

ACS Chemistry Exam Test Preparation

Chapter 3: Formula Calculations and the Mole

Along with completing the activities for the chemistry curriculum, we will be participating in test prep exercises in preparation for the End of Course Exam from the American Chemical Society as a requirement for the NJIT CHEM 125/125A course. The Test Prep Packets will be broken down into problem sets. In order to familiarize yourself with the chemistry concepts in each problem set, you may access the text or video resources respectively.



Materials:

- ★  [Chapter 3- Formula Calculations and the Mole.pdf](#)
- ★ [2: Atoms and Elements - Chemistry LibreTexts](#)
- ★ [Moles and molar mass \(practice\) | Khan Academy](#)

	Topics	Links	College Textbook Link
Problem Set 1 SQ1-SQ4 PQs1-11	☐ Avogadro's Number and the Mole ☐ Avogadro's Number and Molar Mass	• Introduction to Moles • Counting Atoms: Intro to Moles Part 2 Converting Between Moles, Atoms, and Molecules • Converting between Moles, Atoms, and Molecules (Part 2) • Converting Between Moles and Liters of a Gas at STP • The Most Common Mistake with Moles!	2.9: Molar Mass - Counting Atoms by Weighing Them - Chemistry LibreTexts
Problem Set 2 SQ5 PQ12-18	☐ Molar Mass	• How to Calculate Molar Mass Practice Problems • Very Common Mole Questions • Calculate the Mass of a Single Atom or Molecule • Converting Between Grams and Moles • Converting Between Grams and Moles (Part 2)	2.9: Molar Mass - Counting Atoms by Weighing Them - Chemistry LibreTexts
Problem Set 3 SQ6 PQs19-26	☐ Percent Composition	• Percent Composition By Mass	5.4 Percent Composition, Empirical and Molecular Formulas - Chemistry LibreTexts
Problem Set 4 SQs7-8 PQs27-30	☐ Empirical Formula ☐ Molecular Formula	• Empirical Formula and Molecular Formula Introduction	5.4 Percent Composition, Empirical and Molecular Formulas - Chemistry LibreTexts