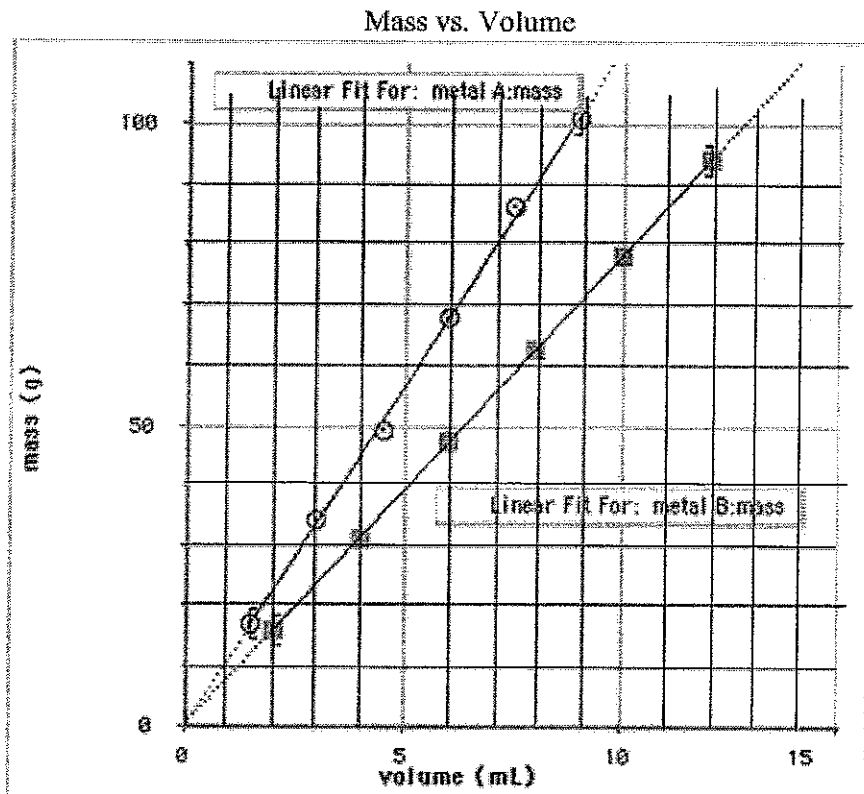


Applied density problems WS



1. Determine the density of each metal. Show all your work and include appropriate units.

2. From the graph, estimate
- the mass of 5.0 mL of metal A. _____
 - the volume of 70 g of metal B. _____
 - mark on the graph how you found the answers above

4. Ethanol has a density of 0.789 g/mL.
- What is the mass of 225 mL of ethanol?

 - What is the volume of 75.0 g of ethanol?
5. The cup is a volume widely used by cooks in the U.S. One cup is equivalent to 225 mL. If 1 cup of olive oil has a mass of 205 g, what is the density of olive oil in g/mL?
6. What would you expect to happen if the cup of olive oil is poured into a container of ethanol? Why?

Gold has a density of 19.3 g/cm^3 . A cube of gold measures 4.23 cm on each edge:

- What is the volume of the cube?

- What is its mass?

- A standard backpack is approximately 30cm x 30cm x 40cm. Suppose you find a hoard of pure gold while treasure hunting in the wilderness. How much mass would your backpack hold if you filled it with the gold? An average student has a mass of 70 kg. How do these values compare?