



Department of Mathematics, Computer Science and Physics  
Annual High School Mathematics Tournament  
Friday, February 10, 2023

**Mathematics Competition Rules and Procedures**

1. Only students taking the written examination will be allowed in the examination room while the written examination is being administered.
2. Prior to beginning each competition, the test monitor will provide specific instructions for proceeding. The mathematics competition will include a 90-minute written examination, and a 10-question timed ciphering match. During the ciphering competition, observers may remain in the rear of the examination room as spectators only. No coaching is allowed.
3. The final team standings will be based on total team points accrued during the written examination and timed ciphering match.
4. The format of the mathematics competition is as follows:
  - a. Calculators may be used during the written examination and ciphering competition.

**b. Procedures for the Written Examination:**

The written examination will consist of **multiple choice questions covering the areas of algebra, geometry, trigonometry, and a small sampling of questions identified with the areas of probability statistics, logic, and puzzle problems.** Designated teams from each school will take the **90-minute written examination. Calculators may be used during the written test and ciphering match.** Individual awards will be given to the persons with the three highest scores on the written examination. Additionally, individual awards will be given to the person at each school with the highest score on the written exam. The four highest scores for each school will constitute the team score for that school on the written examination. One hundred (100) points are possible for the written exam allowing a possible team maximum total of 400 points on the written examination.



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**c. Procedures for the Ciphering Competition:**

Four members from each school will participate in the ciphering rounds. These four students may be selected any time before the beginning of the match. The four students who cipher are not required to be the same four whose scores constitute the team's written score. The ciphering match requires participants to solve problems in a race against time. Members of each team will cipher in pairs. The ciphering match will consist of ten questions. Each ciphering question will have a time limit of two minutes. Members of the team will work on each problem together. When they agree on the answer, one person will write the answer down on the slip of paper containing the question and signal the test monitor. A monitor will retrieve the answered question and mark the question as answered in one minute or two minutes. Each team that submits a correct answer to a question during the first half (within one minute) of the time limit will receive twenty (20) points to be added to the school's written test score. Each team that submits a correct answer to a question during the second half (after one minute but within two minutes) of the time limit for that question will receive ten (10) points to be added to the school's written test score. Thus, a total of 400 possible ciphering points may be added to a school's written examination score.

5. **A total of 800 team points are statistically possible overall; 400 points on the written examination and 400 points in the ciphering match.** Trophies will be awarded to the three teams with 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> highest scores. Trophies will also be awarded to the three individuals on the written exam with the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> highest scores. Additionally, trophies will be awarded to the individual with the highest score on the written exam at each school.
6. **If a tie occurs between teams, an additional ciphering question will be used with a pair of players from each school involved. The first team scoring highest will be declared the winner. If a tie occurs between individuals on the written examination, an additional written question with a specified time limit set by the tournament coordinator will be used to break the tie. The first individual having the correct answer will be declared the winner.**