USACO

http://www.usaco.org/index.php?page=contests

[Online training page]

On-Line Contests

The USACO holds periodic web-based contests during the academic year, and in the late Spring conducts the US Open, our "national championship" exam. Contests generally run for three to five continuous hours in length, although for maximum flexibility, you are free to schedule this block of time anywhere within a Friday-to-Monday contest weekend --- your timer starts when you log into the contest and download the problems. Contest tasks are presented on the web, and you submit your final solutions through a simple web interface. Participation is free and open to all.

Contests are offered in four divisions:

- **Bronze**, for students who have recently learned to program, but who have no training in algorithms beyond basic concepts like sorting and binary search.
- **Silver**, for students who are beginning to learn fundamental problem-solving techniques (e.g., recursive search, greedy algorithms) and fundamental data structures.
- **Gold**, where students encounter more standard algorithms of a more complex nature (e.g., shortest paths, dynamic programming) and more advanced data structures.
- **Platinum**, for advanced students who are well grounded in algorithmic problem-solving techniques, who wish to challenge themselves with sophisticated and more open-ended problems.

All participants start in the bronze division, and those who score particularly well in a contest will be promoted to the next division. Contestants scoring particularly highly will be automatically promoted to the next division while a contest is running; others will need to wait until results are announced at the end of the contest to see if they meet the (contest-dependent) cutoff for promotion.

Detailed technical specifications and rules for our contests are available here.

The Road to the IOI Team

Based on the results of the web-based contests throughout the year (with particular emphasis on the US Open), as well as performance in the on-line training pages, approximately 16..24 students are invited to a rigorous academic training camp in the early summer, hosted at Clemson University. At camp, half a dozen more contests in addition to a full schedule of computing-related and extracurricular activities fill out the week of activities. At the end of camp, the top 4 students are selected by the USACO staff to represent the USA at the International Olympiad in Informatics (IOI). The IOI is held each summer by a different host country --- for example, Australia (2013), Taiwan (2014), and Kazakhstan (2015). The USACO occasionally also participates in regional contests, such as the Central European Olympiad in Informatics (CEOI).

To be eligible for selection as a USACO finalist and ultimately as an IOI team member, you must be enrolled in a high school (or junior high/middle school) for at least one semester in the school year before the IOI. You can concurrently take courses at other institutions, including colleges and universities. You must either be a US citizen or a resident of the USA during the first half of the school year. IOI team members from countries other than the USA are not eligible to be USACO finalists (and

this includes students who have made commitments to other countries that could conceivably result in their being selected for an IOI team prior to USACO camp).

To be selected as a finalist, you must excel in your participation in USACO web-based contests through the year. The coaches may drop one contest when averaging scores and determining trends, but a student who misses several contests is less likely to be chosen. Students in their senior year, and finalists from previous years generally face a much stricter set of criteria for selection than younger students.

Expenses for the USACO training camp are paid by the USACO, although participants are asked to fund their own transportation to the camp if possible. For the IOI, all expenses, including transportation, are paid by USACO.