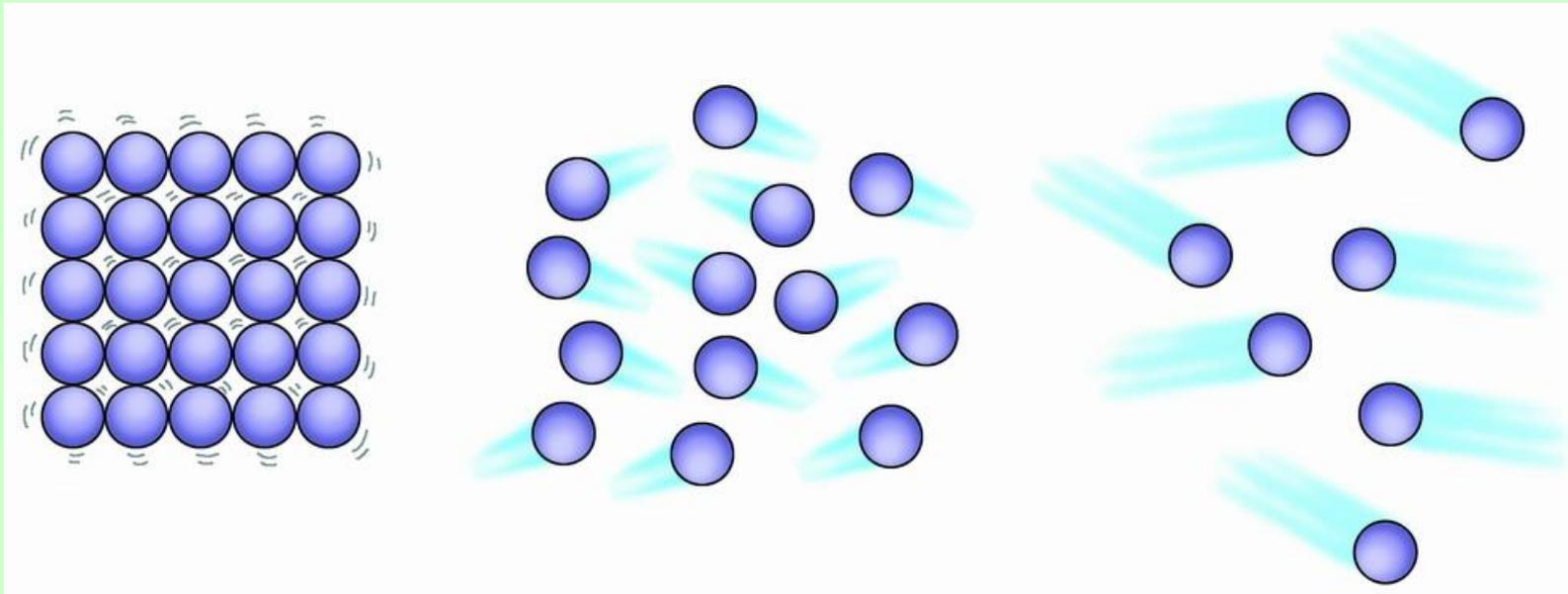


Do-now:

