**Science 10 Chemistry Day 6 Ionic Compounds – Ion tiles**

*Keep the following rules in mind when making compounds:*

1. *You must have a rectangle when you are done.*
2. *When writing the formula write the positive ion (metal from left-hand side of staircase) followed by a subscript that tells how many tiles you used (no subscript if it’s only 1) and then the negative ion (non-metal from right-hand side of staircase) followed by a subscript that tells how many tiles you used (no subscript if it’s only 1).*
3. *What side does the positive ion go on?*
4. *What side does the negative ion go on?*

Ex:

|  |  |  |  |
| --- | --- | --- | --- |
| ***H+ and F1-*** |  | ***HF*** | ***Hydrogen fluoride*** |

**PART A – Write the formula for the following compounds.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Name** | **Formula** |  | **Name** | **Formula** |
|  | Potassium chloride |  |  | Hydrogen chloride |  |
|  | Potassium oxide |  |  | Magnesium chloride |  |
|  | Potassium nitride |  |  | Magnesium oxide |  |
|  | Sodium chloride |  |  | Magnesium nitride |  |
|  | Sodium oxide |  |  | Aluminum chloride |  |
|  | Sodium nitride |  |  | Aluminum nitride |  |
|  | Calcium chloride |  |  | Aluminum oxide |  |
|  | Calcium oxide |  |  | Iron (II) chloride |  |
|  | Calcium nitride |  |  | Iron (II) nitride |  |
|  | Boron hydride |  |  | Iron (II) oxide |  |

**PART B - Determine the formulae formed from the combination of the following ions. Record your answers in the space provided.**

a) H+ and Br1- b) K+ and S2-

c) K+ and I1- d) Cu+ and F1-

e) Fe2+ and S2- f) K+ and P3-

g) Cu+ and O2- h) Li+ and S2-

i) Cu+ and P3- j) Fe3+ and N3-

k) Al3+ and P3- l) Fe3+ and P3-

m) Cu2+ and Br1- n) Cu2+ and F1-

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

**JOURNAL 2: Ionic Compounds Writing Formulae \*submit for Power School marks**

1. When forming ionic compounds, writing their formulae and naming them, which comes first:
   1. The anion or the cation?
   2. The metal or the non-metal?
2. How do you identify that there is more than 1 atom of an ion present? Explain and give an example.
3. In Part B, what do you notice about copper (Cu) and iron (Fe)?

**Evaluation**

|  |  |  |  |
| --- | --- | --- | --- |
| **3** | **2** | **1** | **0** |
| **Journal is thoughtful and demonstrates application and understanding of concepts investigated.** | **Journal is complete; however, application of concepts investigated is not always clear.** | **Journal is missing some components and/or does not demonstrate understanding of concepts investigated.** | **Not completed.** |