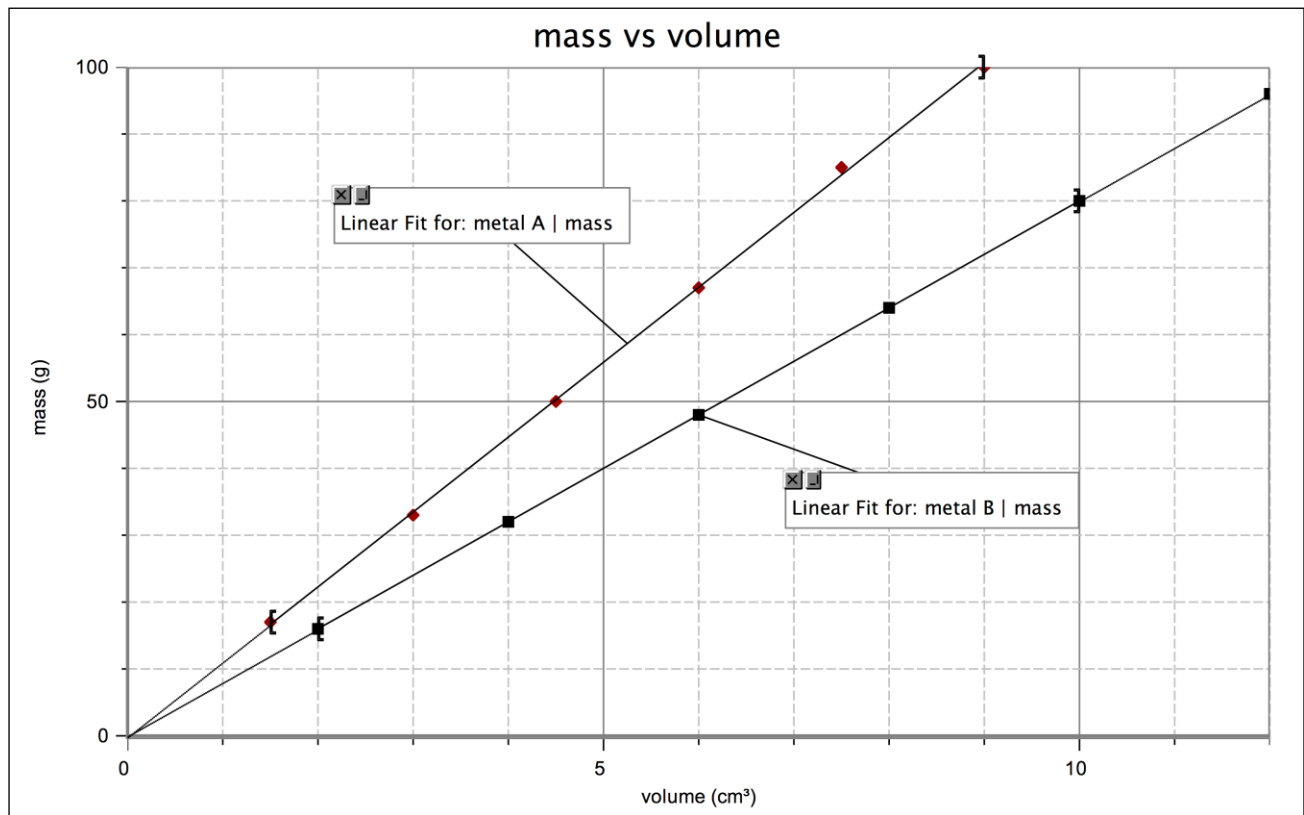


Unit 1– Applied density problems



1. Use the graph above to answer the following questions.
 - a. Determine the density of each metal. Show all your work and include appropriate units.
 - b. From the graph, estimate
 - the mass of 8.0 cm³ of metal A. _____
 - the volume of 70 g of metal B. _____
 - mark on the graph how you found the answers above.
 - c. Use the density of B as a factor to determine the answer to 2b. Show the set-up including how the units cancel.

2. Ethanol has a density of 0.789 g/cm^3 .
 - a. What is the mass of 225 cm^3 of ethanol?

 - b. What is the volume of 75.0 g of ethanol?

3. What is the density of water in g/mL ? What does that mean?
Hint: for every....

4. The cup is a volume widely used by cooks in the U.S. One cup is equivalent to 237 cm^3 .
 - a. One cup of olive oil has a mass of 216 g ; what is the density of olive oil?

 - b. What would you expect to happen if the cup of olive oil in question 6 is poured into a container of ethanol? Why?

5. Gold has a density of 19.3 g/cm^3 . A cube of gold measures 4.23 cm on each edge:
 - a. What is the volume of the cube?

 - b. What is its mass? How many significant figures should you include in your answer and why?