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# Description of the Strategies Used In Problemoids

*Restate The Problem In Your Own Words*  
*What Information Is Given In The Problem?*  
*What Are The Conditions?*  
*What Are You Asked To Find?*

These strategies are directed mainly at understanding a problem. Restating a problem may help a student to focus on the important information in a problem and to eliminate unimportant information. Three essential parts of problems are the information given in the problem, what you are asked to find (the unknown), and the conditions (which must be satisfied by the given information and the unknown). It is important for the student to find links between all three parts.

The student works toward the goal of answering the question, "What are you asked to find?" The student should determine which information in the problem is important and examine whether all the important information has been considered in the solution process. The student may produce a partial solution by separating the various conditions and considering each by itself or by dropping all but one condition and solving the problem which results.

*Make A List or Make A Chart*  
*Draw A Diagram*

These strategies are useful for organizing the conditions or given information of a problem or the information which is produced during the solution. A list or a chart can improve the problem solver's efficiency in going through the steps of solving a problem and aid in the process of planning the next step. Lists and charts also provide excellent aids for observing patterns. An organized list shows information in a systematic order. It is easier to see patterns in an organized list. Also, an organized list facilitates checking for missing information or unnecessary repetitions. When there are several factors to be considered simultaneously, the student should use a chart with enough columns to include the necessary information.

Drawing a diagram may make a problem more understandable. Drawing a diagram assists the student in focusing on part of the problem at a time. That type of focusing fosters the development of a viable strategy for solving the problem.

*Use All Given And Implied Information*

Frequently a student makes progress by deducing something from stated information or from information previously deduced. At times, particularly when a problem has a large set of data or conditions, some information in the statement of the problem may be ignored or forgotten. In these instances a student should read the problem carefully for important information.

*Trial And Error*

Using trial and error in the early stages of a solution often leads to a clearer understanding of the problem. Whenever a student uses trial and error, it is important to realize that most attempts do not produce the correct answer. Through the process of making attempts the student hopes to form a successively clearer idea about the answer.

In using trial and error the student first guesses the answer to the problem or the value of one quantity in the problem. Next, the student should check whether the guess satisfies the conditions of the problem.