

## How can I become a better problem solver?

Practice! *The only way to become a better problem solver is problem solving.*

Keep track of *solutions* to problems as opposed to just getting *answers*. *Every good problem has more than one solution, all producing the same correct answer.* The solutions can be beautiful or ugly; they can be short or take 8 pages in fine print; they can be based on guessing or reasoning etc. Ask your friends or parents about how they would solve a particular problem. Find other solutions in the books or on the internet. Explore a variety of possible solutions for every problem, comparing them to each other.

*The best way to understand something is to explain it to somebody else.* Whenever you obtained a solution to a problem (either by yourself, or from somebody else), try reproduce the solution for a friend or family member, and to explain why it works.

*Be organized.* Have all the solutions carefully written down, step by step, or printed out, so that you can refer to them later.

*I STILL DO NOT KNOW HOW TO SOLVE IT!!!* Do not get upset or discouraged about this: it is absolutely normal. These problems are specially designed to challenge even the best math students. Don't give up. Take your time. Try to generate ideas. Print out the *Problem Solver's Guide* and use it. With time and practice, you will learn to see *many* ways to solve problems that initially seem to be insoluble!