**Solid, Liquid, Gas  
states of matter?**

Particles are far apart and move freely and randomly around their container

**3. Draw an element and compound.**



## Learning Intent

Understand what reactions are and how they occur

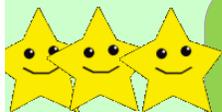
## Success Criteria



State what happens during chemical reactions

1

Identify the reactants and products

2

Determine the number of atoms during a chemical reaction

3-4

# How can you tell if a reaction has taken place?

Thinking time



# L1: State what happens during chemical reactions



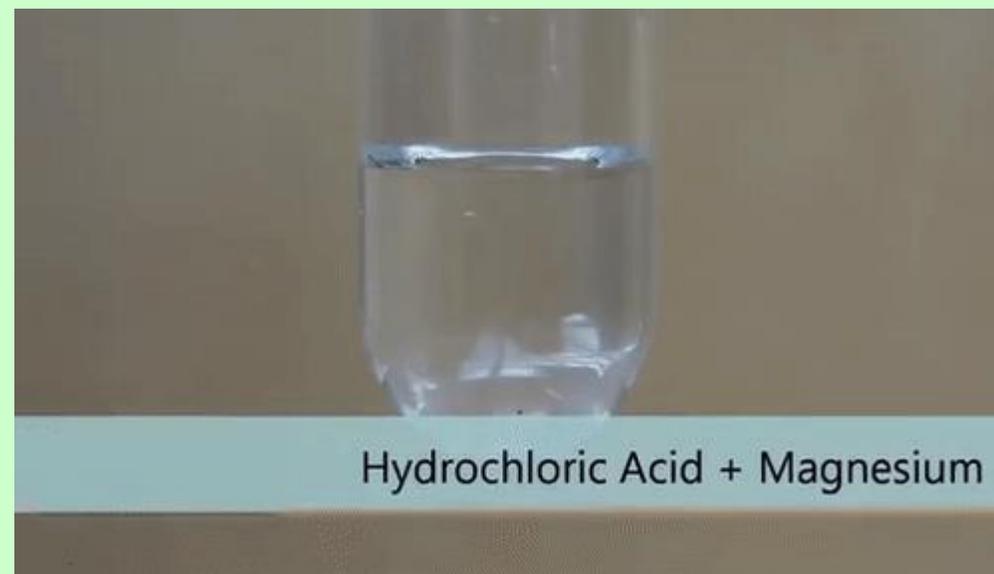
**Temperature  
change/light**



**Colour  
change**



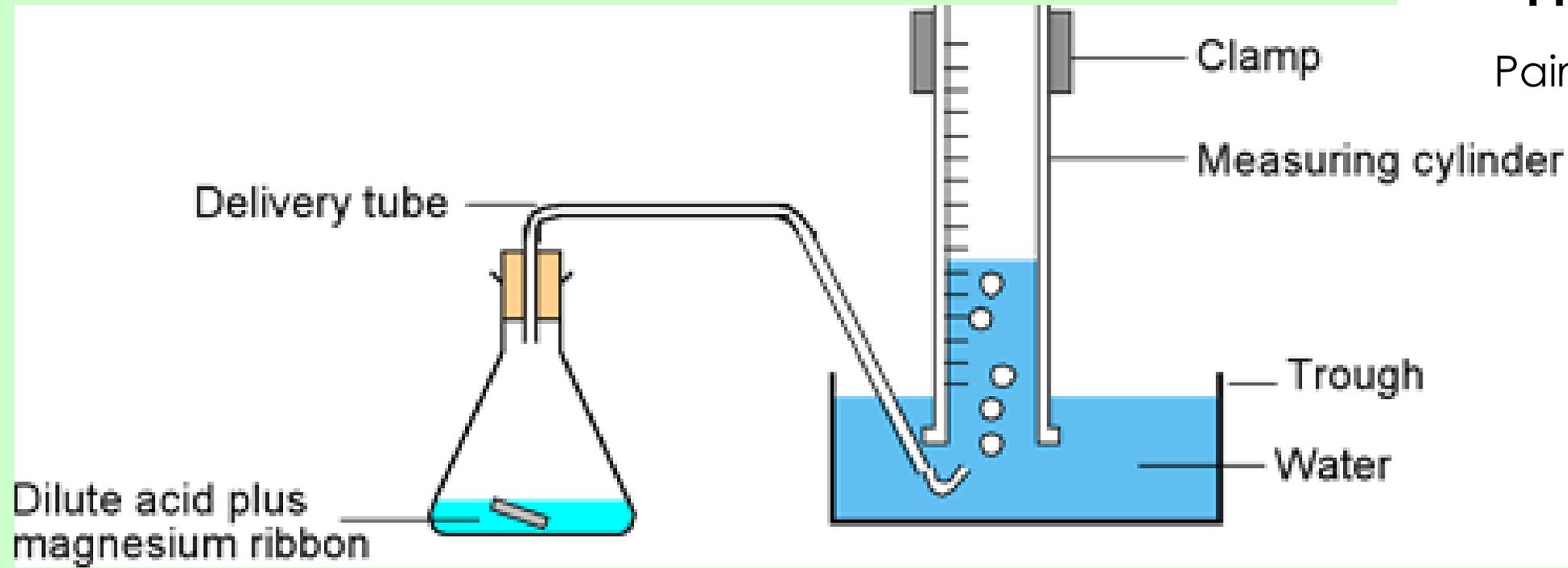
**New  
substance  
forms**



