|  |  |  |
| --- | --- | --- |
| *Naming Ions.*  CλeMis+ry: http://genest.weebly.com  Stop in for help every day at lunch and Tues &Thurs after school! |  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_  Period\_\_\_\_\_\_\_\_\_\_\_\_\_ |



1. This is a pretty good drawing of what Thomson thought a Plum Pudding NEUTRAL hydrogen atom looked like. It shows a positive circle with one electron in it.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | SO42- | NH4+ | He |
| This is (choose one)   1. an anion 2. neutral 3. a cation | This is (choose one)   1. an anion 2. neutral 3. a cation | This is (choose one)   1. an anion 2. neutral 3. a cation | This is (choose one)   1. an anion 2. neutral 3. a cation | This is (choose one)   1. an anion 2. neutral 3. a cation |

1. Go through the boxes below and do the following:

* circle any metal that has a variable charge
* cross out any polyatomic ion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CO32- | Al3+ | Fe2+ | PO43- | Au+ |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Go back through the boxes above and write the name. Remember the rules for naming:

* metal ions that **do** have a variable charge are the name of the element, followed by a roman numeral that tells the charge. For example Fe3+ is named *Iron(III)*
* Polyatomic ions just get whatever name is on your photocopied ion sheet given on Tuesday.
* metal ions that **don’t** have a variable charge are called by their element name. For example, Sr2+ is just named *strontium*.

1. Do steps #2and #3 on the boxes below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NO3- | Pb+ | V2+ | Au3+ | NH4+ |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Key to understanding the cartoons on this sheet: | | | | | | |
| 1 chlorine atom | 1 hydrogen atom | | 1 oxygen atom | 1 nitrogen atom | 1 carbon atom | |
|  |  | |  |  |  | |
|  | | 1. How many atoms, total, are in this box? \_\_\_\_\_ 2. How molecules are in this box? \_\_\_\_\_ 3. What is the formula of this compound? \_\_\_\_\_\_ 4. Which would be an acceptable way to say what's in this box   a) C8H10 b) C4H16 c) other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. What is the molecular weight of this substance? (the units of your answer should be in g/mole. Your first step should be to look up the g/mole in the periodic table) | | | |

Name the following compounds by combining the names you wrote earlier in this sheet:

1. Na2CO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. PbNO­3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Al3(CO3)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. VCO3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Fe(NO3)2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. (NH4)2CO3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Au(NO3)3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Fe3(PO4)2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. In the table below, fill in the formula of the ionic compound below its name:

|  |  |  |  |
| --- | --- | --- | --- |
| Zinc sulfate | ~~Cobalt (II) carbide~~ | ~~Silver selenide~~ | ~~Ammonium sulfide~~ |
| Lead (II) nitrate | Silver oxalate | ~~Lead (IV) oxide~~ | ~~Magnesium oxide~~ |
| Copper (I) sulfate | Copper (II) sulfite | Sodium bicarbonate | Strontium hypochlorite |
| ~~Iron (III) oxide~~ | Copper (I) chromate | Tin (II) sulfate | Potassium bisulfate |