**Name: Period: Seat#:**

**Worksheet #9**

**Answer the following questions:**

|  |  |  |
| --- | --- | --- |
| 1. What are the three types of bonds and how are their electron positions different? | | 1. Why do you need to use prefixes for naming covalent bonds and not for naming ionic bonds? |
| 1. Why does carbon dioxide have two double bonds? | 1. Why can some elements have more than 8 electrons in their valance shell and what do we call it when they do? | |
| 1. List the Roman numerals from 1 to 10. | | |

**Complete the following table:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Type of Bond** | **Formula** |
| 1. **Na2SO4** |  |  |
| 1. **SiO2** |  |  |
|  |  | **Lead (II) nitrite** |
|  |  | **Chromium (III) oxide** |
| 1. **HgO** |  |  |
|  |  | **Iron (II) phosphate** |
|  |  | **Hexaboron silicide** |
| 1. **SCl4** |  |  |
| 1. **P4S5** |  |  |
| 1. **NaHCO3** |  |  |

**Draw the Lewis Structure for the following molecules:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Molecule** | **Lewis Structure** | **Description** | | **Molecule** | **Lewis Structure** | **Description** | |
| **SF6** |  | # of Single Bonds | # of Double Bonds | **Sulfate ion** |  | # of Single Bonds | # of Double Bonds |
| # Valence electrons | # of Triple Bonds | # of  Lone Pairs | # Valence electrons | # of Triple Bonds | # of  Lone Pairs |
| **CH3OH** |  | # of Single Bonds | # of Double Bonds | **BFCl2** |  | # of Single Bonds | # of Double Bonds |
| # Valence electrons | # of Triple Bonds | # of  Lone Pairs | # Valence electrons | # of Triple Bonds | # of  Lone Pairs |
| 1. **O3** |  | # of Single Bonds | # of Double Bonds | 1. **BeH2** |  | # of Single Bonds | # of Double Bonds |
| # Valence electrons | # of Triple Bonds | # of  Lone Pairs | # Valence electrons | # of Triple Bonds | # of  Lone Pairs |
| 1. **SiI4** |  | # of Single Bonds | # of Double Bonds | 1. **K2SO3** |  | # of Single Bonds | # of Double Bonds |
| # Valence electrons | # of Triple Bonds | # of  Lone Pairs | # Valence electrons | # of Triple Bonds | # of  Lone Pairs |
| **Fe3(PO4)2** |  | # of Single Bonds | # of Double Bonds | **NaOH** |  | # of Single Bonds | # of Double Bonds |
| # Valence electrons | # of Triple Bonds | # of  Lone Pairs | # Valence electrons | # of Triple Bonds | # of  Lone Pairs |