

Counting Atoms

Name _____

Science 8 -- _____ Period, _____

Date _____

The formula for a compound indicates the elements that make up the compound and the number of atoms of each element present in the compound. These numbers of atoms are indicated by the use of small numbers called **subscripts**. Sometimes groups of atoms act as a single atom. When a subscript appears outside the parentheses, it indicates that all the elements inside the parentheses should be MULTIPLIED BY THAT SUBSCRIPT. For example, the formula Fe(OH)₃ indicates the combination of one atom of iron—Fe, three atoms of oxygen—O, and three atoms of hydrogen—H.

In the following examples, list each element symbol, element name, and number of atoms of each element present in the compound. The first example has been done for you.

NAME	FORMULA	ATOMS IN FORMULA
Limestone	CaCO ₃	Ca = calcium, 1 C = carbon, 1 O = oxygen, 3
Aspirin	C ₉ H ₈ O ₄	
Magnesium Hydroxide	Mg(OH) ₂	
Paradichlorobenzene	C ₆ H ₄ Cl ₂	
Acetic Acid (vinegar)	C ₂ H ₄ O ₂	
Trinitrotoluene (TNT)	C ₇ H ₅ (NO ₂) ₃	
Calcium dihydrogen phosphate	Ca(H ₂ PO ₄) ₂	
Pyrite	FeS ₂	
Sucrose (Sugar)	C ₁₂ H ₂₂ O ₁₂	
Heptane	C ₅ H ₁₂	
Sulfuric acid (used in batteries)	H ₂ SO ₄	
Cellulose	C ₅ H ₇ O ₂ (OH) ₃	
Asbestos	H ₄ Mg ₃ Si ₂ O ₉	
Dichlorodiphenyl-trichloroethane	C ₁₄ H ₉ Cl ₅	
Silicon dioxide (Sand)	SiO ₂	
Iron oxide (rust)	Fe ₂ O ₃	