

Writing Names of Molecular Substances

Chemistry: <http://genest.weebly.com>

Stop in for help every day at lunch and Tues & Thurs after school!

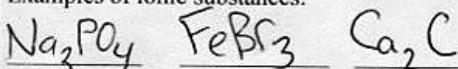


Name the
Period truth

A.

Definition: Ionic Substances contain a cation and anion. They usually have a metal with one or more nonmetals. Rare exception to this: Occasionally they have NH_4^+ instead of a metal. (For example, NH_4NO_3 is an ionic compound.)

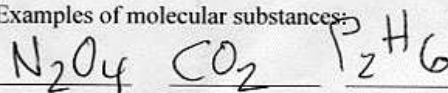
Examples of ionic substances:



B.

Definition: Molecular Substances contain only nonmetals.

Examples of molecular substances:



C.

How to name Ionic Substances:

Use all the rules we learned on our last test.

D.

How to name Molecular Substances:

mono/di/tri element mono/di/tri element ide

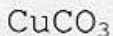
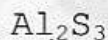
For example,

N_2H_5 is named dinitrogen pentoxide
and BrF is named bromine monofluoride

Don't use Roman numerals!

Omit "mono" if it is at the beginning of the name.

Instructions: Copy these six formulas into the appropriate two lists below.



List each ionic formula then write a name using the rules from last week:

- 1) Al_2S_3 aluminum sulfide
- 2) CuCO_3 copper carbonate

List each molecular formula, then write a name using the mono/di/tri rules we learned today:

- 3) N_2O_4 DINITROGEN TETROXIDE
- 4) H_2O dihydrogen monoxide
- 5) CO carbon monoxide
- 6) C_2H_6 dicarbon hexahydride

Instructions:

A) Circle any substance that is a molecular substance

B) Name each molecular substance you circled USING TODAY'S RULES.

1. CBr_4

Carbon tetra bromide

2. N_2P_3

dinitrogen triphosphide

3. PCl_3

phosphorous trichloride

4. MgCl_2

Magnesium chloride
[No Greek Prefixes NO Roman Numerals]

5. Hg_2O

MERCURY (I) oxide

6. NH_3

NITROGEN TRI hydride

7. CsBr

Cesium Bromide

8. AgF

SILVER FLUORIDE

9. SnI_2

Tin (II) iodide

10. Na_2O

sodium oxide

11. K_2S

potassium sulfide

12. ICl

iodine monochloride

13. CaBr_2

Calcium bromide

14. BaI_2

barium iodide

15. Al_2S_3

Aluminum Sulfide

16. N_2O

dinitrogen monoxide

17. GeH_4

~~Germanium (IV) hydride~~ SKIP!!

18. N_2Br_4

dinitrogen tetrabromide

19. P_2S_5

diphosphorus pentasulfide

20. SeO_2

Selenium dioxide

21. HgS

mercury (II) sulfide

22. CuI

Copper (I) iodide

C) Now go back and name each ionic substance USING LAST WEEK'S RULES

D) For each molecule below, write the formula and the name



dihydrogen monoxide



Carbon dioxide



dihydrogen dioxide



"oxygen"



???



dicarbon tetrahydride



carbon monoxide



carbon tetrahydride


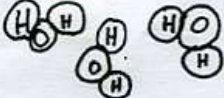
I'm here at lunch every day.



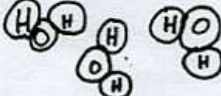
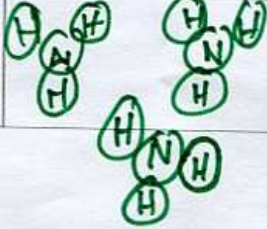
Come for just 5 minutes, it helps.

Purpose:

How do we make reaction equations obey the Law of Conservation of Mass?

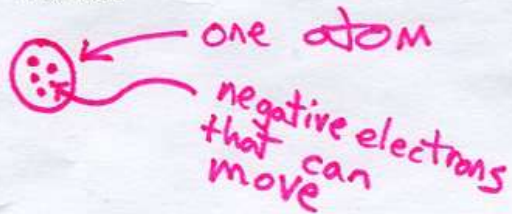
WARMUP :

letters and numbers	cartoon
NH_3	
H_2O	?
?	
3NH_3	?

letters and numbers	cartoon
NH_3	
H_2O	
$3\text{H}_2\text{O}$	
3NH_3	

#1

Features of Our Current Model of Matter

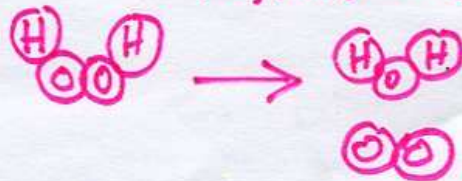


#2

Conservation of Mass

Matter can never be destroyed or created.

For example, this is impossible:



#3

Describe the reaction we just did

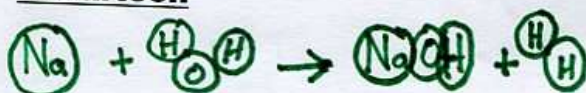
in words:

SODIUM + WATER → SODIUM HYDROXIDE + Hydrogen

in symbols

$\text{Na}_{(s)} + \text{H}_2\text{O}_{(l)} \rightarrow \text{NaOH}_{(aq)} + \text{H}_{2(g)}$

in cartoon



The Law of Conservation of Mass
says what we drew is
(possible / impossible) because...

The equation seems to show there were 2 hydrogen atoms before but 3 hydrogen atoms after....therefore what we drew is *impossible* because matter cannot be created out of nothing. This violates the Law of Conservation of Matter.