**Gas produced**

## L2/3: Identify products and reactants and number of atoms

Practice with aid



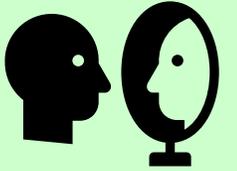
**Write word equation into your book.**

Magnesium + Hydrochloric acid → Magnesium chloride + Hydrogen

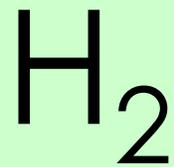
**Reactants**

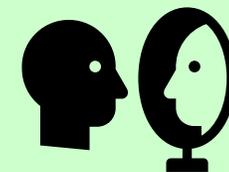
**Products**



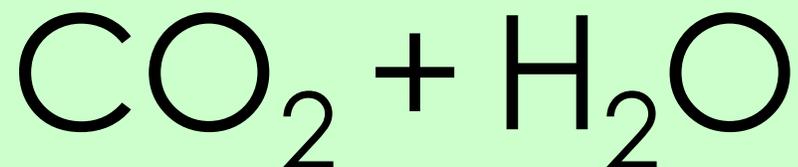
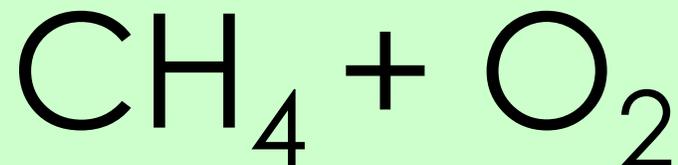
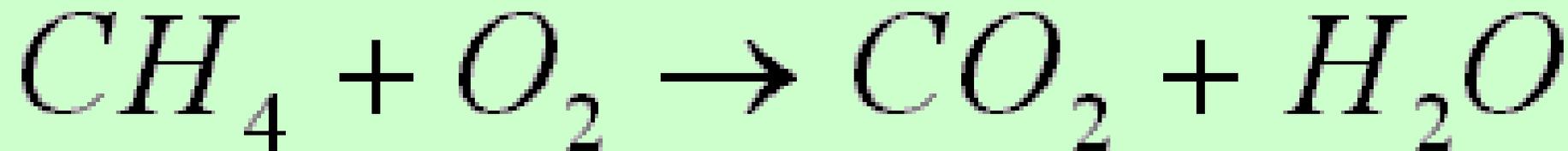


Which of these is the product?

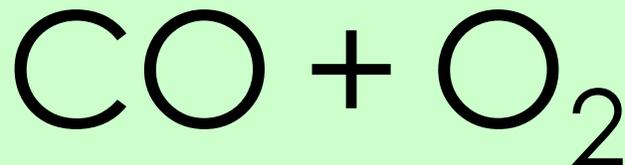
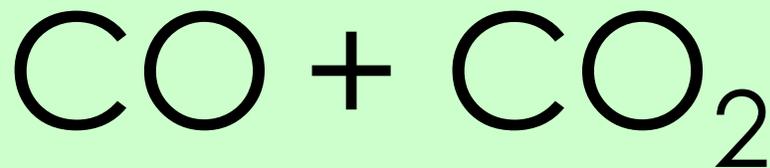
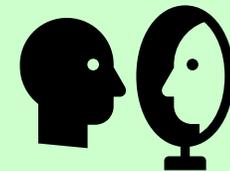


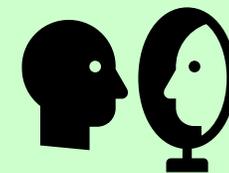


Which of these are the reactants?

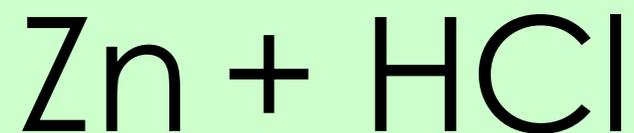


Which of these are the reactants?



