Balancing Equations with Dr. B

Video Workbook with Dr. B.

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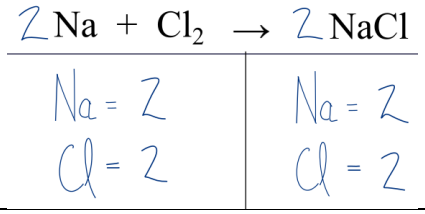
We balance equations to find the **ratios** of each substance in the equation.

When we balance equations, you can *only* change the coefficients. *Never* change the subscripts.

The goal is to have the same number of each type of atom on both sides of the equation.

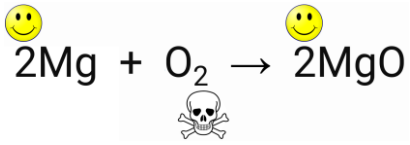


The equation is balanced because there are 2 Na atoms and 2 Cl atoms in the reactants. We also have 2 Na atoms and 2 Cl atoms in the products.

Watch this video, it may be all you need to learn to balance!

[How to Balance Equations in Five Easy Steps]

Remember only change the coefficients!



Practice with Video Explanations

Easy

$Mg + O_2 \rightarrow MgO$
https://youtu.be/AZmkb9jaAmI

$CaCO_3 \rightarrow CaO + CO_2$
https://youtu.be/VsMYoTOzw0o

$H_2 + Cl_2 \rightarrow HCl$
https://youtu.be/L3m9fXnNpok

Medium

$N_2 + H_2 \rightarrow NH_3$
https://youtu.be/qf_aTOEa7Zs

How to Balance $KClO_3 \rightarrow KCl + O_2$
https://youtu.be/oRoHl6pirQ8

$Al_2(SO_4)_3 + NaOH \rightarrow Al(OH)_3 + Na_2SO_4$
https://youtu.be/hqDReNsPdfY

More Challenging

$NH_3 + O_2 \rightarrow NO + H_2O$
https://youtu.be/xffqRUK1RwE

$CH_3COOH + CaCO_3 \rightarrow (CH_3COO)_2Ca + CO_2 + H_2O$
https://youtu.be/xoRG0eYghQs

$C_4H_{10} + O_2 \rightarrow CO_2 + H_2O$
https://youtu.be/2oEzpBZiOm4

Answers Below:

More practice balancing equations: Guided Practice Practice Video

Questions people ask…

- Why do we balance equations in the first place?
- How do I balance equations with polyatomic ions?
- How do I balance equations for combustion reactions?
- What about balancing net ionic equations?

Report errors and suggestions to DrB@breslyn.org

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