**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)
 |  |  |  |