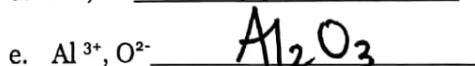
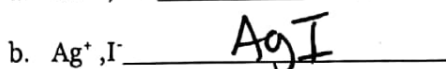
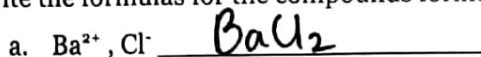


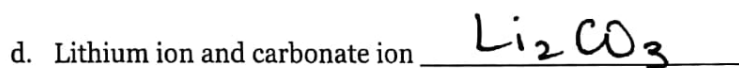
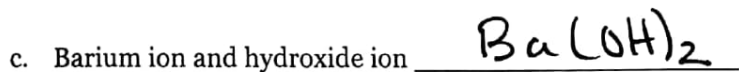
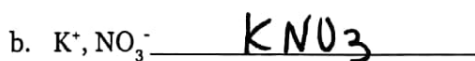
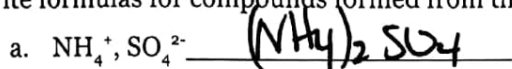
Bonding Test Review

Name: Key

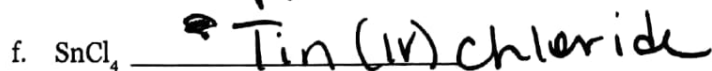
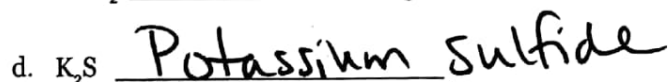
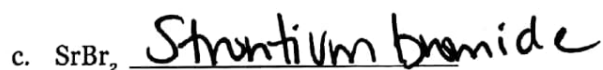
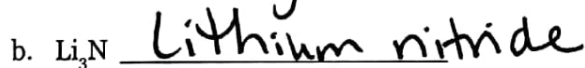
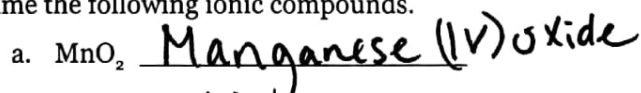
1. Write the formulas for the compounds formed from these pairs of ions.



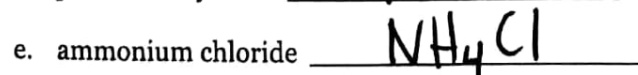
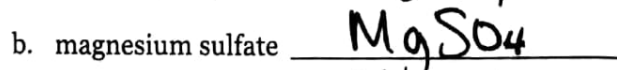
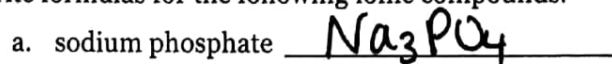
2. Write formulas for compounds formed from these pairs of ions.



3. Name the following ionic compounds.



4. Write formulas for the following ionic compounds.



f. potassium dichromate $K_2Cr_2O_7$

5. Name the following compounds.

a. NaCN sodium cyanide

b. $FeCl_3$ Iron (III) chloride

c. Na_2SO_4 sodium sulfate

d. K_2CO_3 Potassium carbonate

e. $Cu(OH)_2$ Copper (II) hydroxide

f. $LiNO_3$ Lithium nitrate

6. Name the following covalent compounds.

a. PCl_5 phosphorus pentachloride

b. CCl_4 Carbon tetrachloride

c. NO_2 nitrogen dioxide

d. XeF_2 Xenon difluoride

e. SiO_2 Silicon dioxide

f. Cl_2O_7 dichlorine heptoxide

7. Write the formulas for the following covalent compounds.

a. nitrogen tribromide NBr_3

b. dichlorine monoxide Cl_2O

c. sulfur dioxide SO_2








d. dinitrogen tetrafluoride N_2F_4





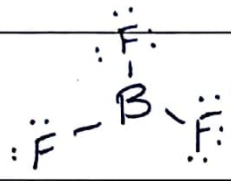
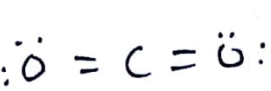

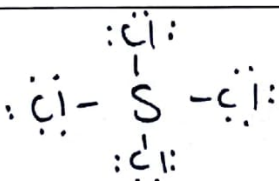
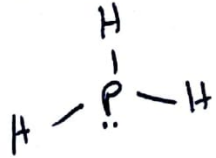
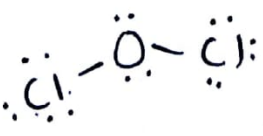
Bonding Properties

Property	Ionic	Covalent	Metals
Luster			✓
Malleability			✓
Ductility			✓
Melting Point	high	Low	high
Solubility	✓		
Ability to conduct electricity as solid			✓
Ability to conduct electricity as liquid	✓		✓
Use of electrons in bonding	transfer	share	Sea of electrons

Lewis Structure & VSEPR Theory

Complete the following charts:

Shape	Bonded Atoms	Lone Pairs	Sketch of Shape
Linear	2	0	
Bent	2	1, 2	
Trigonal Planar	3	0	
Trigonal Pyramidal	3	1	
Tetrahedral	4	0	
Trigonal bipyramidal	5	0	
See Saw	4	1	

T Shape	3	2				
Octahedral	6	0				
Square pyramidal	6 5	1				
Square planar	4	2				
Compound	Formula	Lewis Structure	Bonded Atoms	Lone Pairs	Shape	P / NP
8. boron tribromide Val e- 6	BF_3		3	0	trigonal planar	NP
9. Carbon dioxide Val e- 16	CO_2		2	0	linear	NP
10. Water Val e- 8	H_2O		2	2	bent	P
11. Silicon tetrachloride Val e- 32	SiCl_4		4	0	tetrahedral	NP
12. Phosphorus trihydride Val e- 8	PH_3		3	1	trigonal pyramidal	P
13. Dichlorine monoxide Val e- 20	Cl_2O		2	2	bent	P

14. Arsenic pentafluoride Val e- <u>40</u>	AsF_5		5	0	trigonal bipyramidal	NP
15. Phosphate ion Val e- <u>32</u>	PO_4^{-3}		4	0	tetrahedral	NP
16. Sulfur hexahydride Val e- <u>12</u>	SH_6		6	0	octahedral	NP
17. Selenium hexachloride Val e- <u>48</u>	$SeCl_6$		6	0	octahedral	NP
18. Iodine pentafluoride Val e- <u>42</u>	IF_5		5	1	Square planar pyramidal	P
19. Krypton tetrabromide Val e- <u>36</u>	$KrBr_4$		4	1	Square planar	P