Participation

This contest is open to all college students. Each team may consist of at most three members.

Materials

Each team will be provided 1 computer and sufficient writing materials.
No electronic devices (calculator, cell phone, etc), books, or notes are permitted.
The computers will use Linux. We will attempt to accomodate requests for Windows machines.

Problems

There will be 8-10 problems, varying in difficulty. The problems will focus on reasoning, critical thinking, and algorithmic problem solving. For each problem, you will be provided a description, the format of input, the format of output, samples, and a (generous) time limit for your solution.
You will have 4 hours to solve as many of the problems as you can, in whatever order you wish. After two hours, a brief hint will be given for each problem.
Clarification may be requested about the problems. Each problem has been reviewed for clarity and correctness, so it is unlikely that any futher information will be needed. However, if an ambiguity or error is discovered, all contestants will be notified.
Official solutions will be available here (/BYU2015F/embed/solutions/) after the contest.

Submissions

Your submission will consist of your source code, which must be in one file.
Submissions may be made in many languages, including C++03, Java 6, NodeJS 0.8.11, Python 2.7, and Python 3.2. All standard libraries are available for use.
Input will be provided through the standard input, and output should be printed to standard output. See samples (/BYU2015F/embed/samples/) for further instructions.

Judging

Submissions are tested when they are received, and the outcome will be available to the submitting team. If the submission is incorrect, one of the following reasons will be given:

- Compile-time error
- Run-time error
- Time limit exceeded
- Wrong answer

Well-written code will be easier for your team to debug, but your code will judged on its output, not its style.
Scoring is by the number of problems solved.
Ties are broken by time. A team's time is calculated as the total for each correctly solved problem of

1. The time taken to solve the problem (as measured from the beginning of the contest).
2. Twenty minutes for each incorrect submission for the problem.

(Note that incorrect submissions of unsolved problems do not contribute to this total.)

External Resources

External resources are limited to language and API documentation, for example:

Language	References
C/C++	www.cppreference.com/w/ (http://www.cppreference.com/w/) www.cplusplus.com/reference/ (http://www.cplusplus.com/reference/)
Java	docs.oracle.com/javase/6/docs/api/ (http://docs.oracle.com/javase/6/docs/api/)

Node.js	nodejs.org/api/ (http://nodejs.org/api/) developer.mozilla.org/Javascript/ (http://developer.mozilla.org/Javascript/)
Python 2.7	docs.python.org/2.7/reference/ (http://docs.python.org/2.7/)
Python 3.2	docs.python.org/3.2/reference/ (http://docs.python.org/3.2/)

Teams who access any other external resources will be disqualified.

About

This is the eighth semiannual BYU Invitational Coding Challenge. Its format is similar to the ICPC (icpc.baylor.edu).

Email questions to acm@byu.edu (mailto:acm@byu.edu).

This contest has been generously sponsored by Lucid Software (https://www.golucid.co/jobs).

Instructions

Set-up

1. Find your assigned computer and table. Once the competition begins, no other computers, books, notes, or other materials may be used for the competition.
2. Login to your computer. Your username and password are on the small insert in this packet.
3. This contest will use the SPhere Online Judge (SPOJ). To create an account for your team, go to http://www.spoj.com/register.
4. Use whatever username, email, and password your team chooses, and then pass the turing test.
5. Complete the email verification process.
6. Optional: Customize your profile information. The nickname is used to identify your team in the rankings. If it is not present, your username is used instead.

Practice

1. Go to the contest site: https://spoj.com/BYU2015F.
2. Click on the "problems" link on the left.
3. Solve a sample problem. (Click on the "samples" link to see sample programs.
4. Click on "submit".
5. Paste in your source code, or load from file. Verify that the programming language and problem code is correct, and then submit.
6. Verify that your solution was accepted (click on "status" to see results).

Compiling/running your program:

Some common IDEs are installed. If you are unsure of how to run your program from the command line, you can see examples at http://www.spoj.com/BYU2015F/embed/samples/.

Guidelines for submissions

Your submission consists your single file of source code, which is may not exceed 50000 characters. Input comes from standard in. Output is printed to standout out.

C++

- Input is `std::cin`, and ouput is `std::cout`.
- The `main()` function will be called by the judge.

Java

- Input is `System.in`, and output is `System.out`.
- The `main(String[])` method of your Main class will be called. (Don't forget to name your class `Main`!) To include multiple classes, use default visibility or nest the class inside `Main`.

Node.js

- Input is `process.stdin`, and output is `process.stdout`.

Python

- Input is `sys.stdin`, and output is `sys.stdout`.

For example code, click on the "samples" link on the left navigation bar.

Submissions are accepted in every language that SPOJ accepts (pretty much all of them). You are welcome to use any of those languages and download any software, but we will not be able to help debug them, nor do we have root access to any of the computers.