

MEMORANDUM Chemistry Department

To: Bill, Nellie, Melissa, Carolyn, and Randy
From: John I. Gelder
Date: April 5, 2001
Re: Grading PS#8

STAFF MEETINGS...FRIDAYS, 12:30 p.m. PS117.

The answers to PS #8 are attached. After reviewing the problem sets I have decided we should grade problems PS8.1, PS8.4, and PS8.9 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.

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

- PS8.1 **3 points** 1 point for the plot of $\ln k$ versus T^{-1} . 1 point for the correct magnitude of the activation energy and 1 point for the unit. The units should be $J\ mol^{-1}$ or $kJ\ mol^{-1}$.
- PS8.4 **3 points** 1 point for recognizing that $k_2 = 3k_1$. 1 point for the correct set-up and 1 point for the answer. The units must be OK for the answer point.
- PS8.9 **3 points.** 1 point if the coefficients of the reactants in the slow step of the student's mechanism correspond to the exponents in the rate law. 1 point if the steps of the mechanism sum to equal the overall balanced chemical equation. 1 point for labeling the first step of the mechanism as the slow step AND the second step as the fast step. Do not grade off if the intermediate in the student's proposed mechanism is not identical to mine. Just evaluate the points as described above.
- 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.