UCSD Programming Contest  
Friday, October 22, 1999  
Instructions, Rules, Hints

1. Scoring  
Problems are "correct" if they pass all our test cases within the allotted time. All problems have an implicit time constraint; we won’t wait an hour (or even 5 minutes) for your program to finish. In addition some problems have an explicit time constraint (either written on the whiteboards or specified with the problem). All problems have been solved and run in seconds.

Final standings are based on the number of correct solutions submitted by the end of the contest. If there is a tie, for example, several students solve 3 problems each, then the tie is broken by time to solution. Each successful solution scores 1 point per minute from the beginning of the contest to the time of solution, plus 20 points for each incorrect solution to that problem that was submitted. Lowest total score wins. If you don’t eventually solve a problem, you won’t be charged points for any incorrect solutions you may have submitted.

2. Submitting  
Submit your solutions by email to the login "acm99". We will use the subject line of your message to identify the problem number and the programming language of your solution. The subject line should be `problemx.c` for a solution to problem x in C or `problemx.cpp` for a solution to problem x in C++. To be totally safe, make the first line of your solution a comment containing the problem number, your team number, and your name. It’s unlikely that your solution to one problem will be a correct answer to a different problem, so label carefully. We will log your submission and return a grading slip to you with either the time to correct solution or a very rough and not so helpful reason that it failed. The sample grading slip in your packet shows the possible reasons that we use.

For this contest all problems take input from standard in and write output to standard out. That is not usually true in the regionals and teams are penalized 20 points for naming their files wrong. So be sure you are reading and writing from/to stdin/stdout.

3. Ethics  
You are allowed to bring and use any printed material including books, notes, printouts of programs, etc. You may not use a calculator. You may not use anything electronic, from the network, from a floppy, from another computer, from a disk file that you stashed on the machines before the contest, etc. At regionals and nationals access to electronic stuff is just not there; here you are on your honor. This is an individual contest; all work must be your own -- don’t copy from your neighbor or ask him/her for help. Copying from the books and printed stuff that you bring or borrow is fine.

4. Hints  
Read all the questions before you start solving any of them; we may have stashed all the easy ones at the end. Tackle the easy ones first; because of the scoring algorithm, solving easy ones fast and first gives you an advantage.

Before you submit and after you think you are done, reread the question carefully and be sure you solved the right problem, named the files correctly, formatted the output correctly, etc.

Test the boundary conditions. If n can go from 0 to 10000, we will probably try 0 and 10000 and lots in between.

Don’t get stuck on one problem for too long; if you feel you aren’t making progress, try another one.