

MEMORANDUM

Chemistry
Department

To: Ben, Kevin, Andy, Tyler, and Matthew
From: John I. Gelder
Date: December 5, 2001
Re: Grading and returning PS #14

The answers to PS #14 are attached. After reviewing the problem sets I have decided we should grade problems 14.3, 14.5, and 14.7 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

- PS14.3 **3 points** Grade part a, b and c. 1 point each for the correct reaction describing the neutralization reaction that occurs. Accept either the molecular, ionic or a net ionic equation.
- PS14.5 **3 points.** Grade parts a, b and c. Each for 1 point. In part a and b both the neutralization reaction and 'ICE type table' and the buffer calculation must be shown for the point. In part c just writing the answer that the pH does not change is not sufficient for the point. The student must indicate that although the concentration of each component of the buffer, the ratio means there is no change.
- PS14.7 **3 points.** Grade parts a, b, and c. Each for 1 point. All parts of the calculation as shown on the KEY must be included for the point. In part c be careful. A common error will occur when the student forgets to add the 'x' value calculated to the initial concentration of the strong base. If the student forgets to do this and arrives at a pH of 8.66, deduct the point for part c.
- 3 points** For attempting the remaining 6 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.