**Name: Period: Seat#:**

**Worksheet #1**

**Answer the following questions:**

|  |  |  |
| --- | --- | --- |
| 1. What is the difference between an anion and a cation | | 1. What is the difference between an ionic bond and a covalent bond? |
| 1. What is a valence electron? Why do you think valence electrons are the ones involved in bonding and not core electrons? | | 1. Explain why ionic compounds are electrically neutral |
| 1. Elements within a group have the same number of what? | 1. Are the majority of elements in the periodic table metals or nonmetals? | 1. If you have a compound with a high electronegativity difference (one atom high, one atom low) – what type of bond is it? |

**How many electrons must be gained or lost by each atom to achieve a stable e- configuration:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. Sr | 1. Sb | 1. Si | 1. S | 1. Se | 1. Xe |

**Which of the following pairs of elements will form ionic bonds, and which will not?   
Explain why they do, or why the will not.**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Sulfur and Xenon | 1. Sodium and Calcium | 1. Strontium and Sulfur | 1. Silver and Chlorine |

**How many valence electrons are there in each of the following elements AND COMPOUNDS (add up the valence electrons for each atom). Show your addition for the compounds:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Ca | 1. P | | 1. Se |
| 1. NH3 | 1. NF3 | 1. Al2(CO3)3 | |

**Identify if each is an ionic compound, or a covalent molecule**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. LiF | 1. MgO | 1. CH4 | 1. CH3OH | 1. NH3 | 1. H2O |

**Explain how to name each type of item:**

|  |  |
| --- | --- |
| 1. Ionic Compounds | 1. Covalent Molecules |

1. **Identify the prefixes for the following numbers:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| **6** | **7** | **8** | **9** | **10** |

**Name each item:**

|  |  |  |  |
| --- | --- | --- | --- |
| *Formula* | *Metals, Nonmetals, Polyatomic Ions?* | *Ionic or Covalent?* | *Name* |
| 1. CH4 |  |  |  |
| 1. C2H6 |  |  |  |
| 1. Ag2O |  |  |  |
| 1. SO3 |  |  |  |
| 1. MgBr |  |  |  |
| 1. Cu |  |  |  |
| 1. V |  |  |  |
| 1. Ca(SO4) | *Polyatomic* | *Ionic* |  |
| 1. (NH4)2(CO3) |  |  |  |