

Chemical Equations

How to write and balance chemical equations

*** In a chemical equation, we have both reactants and products.**

*** Reactants \rightarrow Products**

*** Reactants and products are separated by a \rightarrow or yield.**

* More than one reactant or more than one product is separated by a +

* Reactant + Reactant \rightarrow Product + Product

* Example:



Example

- * states of matter are always written in chemical formulas
- * (s) = solid
- * (g) = gas
- * (l) = liquid
- * (aq) = aqueous

Balancing Equations

Law of Conservation of Mass

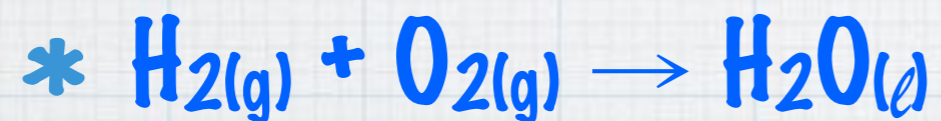
- * **The Law of Conservation of Mass:**
that mass is neither created nor destroyed in any chemical reaction.

Law of Conservation of Mass

- * Because of this principle, equations must be **BALANCED**.
- * Same number of atoms on each side of the equation.

Steps for Balancing Equations

* 1) Write the skeleton equation:



Steps for Balancing Equations

* 2) Count the number of atoms on each side



H: 2	H: 2
O: 2	O: 1

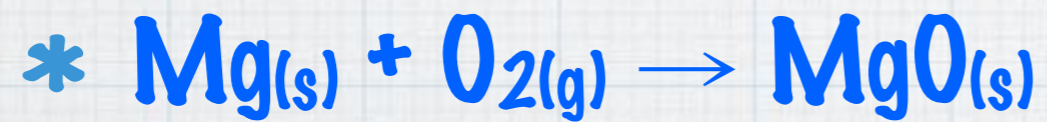
Steps for Balancing Equations

* 3) Use coefficients to balance the total number of atoms

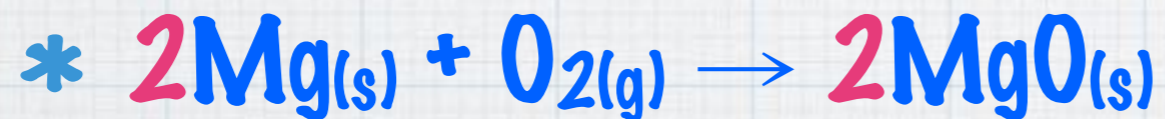
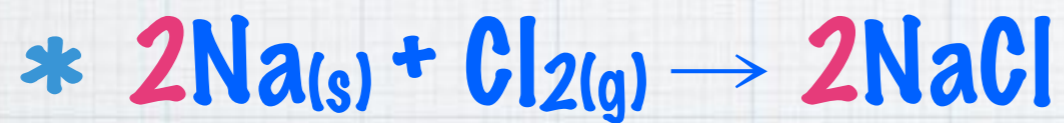
* NOTE: You can change the coefficients, not the subscripts.



Try these...



Try these . . .



Now try these . . .

