Provide a question to be used on the final exam, together with the answer for the exam key. Don’t forget to put the above info (your name, etc.) on it. Your question should provide a good test of some part of the material we have discussed this semester, and it should have enough parts to count for 25 points. It must not be a direct copy of an exercise from the book, practice problems, or exams, but of course you may look to those problems as models for your own. A trivial* or directly copied problem will not get points, nor will one with a wrong answer. I may do some editing to make the exam consistent, but I will use at least two student-supplied questions on the final and you want yours to be selected, so you will be able to answer that one easily. So think seriously and carefully write and draw a concise, unambiguous question & answer.

*For instance, “What is the atomic number of hydrogen?” “How many bonds does sp³ carbon form?” or “What is the formula of ethane?” would count as trivial questions.

SEE PAGE TWO for some comments on the final exam and the overall grading calculations.
A note about the final and grading: Several of you have asked or E-mailed about the final exam and the grading process. The final is scheduled as shown in the syllabus: Tuesday, Dec. 14, 12:45-2:45 in Chemistry 138. It will be 10 questions long of which you should answer 8, so each question is worth 25 points. Because this exam could end up counting for your entire grade, you will need to be able to show a (picture) ID there, and you must hand your paper in to your own TA. Roughly 1/2 to 1/3 will focus on chapters 12, 13, and 14; the rest will cover the remaining body of the course material. You may bring models, and one (1) 8-1/2 x 11 sheet of notes. Experience shows that these things are mainly reminders; if you have to rely too heavily on them, you run out of time. But the process of identifying, organizing, and summarizing the points you think are most valuable (or hard to recall) for working this course’s problems is a very good way to focus your efforts. For study purposes, besides the book chapters themselves, you should look at the problems suggested in the syllabus, the three midterms and five quizzes we have had. As for review sessions, we will not have our regular Monday night session tonight (Dec. 6) but I have made arrangements for a Sunday evening review session next week (Dec. 12) at 7:30 in Chemistry 138, our usual lecture room.

Lots of questions about grading prompt me to give you the following example of the grading scheme we have defined in the syllabus. Let us say a student has the following scores on midterms and quizzes:

**Midterms:** 68, 53, 58; **Quiz total:** 70; **Final exam:** 126

Of her/his 6 possible 100 point units (final = 126 = 2 x 63), the 53 was the worst, so that is dropped, and the grade is computed from the other scores as

\[ \frac{68+58+70+126}{500} = \frac{322}{500} = 64\% \]

which is a 2.5. In addition, the quiz total is also optimized by throwing out your worst quiz of the 120 possible points.

**Lazarus option!** If your final exam percentage is higher than that computed via to the above algorithm, your overall grade will be calculated from the final exam alone. In other words, if the person above had gotten 146 on the final, their summed percentage would have been

\[ \frac{68+58+70+126}{500} = \frac{342}{500} = 68\% \]

(a 2.5), but the final exam’s percentage would be

\[ \frac{146}{200} = 73\% \]

(a 3.0), so despite having struggled a bit during the term, they would move up because they had managed to “put it all together” by the end of the course. In my experience, however, this pulling up requires a major step up in your understanding and command of the subject because of the cumulative nature of the final.

If the class average comes out too low, some adjustment (“curving”) is possible, but with the above optimizations, it probably won’t be needed.