

Chemical Equations Test Review-Answers

- How should hydrogen, oxygen, nitrogen, fluorine, chlorine, iodine, and bromine be written when there are represented in elemental form in a chemical equation? Why? *with a "2" subscript (these elements are diatomic in their elemental state)*
- On the diagram below, identify where the subscript is and where the coefficient is.

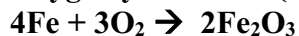


- How does the law of conservation of mass relate to balancing equations? *the number of atoms cannot be gained or lost, they change form from reactant to product but remain equal*
- Identify which type of chemical reaction fits the following general equations:
 - $A + X \rightarrow AX$ Synthesis
 - $AX \rightarrow A + X$ Decomposition
 - $A + BX \rightarrow B + AX$ Single Replacement
 - $AX + BY \rightarrow AY + BX$ Double Replacement
 - $AX + O_2 \rightarrow CO_2 + H_2O$ Combustion

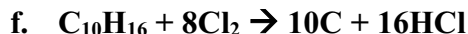
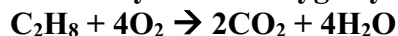
- Balance the following equations, then classify what type of reaction each equation is:



- d. Iron + Oxygen yields Iron (III) Oxide



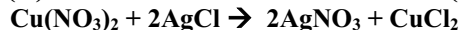
- e. Dicarbon Octahydride + Oxygen yields Carbon Dioxide + Water



- i. Potassium Oxide + Water Yields Potassium Hydroxide



- j. Copper (II) Nitrate + Silver Chloride → Silver (I) Nitrate + Copper (II) Chloride



- Classify the reactions in question #5.

a. Single Replacement

b. Decomposition

c. Synthesis

d. Synthesis

e. Combustion

f. Single Replacement

g. Synthesis

h. Synthesis

- i. Synthesis _____
j. Double Replacement _____

7. Predict the products for the following reactions. Then balance the equation.
(Note: If the reaction is single replacement, consult your activity series to determine if the reaction is possible).

- a. $K_2CrO_4 + Ba(NO_3)_2 \rightarrow BaCrO_4 + 2KNO_3$
b. $2CaO \rightarrow 2Ca + O_2$
c. $MgI_2 + F_2 \rightarrow MgF_2 + I_2$
d. $4Li + O_2 \rightarrow 2Li_2O$