Tips for ACM Contestants (Working Document)

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General Strategy

- Read the problem statements carefully
- Master your text editor & relevant unix tools like gcc, cmp, diff, grep, make, etc
- Avoid doing things manually; instead, automate program development using tools
- Correctness before efficiency; try implementing the simplest algorithm first
- Don't use floating point computation on money problems; use integer calculation instead

I/O

- ► Learn the appropriate I/O libraries for your language
  - ► **C**
    - ► use scanf, fscanf, sscanf for input
    - ► use printf for output
  - ► **C++**
    - ► use cin for input
    - ► use cout for output
  - ► **Java**
    - ► use Scanner for input
    - ► use print, println, and printf for output
    - ► If input data are presented as lines, you should use nextLine() throughout even when you are reading in numbers. Mixing nextInt() with nextLine() will lead to subtle bugs that may be hard to debug.

Debugging

- **DON'T PATCH** a buggy program; instead, analyze it carefully to find the reasons for bugs

API's

- Don't reinvent the wheel; use prewritten libraries whenever convenient. E.g. use `sort` in `java.util.Arrays` and `sort` in C++ STL instead of writing your own.