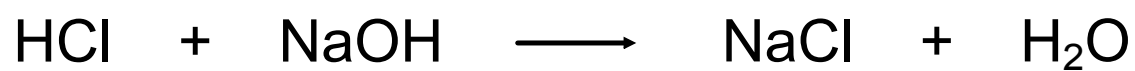


Chemical Equations

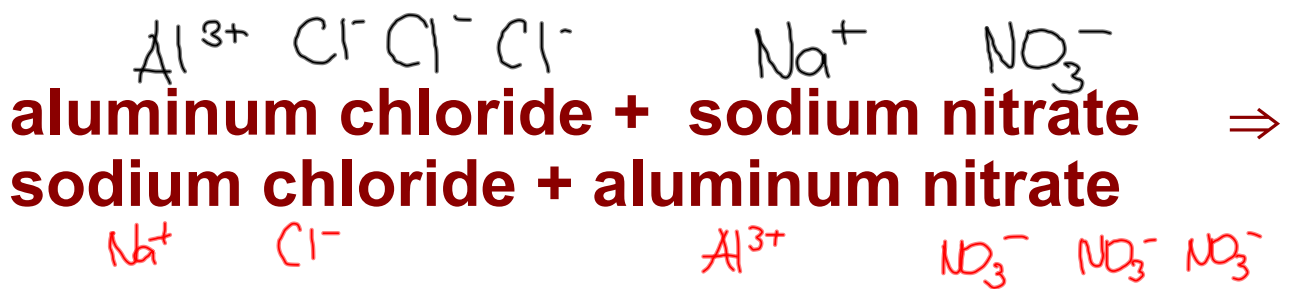


"reactants"
(starting materials)

"products"
(finishing materials)

.

Word Equations



Chemical Reactions

What is a chemical reaction?

- NEW materials

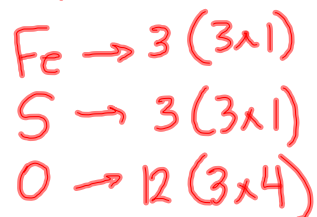
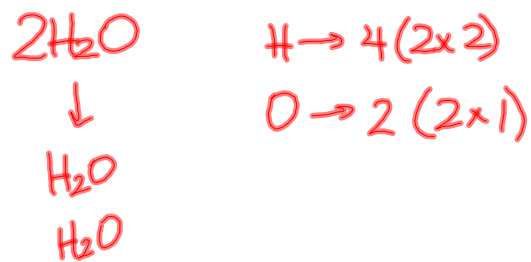
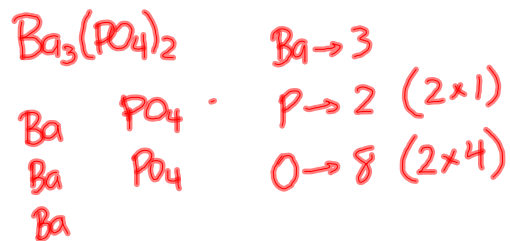
What is a chemical equation?

What is a word equation?

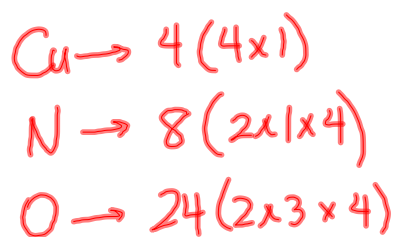
Ca

N₂

↳ two atoms of nitrogen



4Cu(NO₃)₂



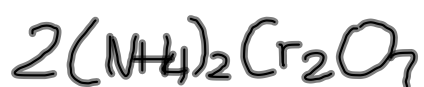
Counting Atoms Sheet



$$\begin{array}{r} \text{N} \rightarrow 1 \\ \text{H} \rightarrow 7 \\ \text{C} \rightarrow 2 \\ \text{O} \rightarrow 2 \\ \hline 12 \end{array}$$



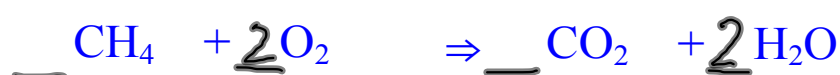
$$\begin{array}{r} \text{Al} \rightarrow 8 \\ \text{C} \rightarrow 12 \\ \text{O} \rightarrow 36 \\ \hline 56 \end{array}$$



$$\begin{array}{r} \text{N} \rightarrow 4 \\ \text{H} \rightarrow 16 \\ \text{Cr} \rightarrow 4 \\ \text{O} \rightarrow 14 \\ \hline 38 \end{array}$$

Balancing Chemical Equations

Skeleton Chemical Equation



Count the Atoms!

ATOM	REACTANTS	PRODUCTS
C	1	1
H	4	2 4
O	2	3

Tips for balancing chemical equations:

- You can only add coefficients (number in front of formula)
- Balance each atom individually, unless it appears to be a polyatomic compound
- Choose the 'easy' atoms first

CH_4

O_2

O_2

CO_2

H_2O

H_2O