Strategy for Solving Word Problems (One Equation)

Step 1: Explain questions, problems, and/or issues.
• Read the problem carefully. State the problem in your own words and state the quantity(ies) you must find.
• Write an equation in words that models the verbal conditions of the problem.

Step 2: Analyze and interpret relevant information.
• Use a variable name, such as $x$, to represent one of the unknown quantities. Using the conditions in the problem, write expressions for all other unknown quantities in the problem in terms of $x$.
• Re-write the equation from Step 1 in terms of $x$.

Step 3: Generate well-reasoned conclusions.
• Solve the equation from Step 2 and determine the unknown quantity(ies).

Step 4: Evaluate information to determine credibility of reasoning.
• State the solution to the original problem and check the solution(s) in the context of the problem. Discard any solutions which do not fit the context.

Contributed by Professor Scott Demsky, PhD