Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: 1 2 3 4 5 6

**Bonding Unit Review**

**Part A: Ionic Compounds**

1. Define the following terms below.
   1. Ion: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Cation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Anion: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Valence electrons: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. Octet: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Draw the Lewis Dot Structures for the following elements.
   1. N
   2. S
   3. Al
   4. Br
2. Write the following elements as the ions that they form when they gain/lose electron(s).
   1. Cl: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Ca: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. O: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Li: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Write the formula for the following compounds:
   1. Sodium phosphide
   2. Aluminum sulfide
   3. Iron (II) chloride
   4. Chromium (I) nitride
4. Write the name for the following compounds:
   1. FeCl
   2. BeF2
   3. MgO
   4. CrS

**Part C: Covalent Compounds**

1. Write the formula for the following compounds:
   1. Silicon dioxide
   2. Carbon monoxide
   3. Dinitrogen trioxide
   4. Pentaphosphorus disulfide
2. Write the name of the following compounds:
   1. CO2
   2. P2O
   3. CCl4
   4. N2O

**Part D: Ionic vs. Covalent Properties**

1. Complete the chart with characteristics you learned from the lab.

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Ionic** | **Covalent** |
| Elements involved |  |  |
| Share/transfer electrons |  |  |
| Naming |  |  |
| Strength of bonds |  |  |
| Conductivity |  |  |
| Structure |  |  |