

Problem 1

Balancing Chemical Equations – Practice

1.1 1.2 *Balancing C...ice

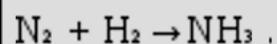
Balance Formula Edit

$$2(\text{CH}_3)_2 + 7\text{O}_2 \rightarrow 4\text{CO}_2 + 6\text{H}_2\text{O}$$

12 H 12 H
4 C 4 C
14 O 14 O

Science Nspired

Identify the reactant(s) of the reaction

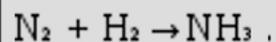


N₂

H₂

NH₃

Identify the product(s) of the reaction



N₂

H₂

NH₃

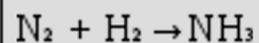
What do the subscripts in an equation represent?

The number of each reactant/product.

The number of each atom in a molecule.

The mass of each element.

In the following equation, how many atoms of hydrogen are present in the reactants?

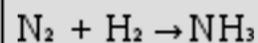


1

2

3

In the following equation, how many atoms of hydrogen are present in the product?

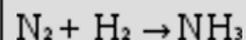


1

2

3

This equation is balanced.



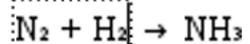
True

False

The tool on the following page enables you enter and balance chemical equations.

Clicking the **Balance** mode allows you to balance the chemical equation.

Use the up and down arrows to adjust the coefficients that appear in front of each reactant or product.

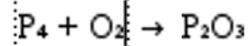
Edit Chemical Formula **Balance**

What do the coefficients in an equation represent?

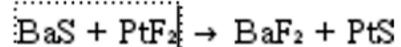
- The number of each reactant/product.
- The number of each atom in a molecule.
- The mass of each element.

Problem 2

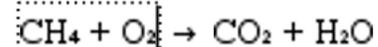
On the next 8 pages, balance each equation.

Edit Chemical Formula **Balance**

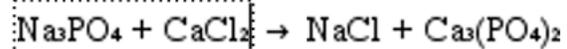
Edit Chemical Formula **Balance**



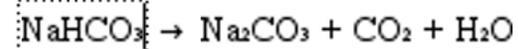
Edit Chemical Formula **Balance**



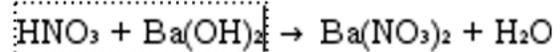
Edit Chemical Formula **Balance**



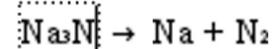
Edit Chemical Formula **Balance**



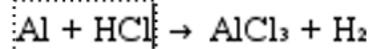
Edit Chemical Formula **Balance**



Edit Chemical Formula **Balance**



Edit Chemical Formula **Balance**



Problem 3

Identify the reactants in the chemical equation
 $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$.

CH_4

O_2

CO_2

H_2O

Select all statements that are true.

The type and number of atoms must be the same on both sides of the equation.

The mass of the reactants and the mass of the products are the same.

An equation is balanced by writing whole numbers before a chemical symbol or formula.

An equation is balanced by changing subscripts in chemical formulas.

Select the equation that is NOT balanced.

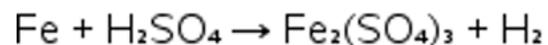
$2\text{NaBr} + \text{Cl}_2 \rightarrow 2\text{NaCl} + \text{Br}_2$

$\text{C}_2\text{H}_6 + 5\text{O}_2 \rightarrow 6\text{H}_2\text{O} + 2\text{CO}_2$

$3\text{CaCl}_2 + 2\text{Na}_3\text{PO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + 6\text{NaCl}$

$2\text{Al} + 6\text{HCl} \rightarrow 2\text{AlCl}_3 + 3\text{H}_2$

Balance the given equation.



Now practice some more...

Balance the following equations by writing the formulas and entering them on page 3.6.

11. Copper + silver nitrate → silver + copper (II) nitrate

Symbols: →

12. Hydrochloric acid + sodium chloride → sodium chloride + water

Symbols: →

13. Calcium hydroxide → calcium oxide + water

Edit Chemical Formula **Balance**

Formula + Formula → Formula + Formula

The end.