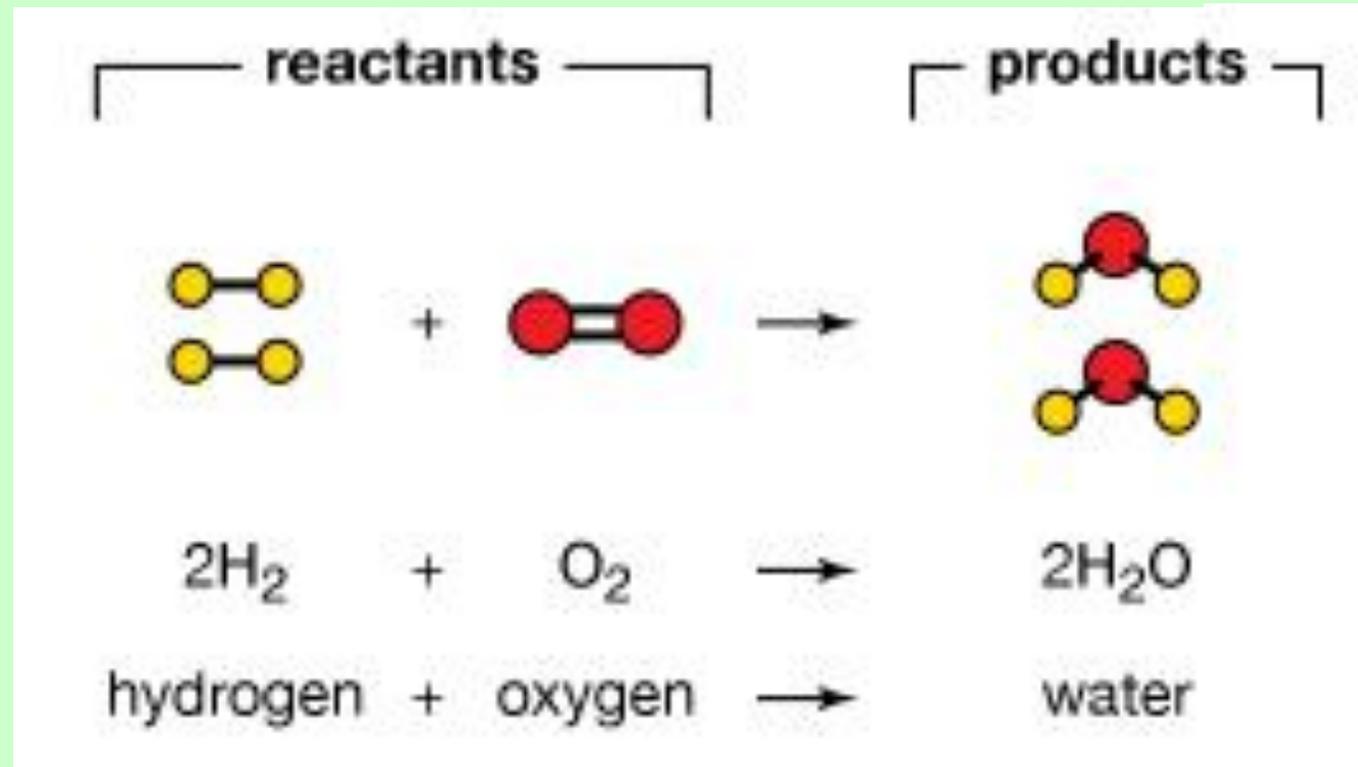


Which of these is the product?



## L2/3: Identify products and reactants and number of atoms

Thinking time



How many atoms of hydrogen at the start?

How many oxygen atoms at the start?

