

Bonding Basics Review

Name _____

1. Complete the chart using your knowledge of atoms.

Element	Atomic Symbol	Total # of Electrons	# of Valence Electrons	# of Electrons Gained or Lost	Oxidation Number
Bromine					
Lithium					
Calcium					
Sulfur					
Boron					
Silicon					
Phosphorus					

2. Ionic Bonds - Draw the Lewis structures for each atom, draw arrows to show the transfer of electrons, write the charge for each ion, and then write the chemical formula.

(A) Potassium + Iodine

(B) Magnesium + Oxygen

(C) Lithium + Nitrogen

3. Covalent Bonds – Draw the Lewis structures for each atom, draw circles to show the electrons that are shared, and then write the bond structure and chemical formula.

(A) Fluorine + Fluorine

(B) 3 Hydrogen + 1 Phosphorus

(C) 2 Hydrogen + 1 Sulfur

Bonding Basics Review

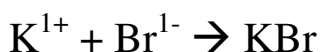
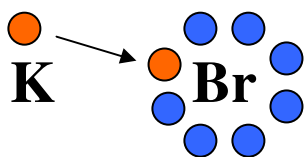
ANSWER KEY

1. Complete the chart using your knowledge of atoms.

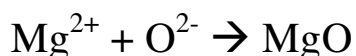
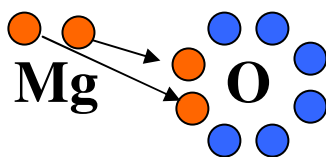
Element	Atomic Symbol	Total # of Electrons	# of Valence Electrons	# of Electrons Gained or Lost	Oxidation Number
Bromine	Br	35	7	Gain 1	1-
Lithium	Li	3	1	Lose 1	1+
Calcium	Ca	20	2	Lose 2	2+
Sulfur	S	16	6	Gain 2	2-
Boron	B	5	3	Lose 3	3+
Silicon	Si	14	4	Gain/Lose 4	4+ 4-
Phosphorus	P	15	5	Gain 3	3-

2. Ionic Bonds - Draw the Lewis structures for each atom, draw arrows to show the transfer of electrons, write the charge for each ion, and then write the chemical formula.

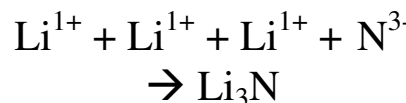
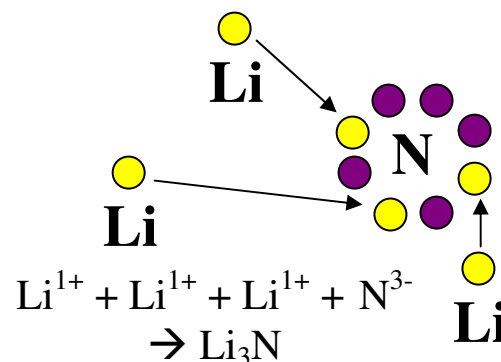
(A) Potassium + Bromine



(B) Magnesium + Oxygen

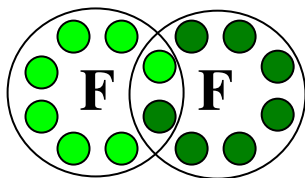


(C) Lithium + Nitrogen

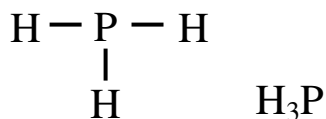
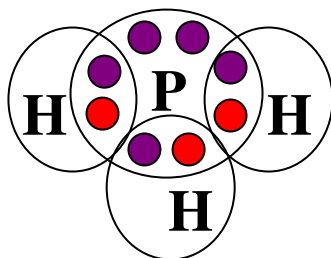


3. Covalent Bonds - Draw the Lewis structures for each atom, draw circles to show the electrons that are shared, and then write the bond structure and chemical formula.

(A) Fluorine + Fluorine



(B) 3 Hydrogen + 1 Phosphorus



(C) 2 Hydrogen + 1 Sulfur

