

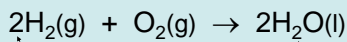
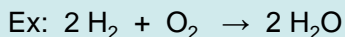
Chemical Equation

Gives a description of a chemical reaction

Reactants → Products

“yields”

“produces”



Coefficient

ratio of molecules in a reaction

Subscript

ratio of atoms in a molecule

Physical State

(s) or (c) = solid (l) = liquid (g) = gas (aq) = aqueous

Other Symbols

Δ = heat applied
(above the arrow)

\downarrow = precipitate
(after a product)

\uparrow = gas
(after a product)

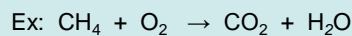
Law of Conservation of Mass

Matter cannot be lost or gained
in a chemical reaction

You must account for every atom

Balance the Equation

Must represent the same number and kind
of atoms on the left and right of the arrow

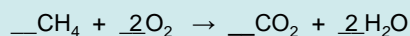


H lost? O created?

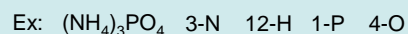
Rules:

Subscripts cannot change

Coefficients change to balance

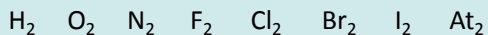


Must be able to count atoms in a formula:



Diatomic Molecules

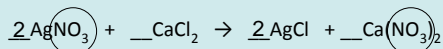
Some elements exist in pairs when alone
(not in a compound)



(HON and the Halogens)

• **Technique Tip #1:**

Work with polyatomic ions as groups



• **Technique Tip #2:**

If you notice one molecule is particularly
larger than the others, start with it first

• **Technique Tip #3:**

Use a pencil