

To: Andy, Ben, Kevin, Matt and Tyler  
From: John I. Gelder  
Date: October 9, 2001  
Re: Grading PS5

**STAFF MEETINGS...FRIDAYS, 3:30 p.m.**

The answers to PS #5 are attached. After reviewing the problem sets I have decided we should grade problems PS5.3, PS5.7, and PS5.10 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. Note: If the word 'Late' is written at the top of the Problem Set grade as usual but deduct 3 points from their total. Note: 'Late' means the student found me at the end of class or immediately after class. I will not accept Problem Sets more than a few minutes after class is over, and such cases will have a minimum of 3 points deducted from their score.

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.

Please return the graded problem sets to your students in laboratory 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**

- PS5.3 **3 points** 2 points for part a and 1 point for part d. In part a assign 1 point each to the order for each reactant. The order with respect to  $\text{NO}_2$  should be pretty straight forward, but the order with respect to  $\text{O}_3$  is more challenging. Look carefully for the correct calculation for the order of  $\text{O}_3$ . Some students will leave off the ratio of the concentrations of the  $\text{NO}_2$  and still get the correct answer. If the ratio of the  $\text{NO}_2$  concentrations is missing deduct the 1 point. In part d both the magnitude and the units must be correct (consistent) for the point.
- PS5.7 **3 points** Award 1 point for recognizing 90% decomposed means 10% remaining. 1 point for the correct integrated rate law (2<sup>nd</sup> order) and 1 point for part b. If the student uses the 1<sup>st</sup> order integrate rate law in part a, deduct a point. If they are consistent (1<sup>st</sup> order) in part b award the point.
- PS5.10 **3 points.** 1 point for 10aii, 1 point for 10bi and 1 point for 10biii. I expect students to include all carbon atoms and hydrogen atoms. I want to see the student knows each carbon atom must have four bonds. If the H atoms are missing just deduct 1 point for the error. Do not deduct for all three, just deduct an overall point. In 10aii both the structure and the name must be correct for the point. I will be picky on nomenclature on the exam, so be picky here also.
- 3 points** For attempting the remaining 7 problems. Remember each problem must have an answer, an attempt. If the student writes nonsense for any of the other answers deduct the 3 points.