

Bonding Homework #1

name _____

Write the correct formula for each of these ionic compounds AND draw the Lewis Dot Diagrams

(show proper bracketing and charges for ALL ions)

USE DIFFERENT COLORS FOR EACH ION

aluminum bromide

potassium sulfide

zinc iodide

calcium oxide

copper (I) chloride

titanium (IV) oxide



Bonding Homework #2

name _____

Write the correct formula for each of these ionic compounds AND draw the Lewis Dot Diagrams

(NO bracketing for molecular compounds)

USE DIFFERENT COLORS FOR EACH ION

WATER

METHANE

CARBON DIOXIDE

OXYGEN DIBROMIDE

AMMONIA

PHOSPHOROUS TRIFLUORIDE



Bonding Homework #3 name

Write a formula for a compound that makes each of these bond types.

single POLAR covalent bond		single NONPOLAR covalent bond	
double POLAR covalent bond		double NONPOLAR covalent bond	
triple POLAR covalent bond		triple NONPOLAR covalent bond	

Put a word from this word bank in front of its definition.

Electronegativity	Electron dispersion attraction	Ionic	Atomic radius
Covalent	Isotope	Alloy	Dipole attraction
Mixture	Octet rule	Resonating bond	Isomer
			Hydrogen bonding
		The number of anions surrounding each cation in an ionic solid, or the number of cations surrounding each anion in an ionic solid.	
		Two or metals melted together into a mixture with “better” properties - such as less likely to oxidize or more strength. Can be a metal + a nonmetal	
		The tendency to gain an electron from another atom when making a bond.	
		Bond with a transfer electrons, and brackets for their Lewis Dot Diagrams.	
		Bonds that share electrons, and don't get brackets for Lewis Dot Diagrams.	
		Reason that almost all bonding atoms, and ions end up with 8 electrons in their outer shells.	
		The type of bonding you would see in carbon monoxide	
		The type of bonding that is found in ozone and in nitrogen dioxide.	



Bonding Homework #4

name _____

Draw proper Lewis Dot diagrams for all species here.

USE DIFFERENT COLORS FOR EACH ATOM OR ION

Chlorine Cl_2	Nitrogen N_2	Hydrogen H_2
Oxygen O_2	H_2O	Magnesium chloride MgCl_2
Hydrogen monochloride HCl	Methane CH_4	Hydrogen cyanide HCN
Carbon disulfide CS_2	CO_2	Calcium sulfide CaS
Potassium chloride KCl	Silicon Dioxide SiO_2	Nitrogen tribromide NBr_3



Bonding Homework #5 name

Fill in the chart below. Fill in the chart. Do not say polar when you could say single polar covalent. Do not say double when you mean double nonpolar covalent. Use the WHOLE NAME of each bond. Don't be lazy. One compound has 2 different bonds in the compound, both bond names.

	Compound name	Formula	Name the bond (or bonds).
1	chromium (VI) fluoride		
2	methane		
3	ozone		
4	silicon dioxide		
5	ammonia		
6	carbon dioxide		
7	sodium hydroxide		
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8	aluminum fluoride		
9	lithium iodide		
10	iron (II) sulfide		
11	boron tribromide		
12	ethyne	C_2H_2	
14	carbon monoxide		
15	phosphorous trifluoride		



Bonding Homework #6 name

2 SIDES!!

Draw Lewis Dot diagrams. Determine if the bonds polar or nonpolar.
Does the molecule have radial symmetry, does that make the molecule polar or nonpolar?

Compound	Lewis Dot Diagram USE DIFFERENT COLORS FOR DIFFERENT ATOMS	Are these bonds polar or nonpolar?	Does this molecule have radial symmetry?	Is the molecule polar or nonpolar?
C ₂ H ₆		C-C bond	YES	YES
		C-H bond	NO	NO
NBr ₃			YES	YES
			NO	NO
PH ₂ F		P-F bond	YES	YES
		P-H bond	NO	NO
CH ₃ Br		C-H bond	YES	YES
		C-Br bond	NO	NO

Compound	Lewis Dot Diagram USE DIFFERENT COLORS FOR DIFFERENT ATOMS	Are these bonds polar or nonpolar?	Does this molecule have radial symmetry?	Is the molecule polar or nonpolar?
H ₂ O			YES NO	YES NO
CO			YES NO	YES NO
CBr ₄			YES NO	YES NO
CO ₂			YES NO	YES NO