

Preview Sheet for Test 1
Chemical Basics and Stoichiometry
Chapters 1, 2, 3; Lectures from 9/7 to 9/19; Problem Sets 1 and 2

Studying strategies:

- Do extra problems at the ends of the chapters. In particular, work the blue-numbered problems paired with the black-numbered problems you were assigned for homework; the answers to the blue problems are in Appendix E of your textbook. If you are stuck on a problem, please come talk with me or one of the student tutors:

Student Tutoring Schedule
(in Olin-Rice 341)
Sunday: noon – 9:00 p.m.
Monday – Thursday: 7:00 – 10:00 p.m.

Extra Office Hours
This Thursday, 6:30 – 8:30 p.m.

- Focus on your lecture notes and homework first, then look at the textbook.
- If a topic was not covered in homework or in lecture, you are not responsible for it!
- Remember that you are responsible for the nomenclature tables (2.3, 2.4, 2.5, 2.6). About 10% of your test will cover nomenclature.
- Try not to just memorize facts and problem-solving techniques; think about the underlying concepts and how to apply them in new ways. One of my goals when I write a test is to ask at least one question that will challenge everyone in class!
- The test will consist of ~50% numerical problem solving, and ~50% short answer and explanation questions.

[From the test booklet:]

Instructions before starting the test:

1. Write your name in the space above and on the backs of the other pages.
2. This exam is closed-everything.
3. Your exam booklet should have **six** pages total, with questions on pages 2-5, and a periodic table and other information on p. 6. Check to see you have six pages now. If you do not, ask for another copy of the exam.
4. You may use programmable calculators, but chemical data should not be stored in them.
5. To receive full credit for a mathematical problem, you must show the method by which you obtained the final answer, including dimensional analysis. However, you do not need to justify how you calculated molar masses.
6. A final numerical answer must contain the correct units and number of significant figures to receive full credit.
7. You have **60 minutes** to work on this exam. Do not start until you are instructed to.

What not to memorize (they will be provided on page 6 of the test booklet):

- (1) The periodic table (with groups numbered as in the inside front cover of Silberberg)
- (2) The information below:

$$N_A = 6.022 \times 10^{23} \text{ particle mol}^{-1}$$

Test-Taking Tips

- Pace yourself. Try to make your effort on a given problem proportional to the number of points that it is worth.
- Read the problems carefully.
- If you can't figure out how to begin a problem after thinking about it for a couple of minutes, go on to the next problem.
- Please ask me if a question doesn't make sense.