Review CHAPTER 10

1. **Label the components of the Chemical Reaction below by selecting the correct options from the drop-down boxes :**

$$6CO_{2\,(g)} + 6H_2O_{(l)} \longrightarrow C_6H_{12}O_{6\,(s)} + 6O_{2\,(g)}$$

2. **Draw a line between the options on the left and the matching options on the right :**

Products	Starting Materials
Precipitate	Number of Atoms
Subscript	Number of Molecules
Reactants	Newly formed Substances
Coefficient	Solid that forms in a liquid

3. **Identify the type of Chemical Reaction in each of the following scenarios (select only 1 option in each case unless stated otherwise) :**

3.1) Na + Cl -> Table salt

A) Synthesis
B) Decomposition
C) Single Replacement
D) Double Replacement
E) Combustion

3.2) $P_4 + O_2 \rightarrow P_2O_5$

A) Synthesis
B) Decomposition
C) Single Replacement
D) Double Replacement
E) Combustion

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3.3) CH_4 + O_2 -> CO_2 + H_2O + Heat

A) Synthesis
B) Decomposition
C) Single Replacement
D) Double Replacement
E) Combustion

3.4) Zn + $CuSO_4$ -> $ZnSO_4$ + Cu (select 2 possible answers)

A) Synthesis
B) Decomposition
C) Single Replacement
D) Combustion
E) Redox

3.5) Zn + $CuCl_2$ -> $ZnCl_2$ + Cu

A) Synthesis
B) Decomposition
C) Single Replacement
D) Double Replacement
E) Combustion

3.6) AX + BY -> AB + XY

A) Synthesis
B) Decomposition
C) Single Replacement
D) Double Replacement
E) Combustion

3.7) X + N + A + D -> ADNX

A) Synthesis
B) Decomposition
C) Single Replacement
D) Double Replacement
E) Combustion

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4. **Drag and Drop the words from the Word Bank onto the correct places so that the statements below make sense :**

gained	reactant	decrease	product	increase	lost

In a Synthesis Reaction, 2 or more reactants are combined into a single _____ .

Oxygen is always a _____ in a Combustion Reaction.

In a Redox Reaction, the element that undergoes Reduction will have a(n) _____ in

Oxidation Number. This means that this element has _____ one or more Electrons.

The element that undergoes Oxidation, will have a(n) _____ in Oxidation Number.

This means that this element has _____ one or more Electrons.

5. **Balance the following Chemical Equations (The grading tool unfortunately cannot grade empty spaces, so please do NOT leave any spaces empty ... for the sake f the grading tool, please fill in the "1" in those spaces) :**

___ Ba_3N_2 + ___ HF -> ___ BaF_2 + ___NH_3

___ PCl_5 + ___ H_2O -> ___ H_3PO_4 + ___HCl

___ SnO_2 + ___ H_2 -> ___ Sn + ___H_2O

___ Al + ___ HCl -> ___ $AlCl_3$ + ___H_2

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___ KOH + ___ H_3PO_4 -> ___ K_3PO_4 + ___H_2O

___ $HClO_4$ + ___ P_4O_{10} -> ___ H_3PO_4 + ___Cl_2O_7

___ KNO_3 + ___ H_2CO_3 -> ___ K_2CO_3 + ___HNO_3

___ CaS + ___ H_2O -> ___ $Ca(HS)_2$ + ___$Ca(OH)_2$

6. Look at the Chemical Formulas provided and answer the questions that follow :

6.1) How many Carbon atoms are there in $C_4H_2S(OH)_2$: _____

6.2) How many Carbon atoms are there in $3C_4H_2S(OH)_2$: _____

6.3) How many Hydrogen atoms are there in $C_4H_2S(OH)_2$: _____

6.4) How many Hydrogen atoms are there in $3C_4H_2S(OH)_2$: _____

6.5) How many Oxygen atoms are there in $2C_4S(OH)_2$: _____

6.6) How many Hydroxide atoms are there in $2C_4S(OH)_2$: _____

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