

## I. Fill in the blanks with the most appropriate term:

balanced equation  
subscripts  
coefficients  
products

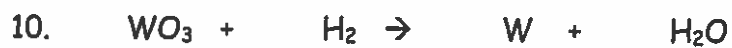
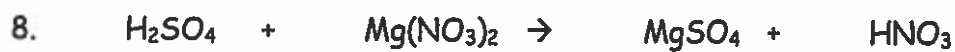
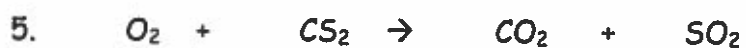
balance  
reactants  
equal  
coefficients

created  
conservation  
destroyed

A \_\_\_\_\_ tells the story of a chemical reaction. \_\_\_\_\_ are the starting substances in the reaction while \_\_\_\_\_ are the new substances that are formed. The large numbers in front of some of the formulas are called \_\_\_\_\_. These numbers are used to \_\_\_\_\_ the equation because chemical reactions must obey the Law of \_\_\_\_\_ of Matter. The number of atoms of each element on both sides of the equation must be \_\_\_\_\_ because matter cannot be \_\_\_\_\_ or \_\_\_\_\_. When balancing equations, the only numbers that can be changed are \_\_\_\_\_; remember that \_\_\_\_\_ must never be changed in order to balance an equation.

## II. Balance the following equations:





*Substitute symbols and formulas for words, then balance each equation.*

1. sodium chloride (s) + lead (II) nitrate (aq) → lead (II) chloride + sodium nitrate
2. iron (s) + chlorine (g) → iron (III) chloride
3. barium + water (l) → barium hydroxide + hydrogen (g)
4. When chlorine gas reacts with methane gas, carbon tetrachloride and hydrochloric acid are produced.
5. When sodium oxide is added to water, sodium hydroxide is produced.
6. In a blast furnace, iron (III) oxide and carbon monoxide gas produce carbon dioxide gas and iron solid.
7. Iodine crystals react with chlorine gas to produce iodine trichloride.