



College Boot Camp



“[S]He who lets an advantage slip will subsequently bring upon him[her]self real disaster.”
Sun Tzu

Chemistry Problem Solving Approaches: Mathematical Based

- 1) Read the Problem Set through one time.
- 2) Note the problems and the concepts.
- 3) Go back through your notes and/or book.
- 4) Find the concepts in the problem.
- 5) Find examples of the problem in the notes or textbook.
- 6) Make sure your math is up to speed, particularly your skills with factor labeling or dimensional analysis.
- 7) Re-read the problem.
- 8) Start with what you know.
- 9) Using your text (and/or lecture notes), coupled with your previous knowledge of mathematics, set up the problem for solving, watching your units carefully.
- 10) Remember that if you have the same number of unknowns as you do “formulas”, you can solve the problem
- 11) If you have difficulty with the problem, move onto the next one. Check the answer key, first, when you have a chance. If the result makes sense to you, super! If not, see your professor for clarification.

Chemistry Problem Solving Approaches: Balanced Reaction Based

- 1) Read the Problem Set through one time.
- 2) Note the problems and the concepts.
- 3) Go back through your notes and/or book.
- 4) Find the concepts in the problem.
- 5) Find examples of the problem in the notes or textbook.
- 6) Make sure your math is up to speed, particularly your skills with factor labeling or dimensional analysis.
- 7) Re-read the problem.
- 8) Examine the chemical reaction in the problem.

9) If it's not balanced, balance it.

10) If it's balanced, start with what you know to solve the problem.

11) Using your text (and/or lecture notes), coupled with your previous knowledge of mathematics, set up the problem for solving, watching your units carefully.

12) Remember that if you have the same number of unknowns as you do "formulas", you can solve the problem.

13) If you have difficulty with the problem, move onto the next one. Check the answer key, first, when you have a chance. If the result makes sense to you, super! If not, see your professor for clarification.