Name: _____

Period: _____

Fall Semester Review – IPC

Find the atomic mass of the following compounds

Calcium oxide (CaO)

Water

Classify (ionic, covalent or polyatomic) and name the following compounds.

1. CO_2 _____ _____
2. Na_2O _____ _____
3. $BeCrO_4$ _____ _____

Find the valence electrons and oxidation number of:

1. Helium_____ 2. Oxygen _____

Draw the Lewis Dot Diagrams for:

1. Carbon
2. Sodium

Make Balanced Compounds from:

1. Li + O _____
2. Na + Ar _____
3. Be + NO_3^{1-} _____
4. Ca + O _____

With dot diagrams draw the covalent bond of O_2:

With dot diagrams the covalent bond of OF_2:

Matching:	
A. Mixture B. Compound C. Element D. Matter E. Heterogenous F. Homogeneous	___ A substance made up of two or more atoms that must be separated by chemical means. ___ Something made up of 2 or more substances that can be separated by physical means. ___ A substance that is pure and made up of only one type of atom. ___Anything that has mass and takes up space. ___A mixture that is the same throughout. ___A mixture that is different throughout.

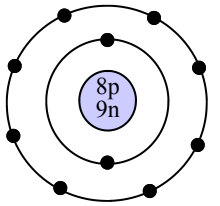
1. Valence electrons are the outermost electrons of an atom that are involved in chemical bonding? True/False.

2. Lithium has _____ valence electrons, will (lose or gain) _____ electrons and become (positive or negative). This is why lithium's oxidation number is _____.

3. A metal and non-metal will form a _____ compound; two non-metals form a _____ compound.

4. Protons are _____; electrons are _____; neutrons are _____.

5. Protons and neutrons are in the center of the atom, which is called the _____.



Atom A Atom B

Which one is the ion?

Give the ion notation for the ion:

Give the number of protons for:

1. Carbon _____ 3. Iron _____
2. Beryllium _____ 4. Chlorine _____

Matching:	
A. Ion B. Element C. Isotope D. Oil	If you change the number of protons you change the _____. If you change the number of neutrons, you change the _____. If you change the number of electrons, you change the _____. Every 5,000 miles you should change a car's _____.

Matching:	
A. Law of Conservation of Mass B. Meter C. Centimeter D. Liter E. Gram	___Mass is neither destroyed or created in chemical reactions. ___Unit of mass; about 1 dollar bill. ___1/100th of meter; width of pinky finger. ___Unit of volume; just b igger a quart. ___Unit of length; 3.3.

Matching:	
A. Solid B. Liquid C. Gas D. Oil	___ Molecules that are tightly packed and retain their shape and size. ___ Molecules that bounce off of each other, can be compressed, and take the shape of their container. ___ Molecules that can move (slide) over each other and have a definite size (volume), but not shape and can not be compressed.

Matching:	___ Temperature at which a liquid turns to a gas.
A. Melting Point B. Boiling Point C. Condensation D. Freezing Point	___ Temperature at which a solid changes to a liquid. ___ Temperature at which a liquid turns to a solid. ___ Process of a gas changing to a liquid.

Matching:	___ Negative particles that are involved in chemical bonding.
A. Proton B. Neutron C. Electrons D. Bromon	___ Positive particles that are in the nucleus and determine the element. ___ Neutral particles that determine the isotope. ___ A really cool word that Mr. Murray made up (NOT!).

A 30 milliliter object rock is 15 grams. Find its density.

Draw a density column for these liquids: Liquid A, 2.43 g/mL; Liquid B, 1.0 g/mL; Liquid C, 0.87 g/mL. Label what you know.

Matching:	___ When a substance is mixed into a solution it does this.
A. Solution B. Suspension C. Alloy D. Dissolves	___ A homogeneous mixture at the molecular level. ___ A temporary solution: the solute will eventually fall out. ___ A solution of two or more metals.

Matching:	___ pH 7, when there is equal amount of acid and base (distilled water is also this).
A. pH B. Base C. Acid D. Neutral	___ A chemical that adds H+ ions to a solution. ___ The scale used to measure acids and bases. ___ A chemical that adds OH- ions to a

1. "If I __ I full" is a way to remember the _____ rule that says that atoms want to have a full outershell of __ electrons.

2. The force that holds the protons together in the nucleus of the atom is called the _____.

3. _____ reactions split big atoms and have toxic waste, while _____ reactions combine atoms and have no toxic waste.

1. Density	a. A measurement of how easily a solid can be pounded into thin sheets
2. Hardness	b. A measurement of the "compactness" of a substance; ratio of mass to volume.
3. Brittleness	c. Measure of a solid's ability to return to its original shape after stretching.
4. Elasticity	d. A measure of how easily a solid will shatter.
5. Malleability	e. A measure of how easily a solid can be

1.tensile strength	a. Upward force of a liquid or gas pushing upon something immersed in it.
2. viscosity	b. Any material that flows; either a gas or a liquid.
3. buoyancy	c. Measure of a fluid's resistance to flow. (How thick a fluid is.)
4. g/mL	d. Measure of how hard it is to break something by pulling.
5. fluid	e. Unit of density.

Classify the reactions as: addition; decomposition; single displacement; double displacement or combustion.

Balance These Chemical Equations

_____	1. ____ Fe_2O_3 + ____C → ____ Fe + ____ CO
_____	2. ____ HgO → ____ Hg + ____ O_2
_____	3. ____ K + ____ SO_4 → ____ K_2SO_4
_____	4. ____ MgO + ____ LiCl → ____ $MgCl_2$ + ____ Li_2O
_____	5. ____ CH_4 + ____ O_2 → ____ H_2O + ____ CO_2

Endothermic OR Exothermic

1. Combustion _____
2. If it gets cold _____
3. If it gets hot _____
4. If it absorbs heat _____

Chemical or Physical Changes

1. Boiling of water _____
2. If it gets hot or cold _____
3. Burning plastic _____
4. If it changes shape _____
5. Digestion _____
6. Mixing something up _____