SNC 1D

1. The **symbol** of an element represents one atom of that element.

2. A **subscript** is a number written at the **lower right** corner **behind the symbol** of an element. If there is more than one atom of the element, then a subscript is used to indicate the number of atoms.

e.g.,
$$H_2$$
=

3. A subscript outside a bracket multiples all the elements inside the brackets.

e.g., $Mg_3(PO_4)_2$ = Mg = P = O =

3. a. A **coefficient** is a number written **in front of a chemical symbol** and indicates the number of atoms of that element.

$$e.g., 3C =$$

b. A **coefficient** is a number written **in front of a chemical formula** and indicates the number of molecules of that compound.

Note: a coefficient multiples the number of atoms of each element in the formula

e.g.,

2 H ₂ O	
	molecules of H₂O
	H (hydrogen)
	O (oxygen)
3 CuS	O_4
	molecules of CuSO ₄
	Cu (copper)
	S (sulphur)
	O (oxygen)
4 Pb(N	IO ₃) ₂
,	molecules of Pb(NO ₃) ₂
	Pb (Lead)
	N (nitrogén)
	O (oxygen)

Counting Atoms

Worksheet

Complete the following charts by using the coefficients and subscripts listed in the in the compounds below.

Na₂CO₃		Ca ₃ (PO ₄) ₂	
Type of Atom	# of Atoms	Type of Atom	# of Atoms
			
Total		Total	
K₂CrO₄		3 BaCl₂	
Type of Atom	# of Atoms	Type of Atom	# of Atoms
Total		Total	
NH ₄ C ₂ H ₃ O ₂		4 Al ₂ (CO ₃) ₃	
Type of Atom	# of Atoms	Type of Atom	# of Atoms
		Total	
Total		, otal	
Pb(NO ₃) ₂		2 (NH ₄) ₂ Cr ₂ O ₇	
Type of Atoms	# of Atoms	Type of Atom	# of Atoms
Total		Total	