MEMORANDUM   Chemistry Department

To: Ben, Cory, Molly and Peter

From: John I. Gelder

Date: February 16, 2002

Re: Grading and returning PS #4

The answers to PS #4are attached. After reviewing the problem sets I have decided we should grade problems 4.3, 4.4, and 4.8 for 3 points. The maximum possible on the problem set is twelve points. The remaining three points are awarded on an all or nothing basis for completion of the remaining problems.

> If you have any questions about the grading procedure described below, please see me. Please do not assign any fractional points. Use a holistic approach, if the student's answer is not quite correct you must make the decision if it is at least half right in which case give the student the point. However, on the next occasion (in the same grading session) that you have to stop and ask yourself whether the student should receive the benefit of the doubt, do not give them the point. Reverse this procedure if for the first time you decide not to give them the benefit of the doubt, the next occasion give them the point. If the PS is marked LATE, deduct the 3 points for completion

Please return the graded problem sets to your students next week. Be sure to record the scores for each student.

Copies of the answers and the grading memo are on the WEB.

Grading the Review Problem Set

PS4.3   **3 points**   1 point for stating the two structures contain the same number of atoms, or writing the same formula for both cells. Then 1 point each for showing how to arrive at the formula they provided for each cell. The student can't say, "In Figure I there is one Ca atom, one Ti atom and three O atoms." There must be some explanation at how they arrived at the number of atoms in each case.

PS4.4   **3 points**. Grade parts a for 1 point. Again, as in PS4.3 there must be some evidence to support their formula. Part b is worth 2 points. One point for the answer, with the correct units and 1 point for showing the work. If there is an error in calculating the mass of the unit cell or the volume of the unit cell deduct one point. As long as the other calculation (mass or volume) is correct award 1 point for the answer. Also watch out for the student who does the calculation in part b correctly with the wrong formula in part a. Deduct the point for part a, but award both points in b as long as the calculation is correct.

PS4.8   **3 points**. Grade parts b, c, and d. 1 point for each part. Be sure that the cis and trans positions are very clear. I think students should be showing the trigonal planar geometry around the double bond, so the cis and trans positions are clear.

3 points   For attempting the remaining 5 problems. Remember each problem must have an answer, an attempt. If the student writes nonsense deduct the 3 points. Since several plots are required in this problem set, deduct the three points if the plots are not included.