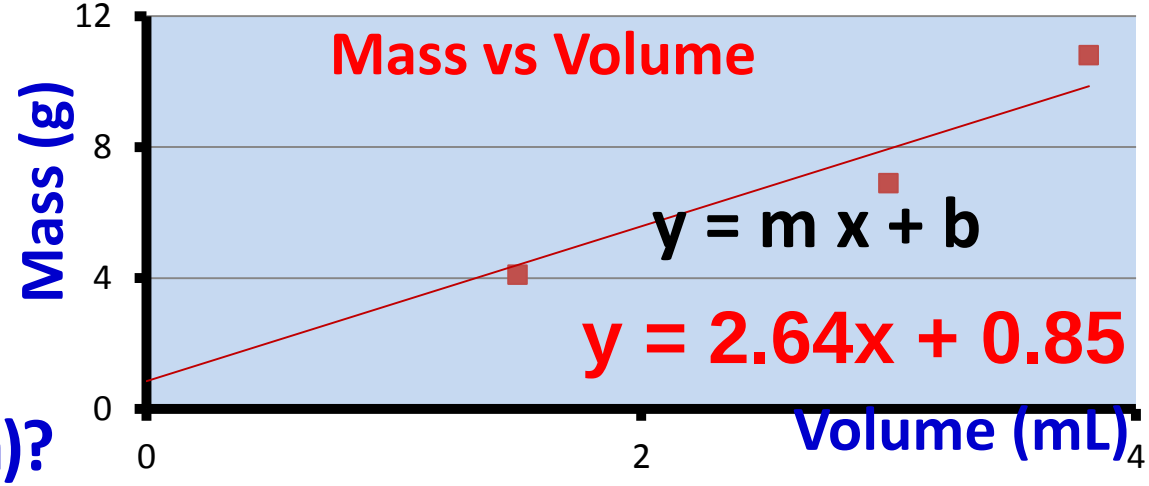
Chemistry Bell Work, March 19 – March 22

Mass and Volume 2:

Percent Error, Percent Range, Density, Density Graphs,

Chemistry Bell Work, Monday, 3/19/18 (7 questions)

Draw the graph



1. What is the slope (m) of this graph? 2.64

2. What are units of the slope (m)?

- $m = Slope = \frac{rise}{run}$ $\textbf{Units of slope} = \frac{units\ of\ the\ rise}{units\ of\ the\ run} = \frac{g}{mL}$

3. Write the slope with units. m = 2.64 g/mL

4. What is the y-intercept (b)? 0.85 What are the units of the y axis? grams

5. What is the y-intercept with units, b? b = 0.85 g

6. Write a mathematical model (equation) for this mass vs volume graph in the form of y = m ● x + b y = mass (M), x = volume (V)

Mass = (2.64 g/1 mL) ● volume + 0.85 g or M = (2.64 g/mL) ● V +0.85 g

7. What does the slope of a mass volume graph represent? Density

Chemistry Bell Work, Tuesday, 3/20/18, 5 questions

1. Define characteristic properties.

Characteristic properties are properties that are unique to each substance and can be used to identify. a substance. Some examples of these properties are:

- **Density – amount of mass per unit volume.**
- **Boling Point – temperature that the stuff boils.**
- **Melting/ Freezing Point- temperature that the stuff melts/ freezes.**

2. For a given substance, such as aluminum, does density change when the size of the sample changes or is the density the same for all samples of a substance? Why?

Density is always the same for each unique substance. Example: density of aluminum always 2.70 g/ mL, water always = 1 g/mL for all masses of water & aluminum. *This is because density is a characteristic property unique to each substance.*