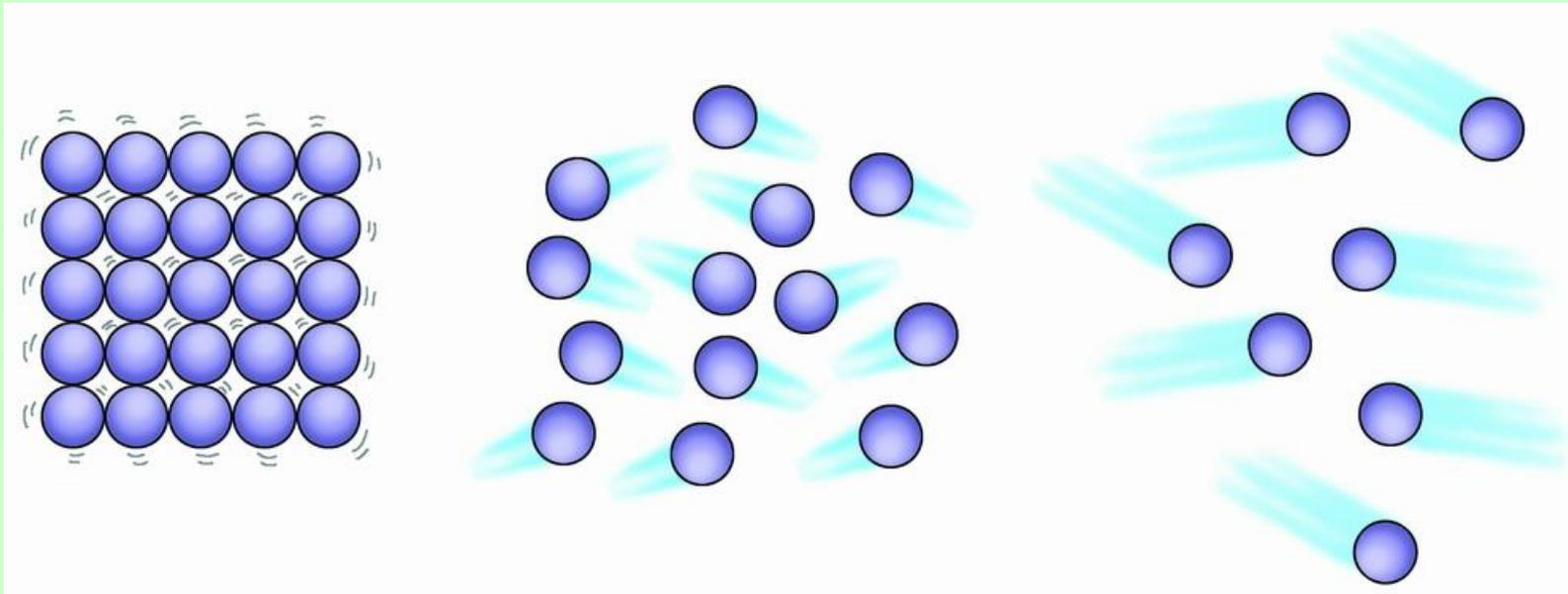
How many are there at the end?

Do-now:

**Solid, Liquid, Gas  
states of matter?**

Particles are far apart and move freely and randomly around their container

**3. Draw an element and compound.**



## Learning Intent

Understand what reactions are and how they occur

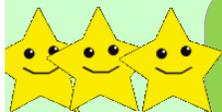
## Success Criteria



State what happens during chemical reactions

1

Identify the reactants and products

2

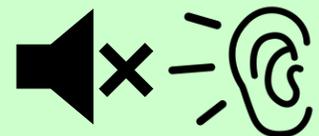
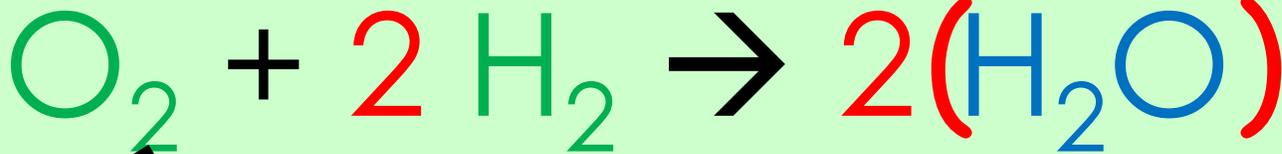
Determine the number of atoms during a chemical reaction

