Topic Introduction

Summarize your understanding of each paragraph.

Write the full equation. After writing the products that will form in the equation, you can write the whole equation with both products and reactants.

Keep the reactants on the left side of the equation and write the new products on the right side with a plus sign between them. Balance the equation.

Memorize the prefixes for number of atoms. In naming compounds, Greek prefixes are used to indicate the number of atoms present for each element.

1: Mono- 2: Di- 3: Tri- 4: Tetra- 5: Penta- 6: Hexa- 7: Hepta- 8: Octa- 9: Nona- 10: Deca-

https://www.wikihow.com/Write-a-Chemical-Equation

Read/Summarize Text

1. **Read the passage.**
2. **Underline key expressions in each sentence.**
3. **Re-write each word (or expression) you underlined.**
4. **Summarize the passage.**

How to Write Balanced Chemical Equations

1

2

Even though chemical compounds are broken up and new compounds are formed during a chemical reaction, atoms in the reactants do not disappear nor do new atoms appear to form the products. In chemical reactions, atoms are never created or destroyed. The same atoms that were present in the reactants are present in the products - they are merely reorganized into different arrangements. In a complete chemical equation, the two sides of the equation must be present on the reactant and the product sides of the equation.

https://chem.libretexts.org

Re-write words you underlined

3

_____ _____ _____

_____ _____ _____

Using a complete sentence, summarize or rephrase the passage

4

Read Text then Answer Problems

Read this article for deeper understanding. No summary is required, although you may want to circle, underline, or mark key ideas and words.

STEPS IN BALANCING A CHEMICAL EQUATION

1. Identify the most complex substance.
2. Beginning with that substance, choose an element(s) that appears in only one reactant and one product, if possible. Adjust the coefficients to obtain the same number of atoms of this element(s) on both sides.
3. Balance polyatomic ions (if present on both sides of the chemical equation) as a unit.
4. Balance the remaining atoms, usually ending with the least complex substance and using fractional coefficients if necessary. If a fractional coefficient has been used, multiply both sides of the equation by the denominator to obtain whole numbers for the coefficients.
5. Count the numbers of atoms of each kind on both sides of the equation to be sure that the chemical equation is balanced.

Is each chemical equation balanced?

a. $2Hg(\ell) + O_2(g) \rightarrow Hg_2O_2(s)$
b. $C_2H_4(g) + 2O_2(g) \rightarrow 2CO_2(g) + 2H_2O(g)$
c. $Mg(NO_3)_2(s) + 2Li(s) \rightarrow Mg(s) + 2LiNO_3(s)$

Answer a:

Answer b:

Answer c:

Balance the following chemical equations.

a. $N_2\,(g) + O_2\,(g) \rightarrow NO_2\,(g)$
b. $Pb(NO_3)_2(aq) + FeCl_3(aq) \rightarrow Fe(NO_3)_3(aq) + PbCl_2(s)$
c. $C_6H_{14}(l) + O_2(g) \rightarrow CO_2(g) + H_2O(g)$

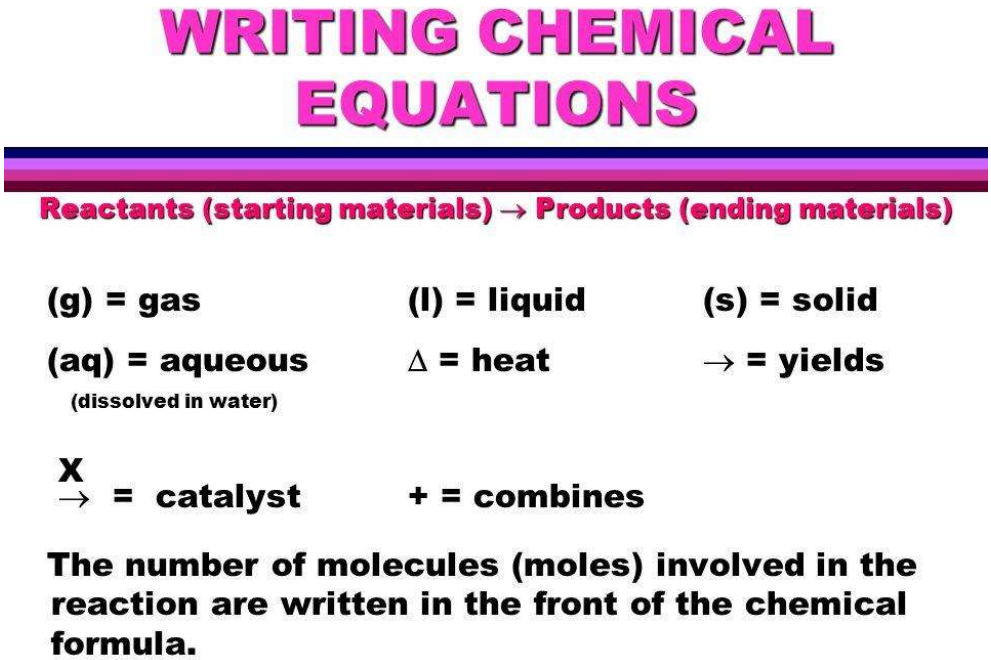
Answer a:

Answer b:

Answer c:

Draw Illustration

Copy and Label the Illustration in the Space Provided



http://slideplayer.com/slide/8131732/.

Draw (Copy) the Illustration Here

Solve the Problems

GROUP STUDY PROBLEM # 16

Balance the following molecular equations then write both the ionic & net ionic equations:

1. $\_\_Na_2SO_4(aq) + \_\_AlCl_3(aq) \rightarrow \_\_Al_2(SO_4)_3(aq) + \_\_NaCl(aq)$

2. $\_\_NaBr(aq) + \_\_Cl_2(g) \rightarrow \_\_ NaCl(aq) + \_\_Br_2(l)$

3. $\_\_SbCl_3(aq) + \_\_Na_2S(aq) \rightarrow \_\_Sb_2S_3(s) + \_\_NaCl(aq)$

4. $\_\_Mg(OH)_2(aq) + \_\_ H_2SO_4(aq) \rightarrow \_\_ H_2O(l) + \_\_MgSO_4(aq)$

5. $\_\_C_2H_4(g) + \_\_O_2(g) \rightarrow \_\_CO_2(g) + \_\_H_2O(g)$

http://slideplayer.com/slide/8131732/

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