

Chemistry CP

Name: _____

Chapter 1 Review Sheet

Section: _____

For the quiz on Chapter 1, you should be able to:

- Distinguish between the physical properties and chemical properties of matter.
- Classify changes of matter as chemical or physical.
- Explain the gas, liquid, and solid states in terms of arrangement of particles.
- Classify a sample of matter as a substance or a mixture; as homogeneous or heterogeneous.
- Explain the difference between an element and a compound.
- Distinguish between intensive and extensive properties.
- Give the names and symbols of elements 1-10.

Questions for you to try:

1. Classify the following as either a physical or a chemical change.
 - a) Gold is melted
 - b) Pizza is sliced
 - c) Pizza is digested
 - d) Coal is burned
 - e) Grape juice is fermented by yeast
 - f) Water freezes
 - g) Carbon + oxygen → carbon dioxide
 - h) A bottle of juice is opened
2. Explain why slicing a piece of bread is one kind of change and why the digestion of bread is a different kind of change.
3. Identify the following as either a heterogeneous mixture or a homogeneous mixture.
 - a) Ice cubes floating in water
 - b) A detergent gasoline
 - c) Granola cereal
 - d) Automobile exhaust
 - e) Pizza
4. Would cottage cheese be considered a heterogeneous mixture? List its components and explain why or why not.
5. Match the beginning of each sentence in column A with the most appropriate ending in column B.

<u>Column A</u>	<u>Column B</u>
_____ a. Although a laser beam occupies space, it	a. is an example of one type of matter.
_____ b. Lacking both volume and mass, a pulse of light	b. is not considered matter because it has no mass.
_____ c. The element gold	c. is an example of a physical property.
_____ d. The radioactivity of uranium	d. cannot be considered matter.
_____ e. The malleability of copper	e. is an example of a chemical property.
6. Explain the difference between an element and a compound.
7. Sketch the following equipment: ring stand, watch glass, beaker, Erlenmeyer flask
8. A chemist heats some white crystals in a test tube. The crystals make a cracking sound, fall

apart into smaller pieces, and give off a misty gas. A colorless liquid forms around the cooler top of the test tube. Tell whether you think the crystals are an element or a compound, and why.

9. Compare intensive properties and extensive properties.

10. Classify the following as intensive or extensive properties.

- a) Volume
- b) Melting point
- c) Mass
- d) Density
- e) Electrical conductivity

11. Classify each of the underlined substances as a pure substance, homogeneous mixture, or heterogeneous mixture.

- a. Bronze is an alloy of copper and tin. _____
- b. Many people use saline solution to store contact lenses. _____
- c. When lithium metal is placed in water, it reacts violently. _____
- d. Potting soil is often used to grow seedlings. _____
- e. The compound sucrose, $C_{12}H_{22}O_{11}$, is commonly known as table sugar. _____

12. Use particle models to illustrate an element, a compound, a homogeneous mixture, and a heterogeneous mixture.

13. Match the macroscopic substance on the top with the corresponding model at the particle level on the bottom.