3-4

Reactants

Products

New learning



Oxygen

2 x 1

Hydrogen

2 x 2 =  
4

Oxygen

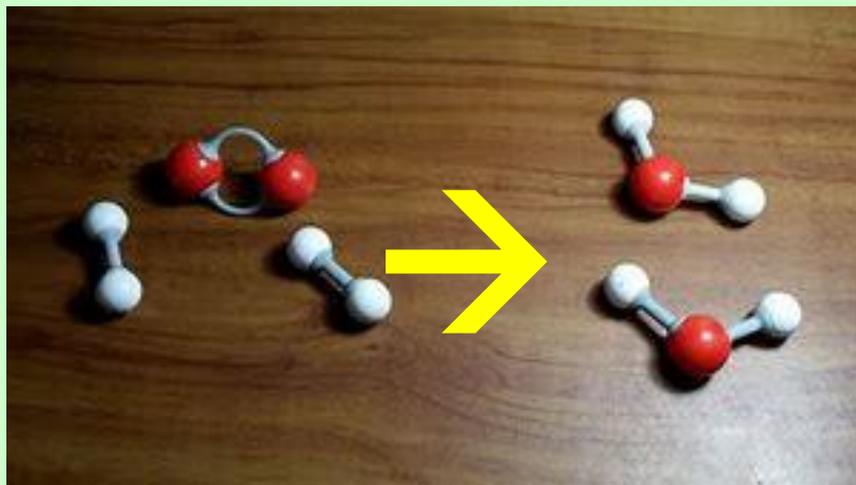
2 x 1

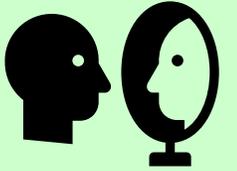
= 2

Hydrogen

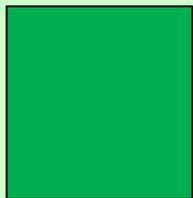
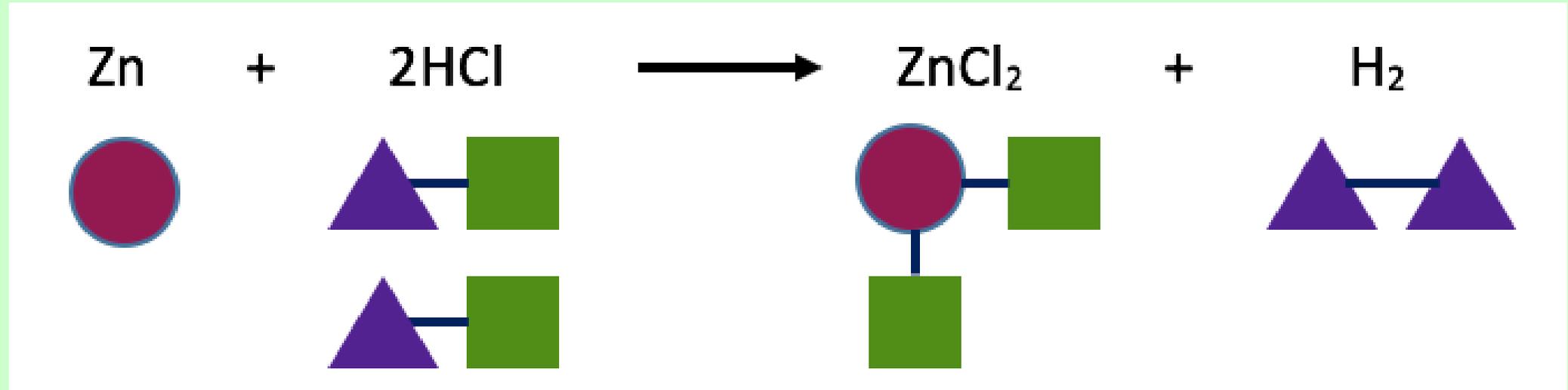
2 x 2

= 4

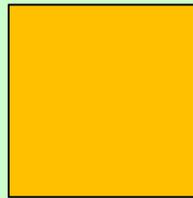




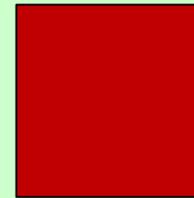
# How many atoms of zinc reacted?



