

Chemical Formulas

Chemical formulas are a simple & quick way to represent _____ & _____.

symbol for element _____

N

symbol for element _____

H

3

no small number here. This means _____ atom of _____.

This small number means _____ atoms of _____.

"N" is a(n) _____

"H" is a(n) _____

NH₃ is a(n) _____. It is _____

Draw it ⇒

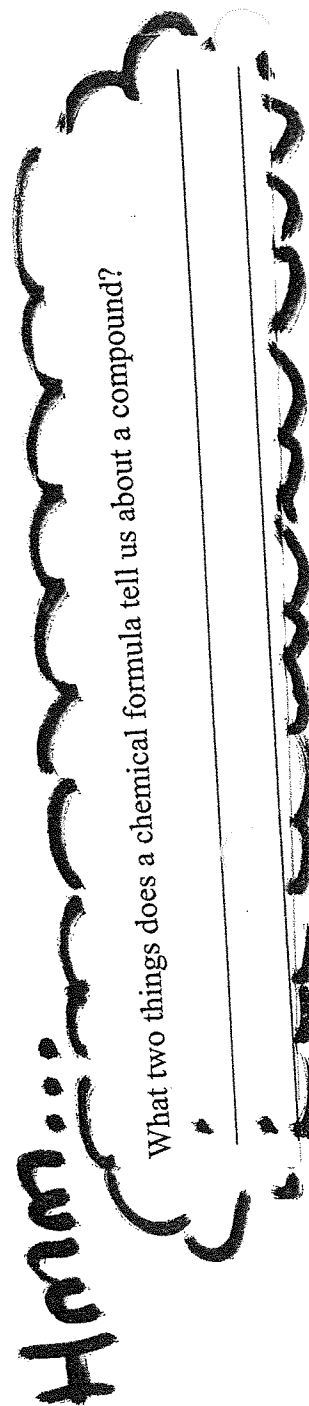
Counting Atoms

3. For each compound, list the element and the number of atoms of each element found in the compound. The first one has been done for you.

Name	Formula	Common name	Number of elements	Atoms in formula
acetic acid	$C_2H_4O_2$	found in vinegar	3	C = carbon 2 H = hydrogen 4 O = oxygen 2
paradichlorobenzene	$C_6H_4Cl_2$	mothballs		
pyrite	FeS_2	fool's gold		
sucrose	$C_{12}H_{22}O_{11}$	table sugar		
butane	C_4H_{10}	lighter fluid		
asbestos	$H_4Mg_3Si_2O_9$	insulation		
ascorbic acid	$C_6H_8O_6$	vitamin C		
sulfuric acid	H_2SO_4	battery acid		
ethanol	CH_3CH_2OH	rubbing alcohol		

4. Write a chemical formula for the following:

- (a) a molecule of carbon dioxide that is made up of one atom of carbon and two atoms of oxygen _____
- (b) a molecule of aspirin that is made up of nine atoms of carbon, eight atoms of hydrogen, and four atoms of oxygen _____
- (c) a molecule of sugar (glucose) that is made up of 6 atoms of carbon, 12 atoms of hydrogen, and 6 atoms of oxygen _____



PAGE **16** Name That Element!

DIRECTIONS: Match the word in the left column with the correct phrase in the right column.

- | | |
|------------------------|--|
| ___ 1. molecule | a. substance consisting of atoms of only one kind |
| ___ 2. photosynthesis | b. all known elements are arranged on this chart |
| ___ 3. group | c. smallest unit of an element |
| ___ 4. compound | d. positively charged particle inside the nucleus of an atom |
| ___ 5. atom | e. column on the periodic table |
| ___ 6. nonmetal | f. a classification of a cluster of elements on the periodic table
(Hint: Carbon is one.) |
| ___ 7. period | g. row on the periodic table |
| ___ 8. proton | h. substance made of two or more <i>elements</i> that are chemically combined |
| ___ 9. element | i. combination of two or more <i>atoms</i> that are bonded together |
| ___ 10. periodic table | j. process that plants use to change sunlight into food |

ANSWERS ON TE 8

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