PROBLEM SOLVING IN CHEMISTRY

Section Review

Objectives
- Identify a general approach to solving a problem
- Describe three steps for solving numeric problems
- Describe two steps for solving conceptual problems

Part A Completion

Use this completion exercise to check your understanding of the concepts and terms that are introduced in this section. Each blank can be completed with a term, short phrase, or number.

Effective problem solving involves developing a _____ and _____ the plan.

Your textbook teaches a _____-step approach to numeric problem solving. Step 1 is to _____ the problem. Identify what is known and what is ____. Then make a ____ for getting from the known to the unknown. Step 2 is to ____. If you have done a good job of planning, this should be straightforward.

Step 3 is to ____ your answer. Does the answer make ____? An answer should be expressed in the correct _____ and with the correct number of _____.

Part B True-False

Classify each of these statements as always true, AT; sometimes true, ST; or never true, NT.

12. All of the information needed to solve a numeric problem will be given in the problem.

13. Problem solving involves developing a plan.

14. The first step in solving a numeric problem is to calculate the answer.

15. If you have a good problem-solving plan, it is not necessary to check your work.

16. Identifying knowns and unknowns is part of the first problem-solving step.

17. Analyze and solve are the two steps for solving conceptual problems.