

## Bonding Homework Assignments.

Homework number 1 is two pages in a row.

Define	
alloy	
valence orbital	
valence electrons	
coordination number	

What elements make up these particular alloys? (go online, or better, use your text)

- a. bronze: \_\_\_\_\_ & \_\_\_\_\_
- b. brass: \_\_\_\_\_ & \_\_\_\_\_
- c. sterling silver: \_\_\_\_\_ & \_\_\_\_\_
- d. cast iron: \_\_\_\_\_ & \_\_\_\_\_

These six ions are isoelectric to which noble gases?	
ion	isoelectric to
calcium cation	
sodium cation	
sulfide anion	
oxide anion	
aluminum cation	
bromide anion	

Homework #1:

Write the correct formula for each of these compounds, then draw the Lewis Dot Diagrams neatly along the right side of this page (show proper bracketing and charges)

ionic compound	formula
aluminum bromide	
potassium sulfide	
zinc iodide	
copper (I) chloride	
titanium (IV) oxide	

## Bonding Homework #2

DEFINE:	use each word in a complete sentence.
ionic bond	
covalent bond	
Electronegativity	
coordination number	
for each of the following four, give at least one example of a common substance for each word	
alloy	
single covalent bond	
double covalent bond	
triple covalent bond	

On the back, draw 12 neat boxes,  
into each write a formula for the following dozen substances,  
Draw the correct LEWIS DOT DIAGRAMS for each of these twelve.

diatomic fluorine, diatomic nitrogen, diatomic hydrogen, diatomic oxygen, water,  
carbon dioxide, hydrogen chloride, potassium chloride, aluminum oxide,  
magnesium chloride, calcium sulfide, and carbon tetra hydride (methane)

Bonding Homework 3 name: \_\_\_\_\_

1. Define: VOCABULARY WORDS:

Malleable: \_\_\_\_\_

Ductile: \_\_\_\_\_

2. DRAWINGS

Draw any 4 different Lewis Dot Diagrams that you want:

One atom, One Ion, One MOLECULAR COMPOUND, and One IONIC COMPOUND.

atom	ion
molecular compound	ionic compound

Bonding Homework 4 name: \_\_\_\_\_

IONIC + COVALENT BONDS Fill in the chart below. Fill in the compound name or formula, then name the bond using words like: metallic, ionic, non polar covalent, polar covalent, single, double, triple, coordinate covalent, etc.

compound name	chemical formula	describe the bond in full detail
sodium fluoride		
calcium chloride		
	NO <sub>2</sub>	
silicon dioxide		
	CO	
Copper (II) carbonate		
aluminum fluoride		
	LiBr	
Iron(II) sulfide		
carbon tetra-iodide		
	NH <sub>3</sub>	
methane		
	CO	
ethyne	C <sub>2</sub> H <sub>2</sub>	

## Bonding Homework 5 name: \_\_\_\_\_

Molecular Compound	Lewis Dot, or Electron Dot Structure	Polar or Non-polar Bonds?	Does this molecule have radial symmetry? Yes or no	Is Molecule polar or non polar?
C <sub>2</sub> H <sub>6</sub>		C:C		
		C:H		
NI <sub>3</sub>				
PH <sub>2</sub> F		P:F		
		P:H		
CH <sub>3</sub> Br		C:Br		
		C:H		
H <sub>2</sub> O				
CO				
CBr <sub>4</sub>				
CO <sub>2</sub>				