4

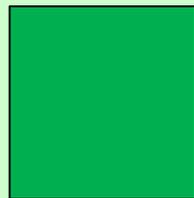
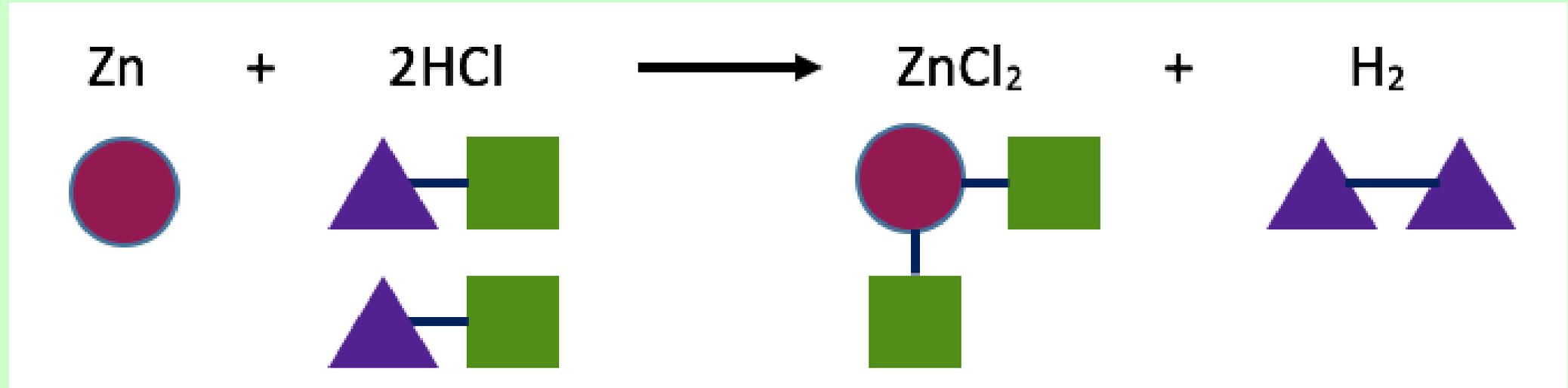
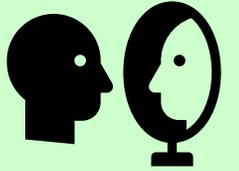


5

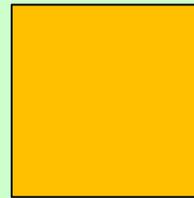


1

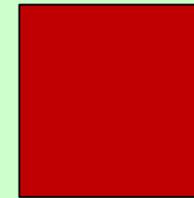
# How many atoms of hydrogen reacted?



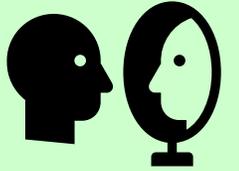
4



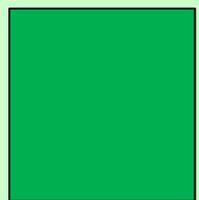
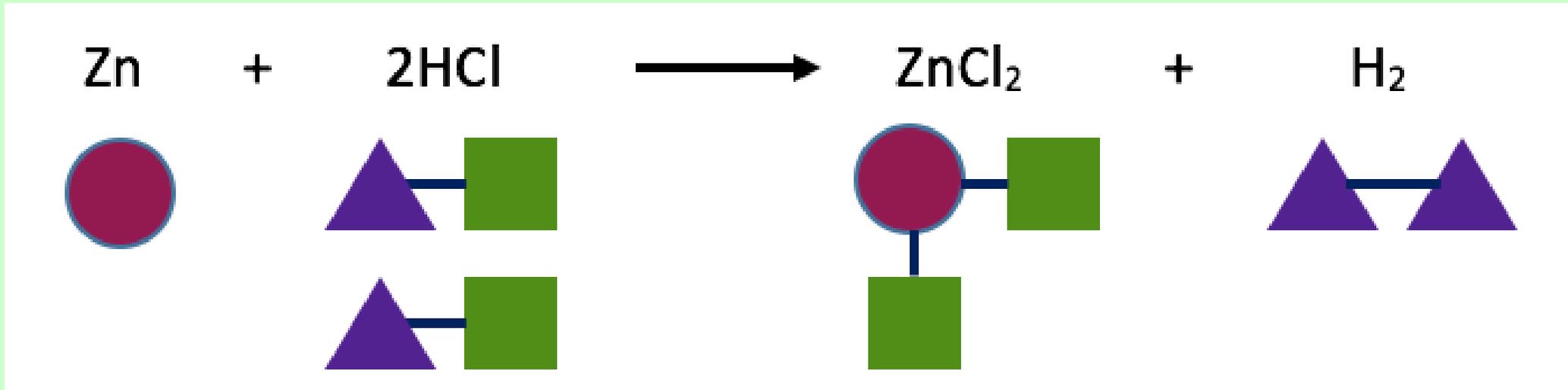
2



