Name_____Date_____Hour____

Chemistry Guided Reading Chapter 2-3

1. Define accuracy.

2. Define precision.

3. Examine figure 10, is it possible to be precise and accurate at the same time. What would the target look like if the archer is both?

4. Examine table 3, which student collected the most accurate data? Whose data was the most precise?

5. What is the difference between an experimental value and a known value?

6. Write an equation we can use to calculate % error. Why do you think it's important for 'error' to be a very small number?

Problem Solving Lab Use page 50 of your text.

1. Complete the data table to satisfy the 1st Think critically question

Mass and Volume Data for an Unknown Sample					
Sample Number	Mass	Initial volume	Final Volume	Actual Volume	Density
1	50.25g	50.1 mL	60.3 mL		
2	63.56g	49.8 mL	62.5 mL		
3	57.65g	50.2 mL	61.5 mL		
4	55.35g	45.6 mL	56.7 mL		
5	74.92g	50.3 mL	65.3 mL		
6	67.78g	47.5 mL	60.8 mL		

Calculate average density of the samples: _____g/mL

2. What is the identity of the unknown substance? (Hint read question 2 first)

3. Using just the average density you calculated determine the error and the % error.

4. Conclusion, was the data accurate? Explain. (hint look at your error, and % error)