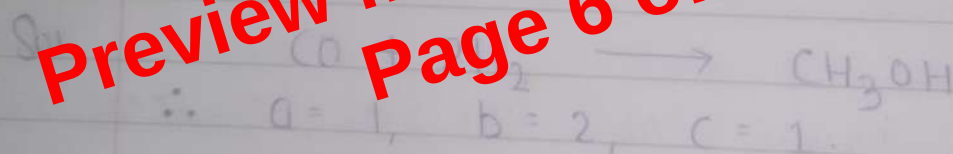


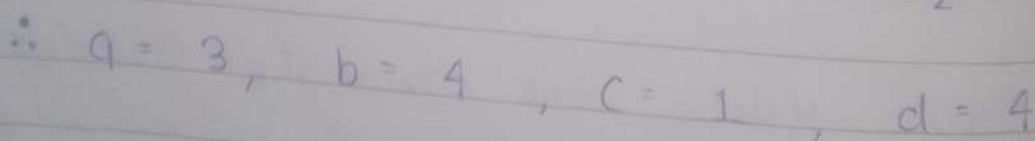
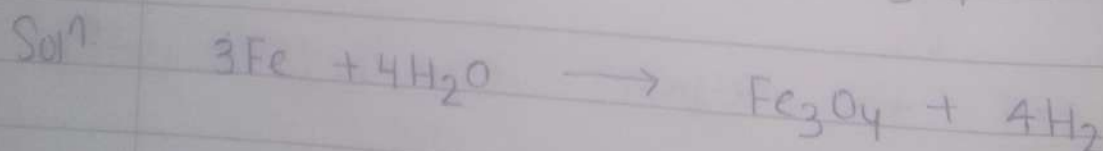
Chemical reaction is just a rearrangement of atoms.

Hence, No. of atoms on reactant =
No. of atoms of product

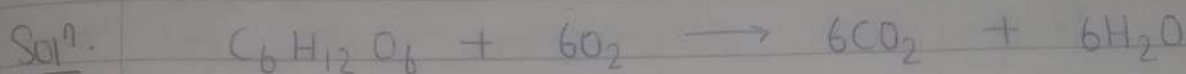
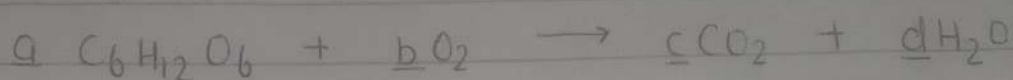
Q. Balance the given Chemical equation by identifying the values of Stoichiometric Coefficients using hit and trial method.



Q. Balance the given Chemical equation.
 $a \text{Fe} + b \text{H}_2\text{O} \rightarrow c \text{Fe}_3\text{O}_4 + d \text{H}_2$



Q. Balance the given equation :



$$\therefore a = 1, b = 6, c = 6, d = 6,$$

Limitation of Chemical Reaction

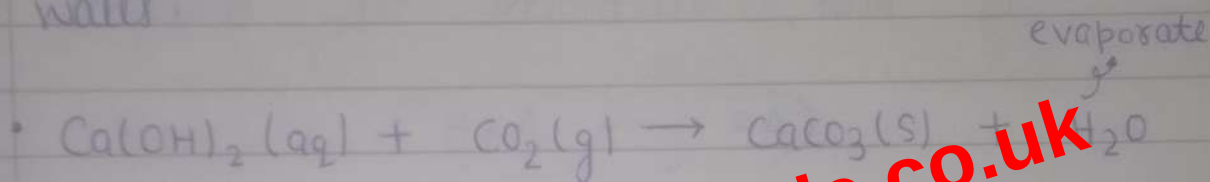
- Balanced Chemical equation don't tell any information about the physical state of the reactant or product or reactant.
- They also don't give any information about reaction condition.
- Energy changes during a reaction.

Making Chemical equation Informative

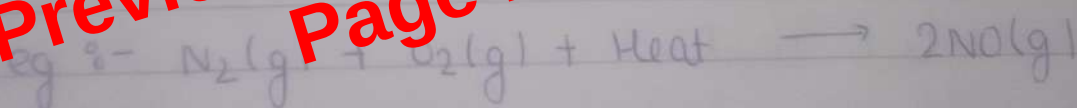
- i) Physical state of reactant and Product.
- Solid State $\longrightarrow$'s'
 - Liquid State $\longrightarrow$ 'l'
 - gas state $\longrightarrow$ 'g'

produced sound with bubbles

→ A solution of slaked lime is used for whitewashing the walls. After 2-3 days of whitewash, a thin layer of calcium carbonate (shiny finish) on the walls.



→ "Not all combinations of reaction are exothermic. They can be endothermic also."



Extra Knowledge

<u>Substance</u>	<u>Common Name</u>
$\text{Ca(OH)}_2(\text{s})$	• Slaked lime (white Powder)
$\text{Ca(OH)}_2(\text{l})$	• Limewater (Satd. Aq. Solution)
$\text{Ca(OH)}_2(\text{slup})$	• Milk of lime or Limewash
CaCO_3	• Limestone / Chalk / Marble.

Chemical equation

Sem I $\text{CaCO}_3(\text{s}) \xrightarrow{\Delta} \text{CaO}(\text{s}) + \text{CO}_2(\text{g})$; Decomposition reaction.

II. $\text{CaO}(\text{s}) + \text{H}_2\text{O}(\text{l}) \longrightarrow \text{Ca}(\text{OH})_2(\text{aq}) + \text{heat}$; Combination reaction.

These reaction are opposite reaction or inverse reaction of each other.

Preview from Notesale.co.uk
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When hydrogen sulphide gas is passed through a blue solution of copper sulphate, a black precipitate of copper sulphide is obtained and the sulphuric acid so formed remains in the solution.

The reaction is an example of:

- a) Combination
- b) Displacement
- c) Decomposition
- d) Double displacement. ✓