

Classifying Chemical Reactions

Grade Homework
Types of Reactions
Homework
Grade Homework

Balancing Equations Practice

Grade Homework

Questions To Ask:

Types of Reactions:

One reactant?

Yes

Decomposition Reaction:
A reactant compound breaks up into multiple products.
 $AB \rightarrow A + B$
Ex. $2MgO \rightarrow 2Mg + O_2$

No

One product?

Yes

Addition (or Synthesis) Reaction:
Reactant elements combine to make a single compound.
 $A + B \rightarrow AB$
Ex. $2Mg + O_2 \rightarrow 2MgO$

No

Oxygen a reactant and water a product?

Yes

Combustion Reaction:
A fuel burns in the presence of Oxygen to produce water, energy, and often CO_2 .
 H_2 or $C_xH_x + O_2 \rightarrow H_2O + ?$
Ex. $H_2 + O_2 \rightarrow H_2O$ or

No

An element and a compound make a different element and compound?

Yes

Single Displacement Reaction:
An element takes the place of a different element in a compound.
 $A + BC \rightarrow B + AC$
Ex. $Mg + BeO \rightarrow Be + MgO$

No

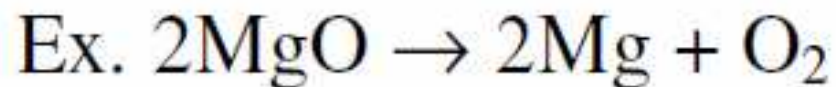
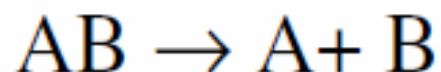
Two compounds make two different compounds

Yes

Double Displacement Reaction:
Elements in two reactant compounds switch places.
 $AB + CD \rightarrow AD + CB$
Ex. $MgO + BeS \rightarrow MgS + BeO$

Decomposition Reaction:

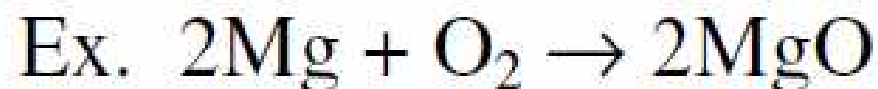
A reactant compound breaks up
into multiple products.



Is there only one Reactant?

Addition (or Synthesis) Reaction:

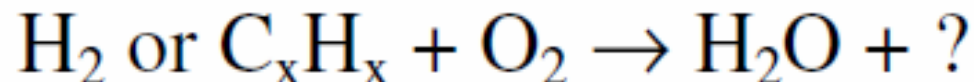
Reactant elements combine to
make a single compound.



Is there only one product?

Combustion Reaction:

A fuel burns in the presence of Oxygen to produce water, energy, and often CO₂.



Is oxygen a reactant and water a product?

Single Displacement Reaction:

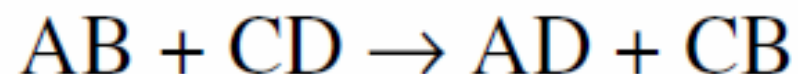
An element takes the place of a different element in a compound.



Does an element and a compound make a different element and compound?

Double Displacement Reaction:

Elements in two reactant
compounds switch places.



**Do two compounds make two
different compounds?**

- We will grade this homework in 30 minutes!!!

Homework