

The International Chemistry Olympiad (IChO) for High School Students

History

- **First Olympiad was held in 1968.**
- **Prague, Czechoslovakia was the host site with Czechoslovakia, Poland and Hungary participating.**
- **Only held in former Eastern Bloc countries until 1980 when the competition was held in Linz, Austria with 13 competing countries.**
- **The USA began participating in 1984.**
- **The USA hosted the competition in 1992 & 2012.**
- **84 countries participated in 2022.**

Structure and Timeline



- Each participating country's team consists of four students.
- The exam contains theoretical and experimental sections.
- The competition occurs in July annually.
- The top 12% of the students competing receive gold medals, the next 22% receive silver medals and the next 32% receive bronze medals.

The First Step – The Local Section Exam (LSE)

- **A 110-minute sixty question multiple choice test (supplied by ACS) with tiebreaker designed by UCI Chemistry faculty. Around 14,000 students compete nationally.**
- **Typically given on the first Saturday in March.**
- **Hosted by Irvine Valley College the past few years.**
- **101 students from 26 county schools (public and private) participated in 2022.**
- **The top ten (or eleven) scoring students advance to the United States National Chemistry Olympiad (USNCO) – the second step.**
- **The OCACS sponsors a team competition in addition to the individual competition.**

How many distinct branched alkanes are there with the formula C_6H_{14} ?

A. one

B. two

C. three

D. four



The Second Step - USNCO

- **The 4.75-hour test consisting of multiple choice, essay and laboratory problems is usually given in mid-April.**
- **The top twenty scorers nationally are invited to two weeks of intensive instruction and testing at the National Study Camp (the third step) held at the University of Maryland.**
- **Hosted by Vanguard University the last few years.**
- **Nathan Ouyang and Yufei Chen, both from University High School, were among the top twenty in the nation this year.**



Performance of Orange County Students in USNCO - 2022

- **Two of the twenty students invited to the National Study Camp were from Orange County (Nathan Ouyang & Yufei Chen).**
- **The average score for Orange County students on Part One of the USNCO (the only part where scores are released) was 40.7 or 69.0% while nationally the average score was 27.9 or 47.3%.**
- **Out of the approximately 1,000 students that competed in the USNCO, the top 49 were designated as achieving High Honors. The next 126 were designated as achieving Honors. Out of the eleven OC students competing in the USNCO, three achieved High Honors and five achieved Honors.**