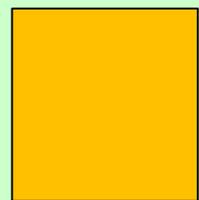
3



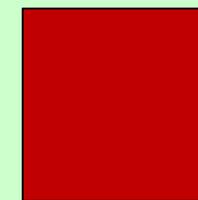
# How has the number of chlorine atoms changed?



Increased



Stayed  
same



Decreased

## L2/3: Identify products and reactants and number of atoms

## Practice with aid



### Task:

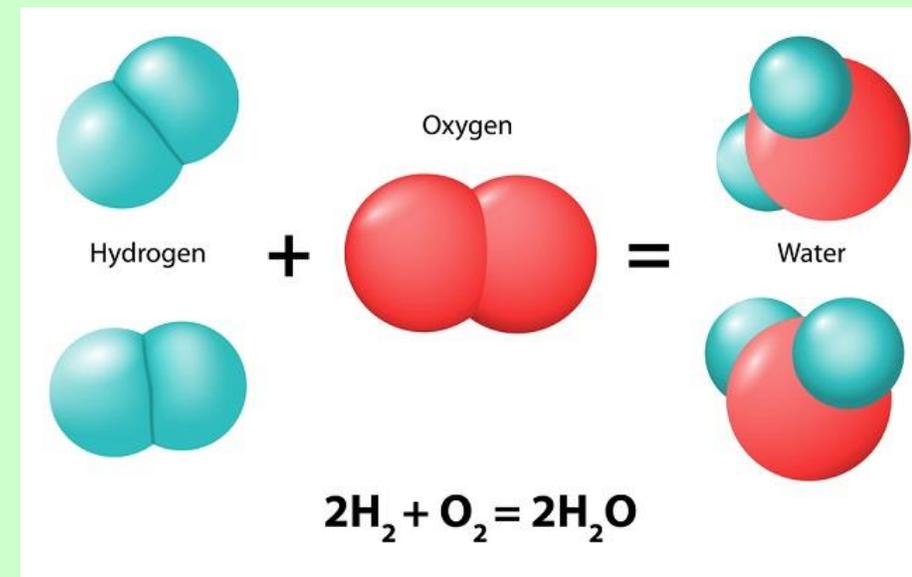
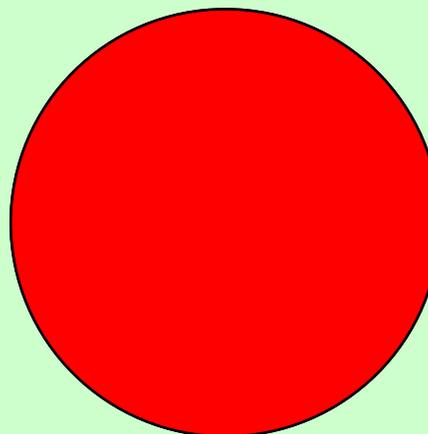
1. Name of reacting elements.
2. Number of atoms of each element in reactants and products

### Challenge:

Write down the name of the products.

**Calcium chloride, Iron oxide,  
Carbon dioxide, Copper  
sulphate, Water**

15 minutes



Reactions and number of atoms	Name of reacting elements	Name of product
$\text{C} + \text{O}_2 \rightarrow \text{CO}_2$	Carbon Oxygen	Carbon dioxide
$\text{C} = 1$ $\text{O} = 2$	$\text{C} = 1$ $\text{O} = 2$	
$\text{O}_2 + 2\text{H}_2 \rightarrow 2\text{H}_2\text{O}$		
$\text{O} =$	$\text{H} =$	

Observations (what do you see happens?):

What is the name of the gas produced?

How is the amount (volume) measured?

