

Name: \_\_\_\_\_

## Honors Chapter 1 Practice Sheet

### Section 1.1:

1. What is matter?
2. What is chemistry?
3. List the 5 branches of chemistry.
  
4. Determine the branch of chemistry for each example below:
  - a. Determining the energy transfer when water boils
  - b. Finding out how much nitrogen is in a sample of air
  - c. Studying the process of photosynthesis in plants
  - d. Manufacturing nylon, which contains carbon
  - e. Determining the composition of a moon rock
  - f. Research on making a new medicine to treat high blood pressure
  - g. Regulate the rate of gasoline burning in a car engine
  - h. Develop a plastic that can be decomposed by bacteria
  - i. Improve the method for extracting iron from iron ore

### **Section 1.3:**

5. What were the alchemists TRYING to achieve?
6. Why are the alchemists important to us today?
7. List the 5 steps of the scientific method in order.

Use the following scenario to answer the next 3 questions.

A student is testing the effect of sugar on a mouse's weight. The student feeds 5 mice a low-sugar diet for 60 days and 5 mice a high-sugar diet for 60 days. The student compares the starting and ending weights of the mice.

8. What is the manipulated/independent variable?
9. What is the responding/dependent variable?
10. What is one control during the experiment?
11. What is the difference in a law and a theory?

### **Section 1.4:**

12. What are the 3 steps to solving a math problem?
13. When answering a math problem, what must your answer have to be fully correct?