|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Topic** | **Homework** | |
| **PA** | **H** |
| M – Jan 12 | Drawing Ionic Compounds and Formulas | 12-15 from last week’s agenda  + #1a-f, 2-3 | 12-15 from last week’s agenda + #1a-h, 2-3 |
| T – Jan 13 | Naming Ionic Compounds + Ionic Compounds with Transition Metals | 4-8 | 4-8 |
| W – Jan 14 | Ionic Compounds with Polyatomic Ions | 9-11, 12a-f, create polyatomic flashcards! | 9-11, 12a-j, create polyatomic flashcards! |
| Th – Jan 15 | Review | 13-19 | 13-19 |
| F – Jan 16 | Lab | Lab Conclusion Questions, Review agenda problems for Quest | Lab Conclusion Questions, Review agenda problems for Quest |

**Important Upcoming Dates:**

Martin Luther King Jr. Day (No School): Monday, January 19

Unit 5 Quest: Wednesday, January 21

Semester 1 Final Exams: Tuesday, January 27-Thursday, January 29

Quarter 2 Ends: Thursday, January 29

Grading Day (No School): Friday, January 30

**\*Complete the following problems on a separate sheet of paper in your chemistry notebook.**

1. Draw the Lewis dot structure for:
   1. Cesium e. B2O3
   2. Arsenic f. CaO
   3. NaBr g. Mg3N2
   4. MgCl2 h. Li3N
2. For each of the following groups, what type of ion will form, and what will the charge be?
   1. Alkali Metals b. Alkaline Earth Metals
3. Halogens c. Group 5A
4. Transition Metals
5. Are the following compounds ionic? Explain your answers.
   1. CaO
   2. KI
   3. H3
   4. CsBe
   5. Al2S3
6. When naming ionic compounds, which ion is named first?
7. Write the name of the following ionic compounds: (be sure to include the charge for transition metals)
   1. AlN e. CrO
   2. Na2O f. MnCl3
   3. MgF2 g. AgI
   4. Be3N2 h. Ni2S3
8. Write the formula for the following compounds:
   1. Calcium phosphide e. Copper (II) oxide
   2. Cesium oxide f. Lead (IV) oxide
   3. Boron chloride g. Manganese (III) sulfide
   4. Barium iodide h. Iron (III) nitride
9. What does the Roman numeral mean behind transition metals?
10. Why can transition metal ions have more than one charge?
11. Write the **chemical name** for the following compounds:
    1. Ca(NO3)2 c. Na2CO3
    2. NH4F d. Mg(CN)2
12. Write the **chemical formula** for the following compounds:
    1. Aluminum phosphate
    2. Calcium nitrite
    3. Sodium nitride
    4. Hydronium chlorite
13. Fill in the table below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cation**  **Formula** | **Charge** | **Anion Formula** | **Charge** | **Compound Formula** | **Compound Name** |
|  |  |  |  |  | Copper (I) chloride |
|  |  |  |  | PbS2 |  |
|  |  |  |  | Hg3N2 |  |
|  |  |  |  |  | Iron (III) sulfate |
| Fe2+ |  | Cl- |  |  |  |
|  |  |  |  | MnPO4 |  |
| Cr3+ |  | CH3COO- |  |  |  |

1. Draw a Lewis dot diagram representing the following ionic compounds:

a. Chromium (III) oxide d. Copper (II) chloride

b. Iron (III) sulfide e. Boron nitride

c. MgO f. Cr3P2

1. Write the chemical formula for the following compounds:
   1. Lithium acetate d. Beryllium oxide
   2. Manganese (IV) nitride e. Silver (I) sulfate
   3. Potassium permanganate f. ammonium nitrate
2. Name the following ionic compounds:
   1. Na2CO3 d. FeCl3
   2. MgBr2 e. Be2SO4
   3. FeCl2 f. Zn(OH)2
3. Identify the kinds of ions that form each ionic compound.
   1. calcium fluoride, CaF2
   2. aluminum bromide, AlBr3
   3. lithium oxide, Li2O
   4. aluminum sulfide, Al2S3
   5. potassium nitride, K3N
4. What the charge on an ion of sulfur? Why does it have this charge?
5. How many valence electrons does an aluminum ion have?
6. Describe 3 properties of ionic bonds.
7. Complete the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Ions in compound (including charges)** | | **Chemical Formula** | **Chemical Name** |
| **Cation** | **Anion** |
| A |  |  | CoS |  |
| B | Ca2+ | ClO3- |  |  |
| C |  |  |  | Rubidium Sulfate |
| D |  |  | MgOH |  |
| E | Zn2+ | PO43- |  |  |