Basic Rules for Writing Chemical Formulas

Reference section 3.2 in the text Chemical Interactions

- 1. Count capital letters (like you did in kindergarten) for elements Each capital letter represents 1 atom of 1 element
- 2. Coefficient (Big number) tells how many molecules. Use distributive property for coefficients to apply to each element
- 3. Subscript follows after its affected element and tells they are connected.
- 4. Apply order of operations (PEMDAS) and the distributive property.

*In a chemical equation, remember to apply <u>the Law of Conservation of Mass</u>: the left must have the same number of atoms of each element as the right

For the following examples in the Table below ask yourself...

How many *elements*? (in either reactants <u>or</u> products)

How many *atoms*? (in either reactants or products)

Now try these...How many *elements* and *atoms*??

Formula	Elements (count capital letters)	Atoms (total number of all)
NaOH		
2HCl		
H₂SO₄		
5HNO ₃		
SiO₂ (sand)		
5H₂O		
K ₂ S ₂ O ₈		
Pb(NO ₃) ₂		
$CaCO_3 + 2HCI \rightarrow CaCl_2 + H_2O + CO_2$ Use Reactants OR Products NOT BOTH!!		