

|                                |                                 |                                                                                                                                                                                                                                                                                                                                                                                   |    |      |    |    |    |                            |                               |                                |                                 |                               |                                |                              |
|--------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|----|----|----|----------------------------|-------------------------------|--------------------------------|---------------------------------|-------------------------------|--------------------------------|------------------------------|
| 1+                             |                                 |                                                                                                                                                                                                                                                                                                                                                                                   |    |      |    | 0  |    |                            |                               |                                |                                 |                               |                                |                              |
| 1                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                   |    |      |    | 8  |    |                            |                               |                                |                                 |                               |                                |                              |
| 1                              | 2+                              | Oxidation Number                                                                                                                                                                                                                                                                                                                                                                  | 3+ | 4+/- | 3- | 2- | 1- | 8                          |                               |                                |                                 |                               |                                |                              |
| 1<br>H<br>Hydrogen<br>1.008    | 2-<br>2                         | Valence Electrons<br>Family                                                                                                                                                                                                                                                                                                                                                       | 3  | 4    | 5  | 6  | 7  | 4<br>He<br>Helium<br>4.003 |                               |                                |                                 |                               |                                |                              |
| 3<br>Li<br>Lithium<br>6.941    | 4<br>Be<br>Beryllium<br>9.0122  | <div>Some Polyatomic Ions and their Oxidation Numbers</div> <div>1+ ammonium (NH<sub>4</sub>)      1- acetate (C<sub>2</sub>H<sub>3</sub>O<sub>2</sub>)      2- carbonate (CO<sub>3</sub>)      3- phosphate (PO<sub>4</sub>)<br/>chlorate (ClO<sub>3</sub>)      sulfate (SO<sub>4</sub>)<br/>hydroxide (OH)<br/>nitrate (NO<sub>3</sub>)<br/>bicarbonate(HNO<sub>3</sub>)</div> |    |      |    |    |    |                            | 5<br>B<br>Boron<br>10.81      | 6<br>C<br>Carbon<br>12.011     | 7<br>N<br>Nitrogen<br>14.007    | 8<br>O<br>Oxygen<br>15.999    | 9<br>F<br>Fluorine<br>18.998   | 10<br>Ne<br>Neon<br>20.180   |
| 11<br>Na<br>Sodium<br>22.990   | 12<br>Mg<br>Magnesium<br>24.305 |                                                                                                                                                                                                                                                                                                                                                                                   |    |      |    |    |    |                            | 13<br>Al<br>Aluminum<br>26.98 | 14<br>Si<br>Silicon<br>28.086  | 15<br>P<br>Phosphorus<br>30.974 | 16<br>S<br>Sulfur<br>32.06    | 17<br>Cl<br>Chlorine<br>35.453 | 18<br>Ar<br>Argon<br>39.948  |
| 19<br>K<br>Potassium<br>39.098 | 20<br>Ca<br>Calcium<br>40.078   |                                                                                                                                                                                                                                                                                                                                                                                   |    |      |    |    |    |                            | 31<br>Ga<br>Gallium<br>69.72  | 32<br>Ge<br>Germanium<br>72.61 | 33<br>As<br>Arsenic<br>74.922   | 34<br>Se<br>Selenium<br>78.96 | 35<br>Br<br>Bromine<br>79.904  | 36<br>Kr<br>Krypton<br>83.80 |

|                              | Symbols & Oxidation # | Formula | Name of Compound |
|------------------------------|-----------------------|---------|------------------|
| 19. Sodium and chlorine      |                       |         |                  |
| 20. Magnesium and oxygen     |                       |         |                  |
| 21. Potassium and chlorate   |                       |         |                  |
| 22. Ammonium and hydroxide   |                       |         |                  |
| 23. Potassium and phosphorus |                       |         |                  |
| 24. Aluminum and bromine     |                       |         |                  |

25. An ion is an atom or group of atoms that has become electrically \_\_\_\_\_

26. When an atom loses an electron its charge is (**positive or negative**)

27. An ionic bond is the attraction between (**opposites, positive, neutral, or negative**) ions.

28. Ionic compounds are electrically (**charged, positive, neutral, or negative**).

29. The sum of the charges for an ionic compound is \_\_\_\_\_.

**The two answers must be in the right order.**

30. An ionic compound is the result of the bonding of a (**non-metal, metalloid, metal, noble gas**) with a (**non-metal, metalloid, metal**).