1.7 Safety and Graphing

The difference between…..

_____: A statement based on repeated experimental observations that describe some phenomenon of nature.

_____: A proposed explanation for a phenomenon made as a starting point for further investigation.

_____: A well-substantiated explanation acquired through the scientific method and repeatedly tested and confirmed through observation and experimentation.

Qualitative vs. Quantitative

Qualitative:

Examples:

-the building is really tall

-it takes a long time for me to ride my bike to the store

-I live very far away

Quantitative:

Examples:

-the river is 31.5 m deep

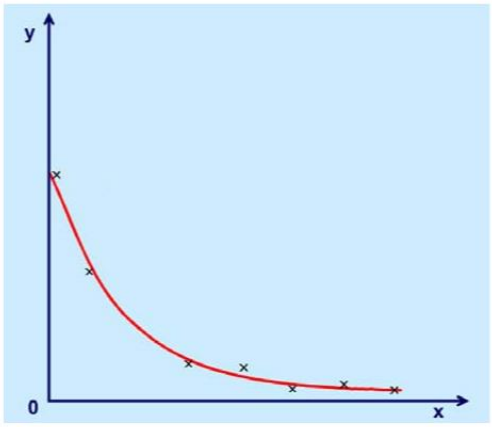
-the cheese costs $4.25 per pound

-it is 75 °F outside today

GRAPHING

A graph should always…

1. Fill up at least half of the graph paper.
2. Have each tick mark represent an equal increment.
3. Have labels on the x and y axis including UNITS in parentheses.
4. Have a descriptive title (i.e. y-axis v. x-axis or the slope of the line).
5. Have a best fit line/curve that goes through the data points.

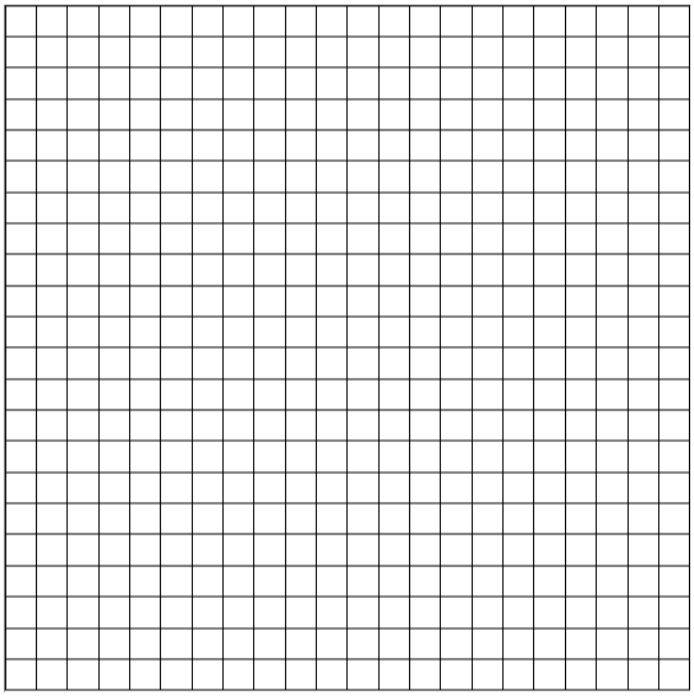


INDEPENDENT VARIABLE:

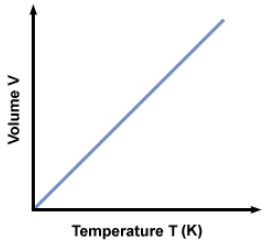
DEPENDENT VARIABLE:

LIQUID

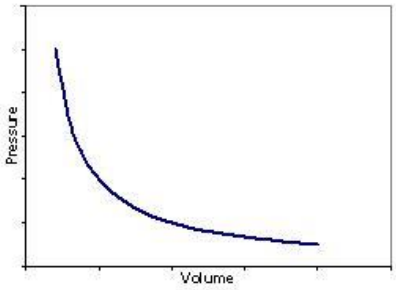
	Volume mL	Mass g
1	1.00	2.50
2	2.38	5.82
3	3.70	9.25
4	5.04	12.62
5	6.82	17.08
6	7.64	19.15
7	8.99	22.55
8	9.85	25.62



DIRECT RELATIONSHIP:



INDIRECT RELATIONSHIP:



_____- a method of constructing new data points WITHIN the range of known data points.

_____- a method of constructing new data points OUTSIDE the range of known data points.

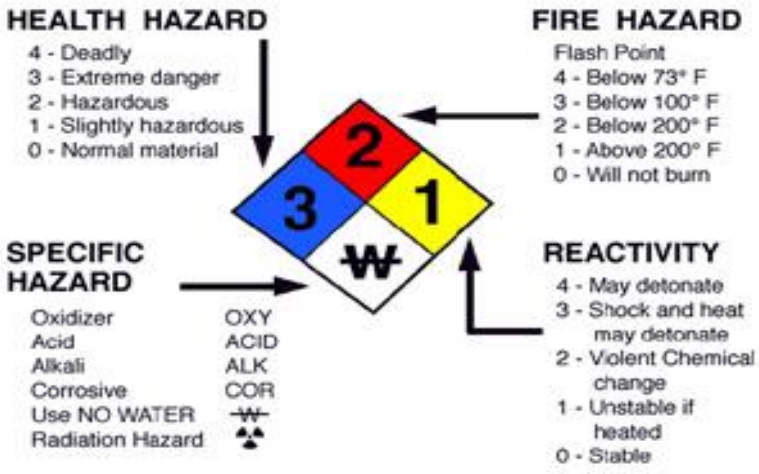
LABORATORY SAFETY

STUDY AND REVIEW LAB EQUIPMENT AND LAB SAFETY RULES!!!

You may be quizzed or tested over lab equipment and lab safety.

NFPA (National Fire Protection Association) Safety Diamond:

Found on chemical hazard labels and/ or Material Safety Data Sheet (MSDS)



Material Safety Data Sheet (MSDS) includes all information shown on a chemical label and more. It also shows information on treatment of chemicals.

Only HOMEWORK is to read over lab equipment, lab safety, and sign safety contract!