JAMES TANTON'S STEPS FOR PROBLEM SOLVING

adapted from his Curriculum Inspirations: Tidbits for the Classroom Inspired by MAA American Mathematical Competitions

1. Read the question/problem. Have an emotional reaction to the question/problem. Take a deep breath. RE-READ the question/problem.
   (Note: It doesn't matter whether your reaction is joyous--"That's easy!" or horrified--"That's impossible!" Either one can get in the way of you answering the problem correctly. DON'T start your work until you have moved beyond your first emotional response.)

2. Understand the question/problem. Understand the different components of the question.
   (Note: This involves asking such questions as: "What does the question/problem tell us?", "What is the question/problem asking?", "What does the question/problem want us to do?", "What information does the question/problem give us?," "What can we do with the information available to us?", "What kind of response is required?)

3. Consider what problem-solving techniques might be appropriate for this question/problem.
   (Note: Would one or more of the problem-solving techniques be useful? Would any of the Thinking Maps be appropriate for organizing your thoughts and/or answering the question/problem?)

4. Work out and answer the question/problem.

5. Check your answer. Did you answer the question/problem in the format required? Is that the only possible answer? Can you defend/prove your answer?