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

1. In each box below, use the ‘atoms involved’ quantity to write a formula (like H2O) and a cartoon of the compound (letters in circles).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Atoms  involved | 1 calcium  1 oxygen | 2 lithium  1 oxygen | 2 aluminum  3 sulfur | 1 beryllium  1 sulfur |
| formula |  |  |  |  |
| particle diagram |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Atoms  involved | 2 boron  3 oxygen | 1 magnesium  1 oxygen | 2 sodium  1 sulfur |
| formula |  |  |  |
| particle diagram |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Atoms  involved | 1 magnesium  2 chlorine | 1 lithium  1 fluorine | 1 beryllium  2 bromine | 1 boron  3 chlorine |
| formula |  |  |  |  |
| particle diagram |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Atoms  involved | 1 sodium  1 chlorine | 1 calcium  2 bromine | 1 aluminum  3 chlorine |
| formula |  |  |  |
| particle diagram |  |  |  |

2. Write each formula from Question 1 in the boxes corresponding to its elements. For example, the compound formed from sodium and sulfur have been written in the box for sodium and in the box for sulfur. Now add the rest.

Helium

2

**He**

Lithium

3

**Li**

Beryllium

4

**Be**

Hydrogen

1

**H**

Nitrogen

7

**N**

Carbon

6

**C**

Boron

5

**B**

Neon

10

**Ne**

Fluorine

9

**F**

Oxygen

8

**O**

Sodium

11

**Na2S**

Magnesium

12

**Mg**

Silicon

14

**Si**

Aluminum

13

**Al**

Argon

18

**Ar**

Chlorine

17

**Cl**

Sulfur

16

**Na2S**

Potassium

19

**K**

Calcium

20

**Ca**

Arsenic

33

**As**

Germanium

32

**Ge**

Gallium

31

**Ga**

Krypton

36

**Kr**

Bromine

35

**Br**

Selenium

34

**Se**



Phosphorus

15

**P**

3 What patterns do you find in the formulas of the compounds formed in the table in #2?

4 Based on these patterns, predict the formulas of the compounds formed by the ions below

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Ratio of ions in compound* | | |
| Atoms involved | \_\_\_ potassium  \_\_\_ oxygen | \_\_\_ calcium  \_\_\_ sulfur | \_\_\_ gallium  \_\_\_ oxygen |
| formula |  |  |  |

5. How does a neutral atom become a positive ion? a negative ion?