

Exercise walk-through

4.7

Types of Chemical Reactions

AP Chemistry

Types of chemical reactions

Knowing the family helps you predict the products:

Synthesis : $A + B \rightarrow AB$

Decomposition :
 $AB \rightarrow A + B$

Precipitation: an insoluble solid
forms

Acid-base: transfers a **pro-**
ton H^+

Redox: transfers **electrons**

Exercises 2.1-2.3

2.1 Classify $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$.

[1]

2.2 Classify $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$.

[1]

2.3 What are the products of complete combustion of a hydrocarbon?

[2]

Exercises 2.1-2.3

2.1 Classify $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$. [1]

2.1

- Decomposition
-

2.2 Classify $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$. [1]

2.2

- Acid-base (neutralization)
-

2.3 What are the products of complete combustion of a hydrocarbon? [2]

2.3

- Carbon dioxide and water

Exercise 3.1

3.1 A reaction $A + B \rightarrow AB$ is a

[1]

☐

A decomposition

B synthesis

C combustion

D precipitation

Exercise 3.1

3.1 A reaction $A + B \rightarrow AB$ is a

[1]

☐

A decomposition

B synthesis

C combustion

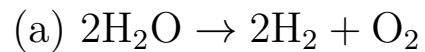
D precipitation

3.1 B

- synthesis (combination)

Exercise 3.2 (a)

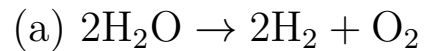
3.2 Classify each reaction:



[1]

Exercise 3.2 (a)

3.2 Classify each reaction:



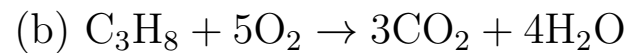
[1]

(a)

- decomposition

Exercise 3.2 (b)

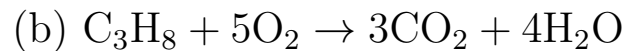
3.2 Classify each reaction:



[1]

Exercise 3.2 (b)

3.2 Classify each reaction:



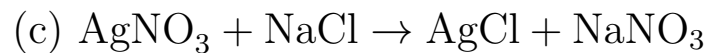
[1]

(b)

- combustion

Exercise 3.2 (c)

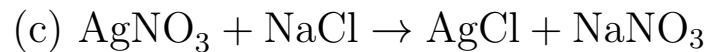
3.2 Classify each reaction:



[1]

Exercise 3.2 (c)

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[1]

(c)

- precipitation

Exercise 3.3

3.3 Write the balanced equation for the complete combustion of ethane, C_2H_6 . [3]

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3.3

