

Unit 7 - The Mole

(Honors Chemistry Syllabus)

(Chapters 10, 11, and 13)

- I. Counting Atoms (Sections 10.1, 10.2 & 10.3)**
 - A. Atomic Mass
 - B. Formula Mass
 - C. The Mole
 - D. Molar Mass
- II. Molar Conversions (Sections 10.2, 10.3 & 13.2)**
 - A. Mass and Moles
 - B. Particles and Moles
 - C. Moles and Gases
- III. Percentage Composition (Section 10.4)**
 - A. Defn.
 - B. Calculating % Comp.
- IV. Empirical Formulas (Sections 10.4 & 10.5)**
 - A. Defn.
 - B. Calculating the Emp. Formula
- V. Molecular Formulas (Section 10.4)**
 - A. Defn.
 - B. Calculating the Molec. Formula
- VI. Stoichiometry (Sections 11.1, 11.2 & 13.3)**
 - A. Defn.
 - B. Interpreting Balanced Chem. Eqns.
 - C. Mole-Mole Problems
 - D. Mass-mass Problems
 - E. Mass-volume Problems
 - F. Volume-volume Problems
 - G. Mixed Mass-volume-particle problems
- VII. Limiting Reactants (Section 11.3)**
 - A. Limiting Reactant
 - B. Excess Reactant
 - C. How To Determine The Limiting Reactant
 - D. Calculations Involving Limiting Reactants
- VIII. Percent Yield (Section 11.4)**
 - A. Theoretical (Expected) Yield
 - B. Actual Yield
 - C. Percent Yield

✓ **Unit 7 Internet help (On Mr. Segulin's Honors Chemistry Web-page):**

- Online Text
- CyberEd Chemistry: "Formulas, Equations, and Stoichiometry"
- General Chemistry help (pick the topic that you need to assist you)

✓ **Review Questions:**

- Ch. 10 (pgs. 318-363): #'s 1-82, 83-86, 88, 90-199, 201, 202, 204, 210 & 211.
- Ch. 11 (pgs. 366-397): #'s 1-35, 36-105, 107-109, 114 & 115.
- Ch. 13 (pgs. 452-471): #'s 20-25, 38-46, 49, 61-64, 67, 71, 73, 79-83, 87, 89-92, 94a, 100a, 101 & 114.
- Pgs. 981-985: (Ch. 10) #'s 1-34, (Ch. 11) #'s 1-15, and (Ch. 13) #'s 10-14 & 19-22.