

Name: _____ Date: _____ Period: _____

Ionic Compounds and Covalent Molecules

Review of Ionic Bonding

- Ionic bonds occur between a _____ and a _____, or between a _____ charged particle and a _____ charged particle.
- Ionic bonds involve a _____ of electrons.
- Can you identify which of the following are joined by ionic bonds?
a) NaCl b) K₃N c) MgBr₂ d) CO₂ e) N₂ f) Al₂O₃

Covalent Bonding

- Covalent bonds occur between two _____.
- A _____ is formed when two or more atoms bond _____.
- Covalent bonds involve _____ of electrons.

Diatomic Molecules

- Certain elements occur in nature as _____ and not as single atoms (more stable as the molecule)
- Examples: _____
- Diatomic molecules are bonded together by _____.

Important Definitions

- **Chemical Formula:** a representation, using symbols, _____
- **Subscript:** small number, written behind an element, _____

Naming Molecular Compounds

- The _____ written in the formula is always written first, _____.
- The _____ is named using the root of the element and the suffix _____.
- _____ are used to indicate the _____ of each type that are present in the compound.
 - **Exception:** Do not use the prefix mono- for the first element
 - Drop the final letter of the prefix when the element name begins with a vowel

Table 1: Common Prefixes Used in Covalent Compounds

Number of atoms	Prefix	Number of atoms	Prefix
1		6	
2		7	
3		8	
4		9	
5		10	

What does naming look like?

1. CCl_4 : _____
2. CO : _____
3. NF_3 : _____
4. NO : _____

Now, you practice.

1. CO_2 : _____
2. SO_2 : _____
3. S_2O_3 : _____
4. N_2O : _____
5. PCl_5 : _____
6. OF_2 : _____
7. N_2O_4 : _____
8. S_4N_4 : _____
9. SiCl_4 : _____
10. BF_3 : _____

What's the formula?

1. Selenium hexafluoride: _____
2. Disilicon hexabromide: _____
3. Diboron silicide: _____
4. Iodine pentafluoride: _____
5. Hexaboron silicide: _____
6. Diboron tetrabromide: _____
7. Diphosphorous pentoxide: _____
8. Carbon tetrafluoride: _____
9. Tetraphosphorous pentasulfide: _____
10. Hexasulfur oxide: _____