

1. Using the electronegativity table below, find the electronegativity of each of the following compounds. Then determine if they are pure covalent, polar covalent, or ionic

1																			18
H 2.1	2																		He -
Li 1.0	Be 1.5																		Na -
Na 1.0	Mg 1.3																		Ar -
		3	4	5	6	7	8	9	10	11	12								
K 0.9	Ca 1.1	Sc 1.2	Ti 1.3	V 1.5	Cr 1.6	Mn 1.6	Fe 1.7	Co 1.7	Ni 1.8	Cu 1.8	Zn 1.7	Ga 1.8	Ge 2.0	As 2.2	Se 2.5	Br 2.8			Kr -
Rb 0.9	Sr 1.0	Y 1.1	Zr 1.2	Nb 1.3	Mo 1.3	Tc 1.4	Ru 1.4	Rh 1.5	Pd 1.4	Ag 1.4	Cd 1.5	In 1.5	Sn 1.7	Sb 1.8	Te 2.0	I 2.2			Xe -
Cs 0.9	Ba 0.9	La 1.1	Hf 1.2	Ta 1.4	W 1.4	Re 1.5	Os 1.5	Ir 1.6	Pt 1.5	Au 1.4	Hg 1.5	Tl 1.5	Pb 1.6	Bi 1.7	Po 1.8	At 2.0			Rn -
Fr 0.9	Ra 0.9	Ac 1.0																	

- a. KCl
- b. CO₂
2. Write the name of the following molecules
- a. NF₃
- b. CaCl₂
- c. HBr
- d. Zn₃(PO₄)₂

3. Write the chemical formulas for each of the following
 - a. Iron (III) chloride
 - b. Carbon tetrafluoride
 - c. Ammonium Chloride
 - d. Potassium Dichromate
4. Write the reaction for LiF using Lewis Symbols
5. What is the difference between the electron geometry and the molecular structure

6. Draw the Lewis structure for PCl_5 . State the molecular geometry, the formal charge of each atom, and the hybridization state. Show the dipoles with vector arrows and indicate the net dipole movement.

7. Draw the Lewis structure for SF_4 . State the molecular geometry, the formal charge of each atom, and the hybridization state. Show the dipoles with vector arrows and indicate the net dipole movement.

8. Draw out the molecular orbital of F_2 and state the bond order and if it is paramagnetic or diamagnetic.