Review Sheet: Unit 2 **Name**_____

I. Fill in the blanks

_____ properties can be observed without chemically changing matter. _____ properties describe how a substance interacts with other substances. _____ have definite shapes and definite volumes. _____ have indefinite shapes and definite volumes. _____ have indefinite shapes and indefinite volumes.

Phase changes are _____ changes. _____ point is the temperature at which a liquid turns to a solid. It is also equal to the _____ point which is the temperature at which a _____ turns to a _____. _____ point is the temperature at which a liquid turns to a gas, and _____ point is the temperature at which a gas turns to a liquid. Occasionally, a solid turns directly into a gas without turning into a liquid first. This is called _____.

A(n) _____ is a pure substance that is made of only one kind of atom. The symbol for a(n) _____ is always one or two letters. When the symbol contains two letters, the first letter is always _____, and the second letter is always _____.

A(n) _____ is a pure substance containing two or more elements that are _____ combined. A(n) _____ is represented by a chemical _____. The elements in a(n) _____ always combine in _____ proportions.

A(n) _____ is made of two or more substances that are _____ combined. A(n) _____ that is uniformly mixed is called _____. A special name for this is a(n) _____. A(n) _____ that is not uniformly mixed is called _____. A special type of mixture that is a solid _____ of two or more metals is called a(n) _____.

The property used to separate a mixture of sand and iron filings is _____. The technique used to separate liquids based on boiling points is called _____. The spinning machine used to separate mixtures based on densities is a _____.

Density describes the relationship between the _____ and _____ of a sample of a substance. The most common units for density are _____ and _____. The density of water is _____.

II. Classify each of the following properties/changes as chemical (C) or physical (P).

combustibility	_____	getting a haircut	_____
flammability	_____	tendency to corrode	_____
weight	_____	crushing rocks	_____
tearing paper	_____	boiling point	_____
ductility	_____	odor	_____
texture	_____	malleability	_____
digestion of food	_____	fire works exploding	_____
density	_____	lighting a candle	_____
evaporation	_____	tarnishing silver	_____
ice cube melting	_____	formation of acid rain	_____
volume	_____	dissolving salt in water	_____

III. Classify each of the following as an element (E), compound (C), homogeneous mixture/solution (S), or heterogeneous mixture (HE).

chocolate chip cookie	_____	carbon dioxide	_____
oxygen gas	_____	water	_____
salt water	_____	iced tea	_____
taco	_____	rust (iron oxide)	_____
gold	_____	muddy water	_____
potassium	_____	bronze	_____
graphite	_____	copper	_____
air	_____	salad dressing	_____

IV. Show all work as you complete the following problems.

Given a mass of 24 grams and a volume of 3 milliliters, calculate the density.

What is the mass of 32 milliliters of water?

Given that the density of iron is 7.9 grams per centimeters cubed, what would be the volume of a 3.5 gram piece of iron?

Find the density of a block with a length of 5.0 centimeters, a width of 2.0 centimeters, a height of 1.0 centimeter, and a mass of 45 grams.

Find the density of an 8-gram rock if the water in a graduated cylinder rises from 25.0 milliliters to 29.0 milliliters when the rock is placed into the graduated cylinder.

You have a piece of silver with a mass of 42.8 grams. Silver has a density of 10.5 grams per centimeter cubed. What would be the new level of water if this piece of silver were placed into 25.0 milliliters of water?

The density of iron is 7.0 g/cm^3. What volume of iron would have a mass of 14.0 g?