Name:

**Study guide: Ch 3,2,13.4 C**

**Instruments:**

1. Record to measurements to the correct number of significant figures:
2.  b.) c.) 

**Percent Error:**

1. The solubility product constant for silver oxide at 25° C is actually 1.51 x 10-8. An experimental value obtained in a lab was 1.36 x 10-8. What is the percent error?
2. A student analyzing a sample for bromine (Br) makes four trials with the following results: 35.2, 36.9, 35.2, and 36.5. The actual value is 36.2. What is the percent error?

**Density:**

1. Limestone has a density of 2.72 g/cm3. What is the volume of 24.9 g of limestone?
2. Use a calculator to determine the density of a pine board whose dimensions are

 4.05 cm x 8.85 cm x 164 cm and whose mass is 2580 g.

1. What is the volume of 7.57 kg of tin if its density is 7.28g/ml?
2. Calculate the density of an object if its mass is 5.32 g and its volume is .745 cm3.
3. Based on the density, identify the object from the previous question (# 4) (hint:

 use your Chemistry Reference packet).

**Matter and Change:**

1. How are physical and chemical changes different?
2. List all the indicators of a chemical rxn.
3. Susie reacted two clear, liquid chemicals together and produced a bright yellow solid. Did a physical or chemical change (rxn) occur? How do you know (what is the evidence?)
4. Johnny light a metal strip and bright light was produced. Did a physical or chemical change (rxn) occur? How do you know (what is the evidence?)
5. Danny put some mentos in Diet coke and coke shot out of the bottle. Did a physical or chemical change (rxn) occur? How do you know (what is the evidence?)
6. What are the differences b/w a solid, liquid and a gas?
7. What are substances?
8. What are mixtures?
9. What is the difference b/w a homogeneous mixture and a heterogeneous mixture?
10. Classify the following as a physical or chemical change:
11. Burning paper
12. Heating water
13. Slice a pellet of sodium into smaller pieces
14. Fry an egg
15. Hydrochloric acid reacts with sodium hydroxide to produce salt, water and heat.
16. Fireworks
17. Dissolve sugar into water
18. Classify the following as a mixture or a substance.

a. air

b. sodium hydroxide (NaOH)

c. nitrogen

d. milk

1. Classify each of the following as homogeneous or heterogeneous mixtures.
2. chocolate-chip ice cream
3. green ink
4. salad
5. kool-aid

**\*\*\*\*GO OVER PHASE DIAGRAMS CHAPTER 13.4**