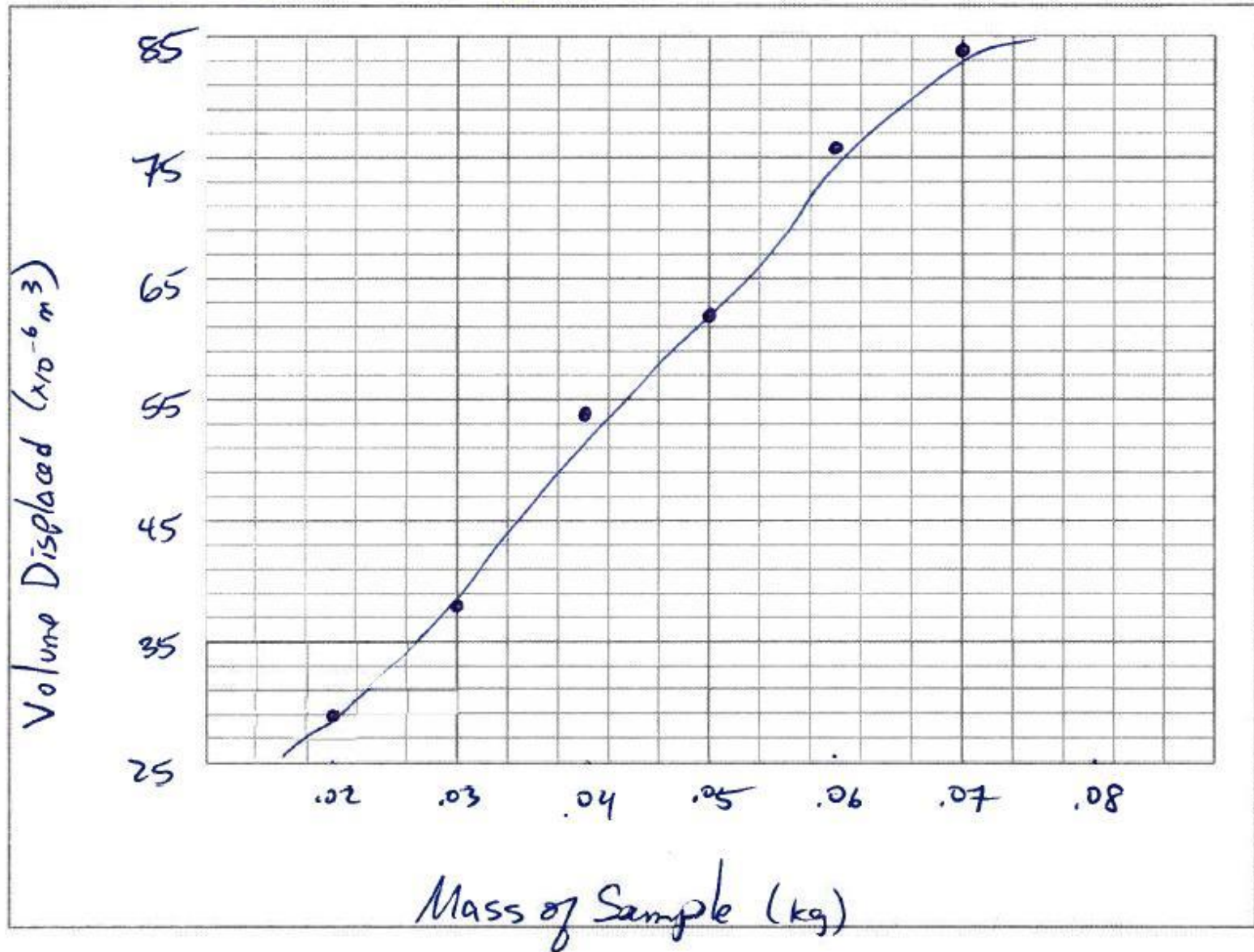## 1. Label each axis (include units) & add title

2. Origin does **<u>NOT</u>** need to be 0, but it can be
3. Avoid using a break (lightning bolt) on axis

4. Use consistent scale, each box = same value

5. Use the smallest scale that fits the space given, ex. try 1s, 2s, 5s, 10s, 20s, etc.

Volume Displaced (x_{10}^{-6} m^3) vs Mass of sample (kg)

6. Connect points with a straight edge, no curves

7. Do **NOT** connect line graph to y-axis unless given that data point to plot