

High School Mathematics Contest

Minnesota State University, Mankato
Mankato, MN

April 19, 2023

Description: Minnesota State University has hosted High School Mathematics Contest since 1974. The contest is organized by a committee of three mathematics faculty who have had previous experience in high school mathematics contests. Dr. Wook Kim participated in the high school mathematics competition in South Korea, and he has also led the MAA-NCS (Mathematical Association of America-North Central Section) competition team from MSU Math Club for several years. Dr. Brandon Rowekamp participated in the High School Math League competition for four years. Dr. Zhu was a first prize winner in National High School Mathematics League in China. The contest includes challenging questions from many areas of high school mathematics, such as algebra, trigonometry, and geometry. The contest will be a great complement to other contests such as Math League and AMC 10/12, and it is a great opportunity for students regardless of whether they are participating in these contests.

The contest is both an individual competition and a team competition. A team consists of up to five students from a single school, selected by the school prior to the start of the contest. A team score is the sum of the individual scores of the team members. The competition consists of multiple-choice problems covering the topics listed at the bottom of this page. There is no calculus on the exam. Calculators are not permitted.

Individual Awards:	**1st Place:	Certificate,	\$600 MSU *Scholarship,	\$50
	**2nd Place:	Certificate,	\$500 MSU *Scholarship,	\$40
	**3rd Place:	Certificate,	\$400 MSU *Scholarship,	\$35
	Top Score of 12th Grade:	Certificate,		\$35
	Top Score of 11th Grade:	Certificate,		\$35
	Top Score of 10th Grade:	Certificate,		\$35
	Top Score of 9th Grade:	Certificate,		\$35
	Top 20% of Each Team:	Certificate,		\$10

*Scholarships expire after five years. **Awards may be divided in a tie.

Team Awards:	First Place:	Certificate to each member, a team plaque, and \$30 per member
	Second Place:	Certificate to each member, a team plaque, and \$25 per member
	Third Place:	Certificate to each member, a team plaque, and \$20 per member

Participant Awards: Each participant will receive a Math Contest T-shirt and a Participation Certificate

Detailed Listing of Topics Covered

The exam consists of 30 multiple choice problems that require a non-calculus based background in high school mathematics. The problems range from those accessible by high school freshman to more advanced problems that require a more mature level of understanding of mathematics and problem solving. The objective of the Contest is to allow students to showcase their talents and to introduce a wide range of high school students to a higher level of mathematical problem solving to stimulate their interest and widen their perspective of mathematics. A background in algebra, trigonometry, geometry, counting, and probability is desirable, but not necessary. Calculators are not permitted. Sample tests can be downloaded from <https://cset.mnsu.edu/departments/mathematics-and-statistics/mathematics-contest>.

High School Mathematics Contest Schedule

When: WEDNESDAY, APRIL 19, 2023

8:45 - 9:00 am	Check-in, Student Union Ballroom Entrance
9:15 - 10:45 am	Examination, Centennial Student Union 200
10:45 - 12:30 pm	Lunch Break
12:45 - 1:15 pm	Awards Ceremony, Centennial Student Union 200
1:30 - 2:00 pm	Tour of Department of Mathematics and Statistics

For: 9th through 12th grade students

Registration: The registration fee is \$10.00 per participant. To register for the contest, complete the attached registration form and return it along with the registration fee by March 27, 2023. The registration form can also be found at the following website:
<https://cset.mnsu.edu/departments/mathematics-and-statistics/mathematics-contest>.

Parking: Buses must park on the south end of Lot 22. Passenger vehicles will be provided permits for the visitor's lot located just across the street to the south of Centennial Student Union.

Lunch: The University Diner Court (meal tickets will be provided)