

Outline Chapter 3

Homework: 8, 14, 22, 36, 42, 62, 64, 72, 76

Chemical reaction equations

Reactants

Products

Reaction arrow

Coefficients

State, solution and energy information

Translating chemical reaction equations into verbal descriptions and vice versa

Stoichiometry

Balancing reaction equations

Mass of products

Limiting reactants

Theoretical yield

Percent yield

Objectives Chapter 3

Define and give examples for each of the following terms: reactant, product, coefficient, aqueous, precipitate, addition reaction, combination reaction, decomposition reaction, single replacement reaction, metathesis, combustion, stoichiometry, limiting reactant, theoretical yield, and percent yield.

Find atomic weight from abundance data and vice versa.

Use Avogadro's Number to find number of particles or mass in either amu or grams.

Calculate the formula weight or molar mass of a compound in either amu or grams.

Find percent composition of a compound using either experimental data or the atomic weights.

Find the empirical formula and molecular formula from mass percent or combustion data.

Translate a reaction equation into a verbal description and vice versa.

Identify types of reactions.

Balance reaction equations.

Calculate the mass of products if given the mass of a reactant and an excess reactant. Calculate the amount of excess reactant that is left over after the reaction is complete.

Identify the limiting and excess reactants and find the theoretical yield and the percent yield.