

ACP - Unit 2 - Chemical Reactions Practice

Reaction Balance the Reaction	Chemical or Physical Change	Reactant(s) include the physical state	Product(s) include the physical state
<u>1</u> $N_2(g)$ + <u>3</u> $H_2(g)$ → <u>2</u> $NH_3(g)$	Chemical	$N_2(g)$ $H_2(g)$	$NH_3(g)$

Describe what is happening by:

Classify the reactant or product as an atomic element, molecular element or a compound

molecular element molecular element → molecular compound

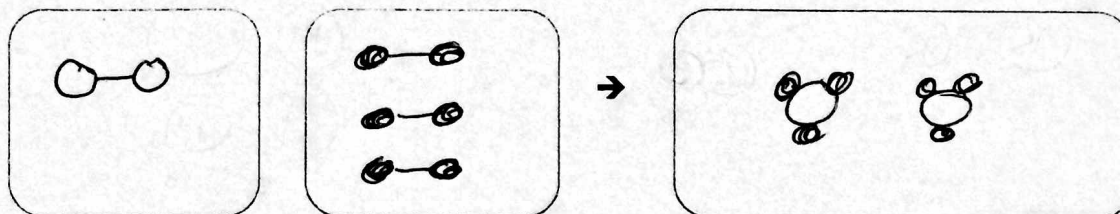
Describe the state of each reactant and product

gas gas → gas

Discuss the ratio between each of the reactants and product

1 nitrogen molecule with 3 hydrogen to form 2 nitrogen trihydride

Draw what is happening



Reaction Balance the Reaction	Chemical or Physical Change	Reactant(s) include the physical state	Product(s) include the physical state
<u>1</u> $H_2O(s)$ → <u>1</u> $H_2O(l)$	Physical phase change	$H_2O(s)$	$H_2O(l)$

Describe what is happening by:

Classify the reactant or product as an atomic element, molecular element or a compound

molecular compounds → molecular compounds

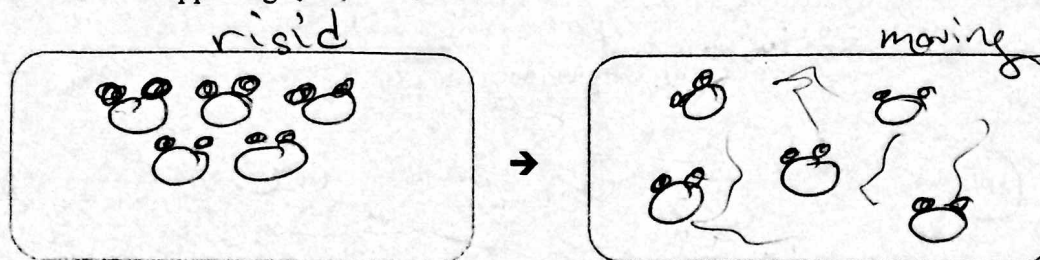
Describe the state of each reactant and product

solid → liquid

Discuss the ratio between each of the reactants and product

1 solid water melts to form 1 liquid water

Draw what is happening



Reaction Balance the Reaction	Chemical or Physical Change	Reactant(s) include the physical state	Product(s) include the physical state
$2 \text{K(s)} + 1 \text{Cl}_2(\text{g}) \rightarrow 2 \text{KCl(s)}$	Chemical	K(s) $\text{Cl}_2(\text{g})$	KCl(s)

Describe what is happening by:

Classify the reactant or product as an atomic element, molecular element or a compound

atomic element molecular element \rightarrow ionic compound

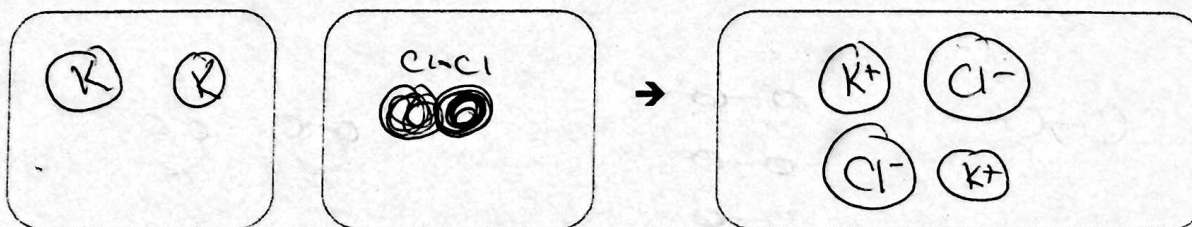
Describe the state of each reactant and product

Solid gas \rightarrow Solid

Discuss the ratio between each of the reactants and product

2 potassium atoms combine with 1 chlorine molecule \rightarrow to form 2 potassium chloride

Draw what is happening



Reaction Balance the Reaction	Chemical or Physical Change	Reactant(s) include the physical state	Product(s) include the physical state
$1 \text{Mg(s)} + 2 \text{HCl(aq)} \rightarrow 1 \text{H}_2(\text{g}) + 1 \text{MgCl}_2(\text{aq})$	Chemical	Mg(s) HCl(aq)	$\text{H}_2(\text{g})$ $\text{MgCl}_2(\text{aq})$

Describe what is happening by:

Classify the reactant or product as an atomic element, molecular element or a compound

atomic element molecular compound \rightarrow molecular element ionic compound

Describe the state of each reactant and product

Solid aqueous - dissolved in water \rightarrow gas aqueous - dissolved in water

Discuss the ratio between each of the reactants and product

1 magnesium atom combines with 2 molecules of hydrochloric acid \rightarrow 1 hydrogen and 1 magnesium chloride

Draw what is happening

