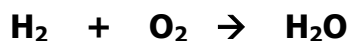


Hydrogen reacts with oxygen to form water.

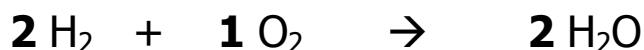


What's wrong? It doesn't "balance."

Aim: How do we balance chemical equations?

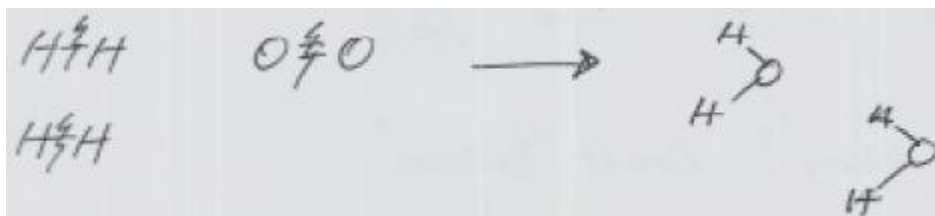


- 1) Don't change the subscripts.
- 2) Don't add/subtract substances.
- 3) Just multiply the substances in the equation by changing the **coefficients**.



The "1" in front of O_2 is assumed.

If you're having a problem, picture this:



Let's do an atom count.

Check: **coefficient x subscript = # atoms**

$$4\text{-H} + 2\text{-O} = 4\text{-H} + 2\text{-O}$$

Δ

It's Balanced!

A chemical equation must balance to satisfy the **Law of Conservation** which states that matter and energy cannot be created nor destroyed. Therefore, the total number of atoms on both sides of the equation must be equal.

Let's do some more problems. Go to Balancing Act 1.

RCHEM 2/Chille

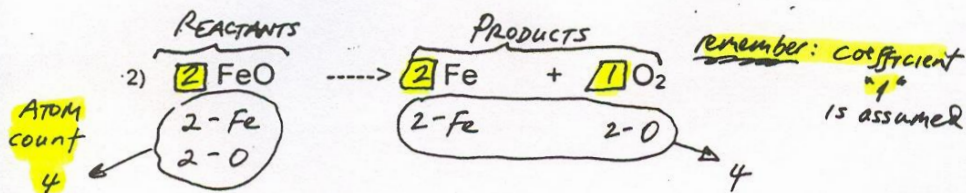
BALANCING ACT 1

Balance the following chemical equations.

Sum of Coeff Rxn Type



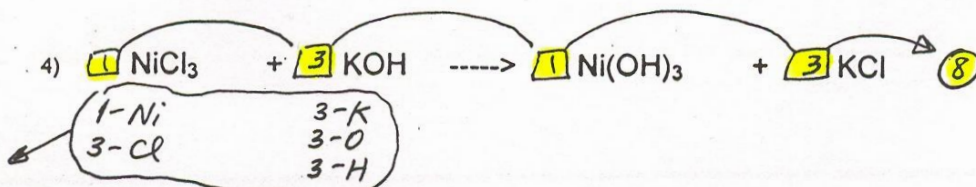
(4)



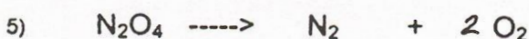
(5)



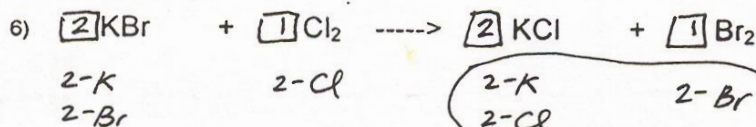
(5)



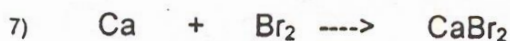
(4)



REACTANTS

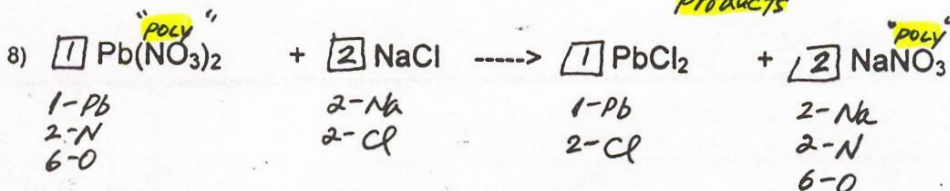


(6)

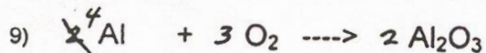


6 atoms of products

(3)

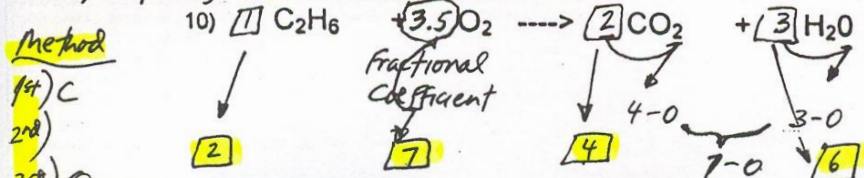


(6)



(9)

Example of a Combustion Reaction



(19)

4th) If fractional coefficient, double everything.