

WRITTEN COMPETITIONS - EVENT SUMMARY

Algebra I

Team Make-up: maximum 6 students; freshmen or students enrolled in Algebra I

Questions: 20

Time: 50 minutes

Format: Individual competition

All battery operated calculators permitted, including CAS-type

Answers must be legible

Answers must be **exact** unless otherwise indicated in the question

Scoring: Correct answers worth 2 points each; 40 points possible per team member

Team Score: The top 4 scores count toward the team score; 5th and 6th scores are used for tie-breaking

Maximum 160 points per team

Geometry

Team Make-up: maximum 6 students; sophomores or freshmen, or students enrolled in Geometry

Questions: 20

Time: 50 minutes

Format: Individual competition

All battery operated calculators permitted, including CAS-type

Answers must be legible

Answers must be **exact** unless otherwise indicated in the question

Scoring: Correct answers worth 2 points each; 40 points possible per team member

Team Score: The top 4 scores count toward the team score; 5th and 6th scores are used for tie-breaking

Maximum 160 points per team

Algebra II

Team Make-up: maximum 6 students; juniors, sophomores or freshmen, or students enrolled in Algebra II

Questions: 20

Time: 50 minutes

Format: Individual competition

All battery operated calculators permitted, including CAS-type

Answers must be legible

Answers must be **exact** unless otherwise indicated in the question

Scoring: Correct answers worth 2 points each; 40 points possible per team member

Team Score: The top 4 scores count toward the team score; 5th and 6th scores are used for tie-breaking

Maximum 160 points per team

Pre-Calculus

Team Make-up: maximum 6 students; any grade level

Questions: 20

Time: 50 minutes

Format: Individual competition

All battery operated calculators permitted, including CAS-type

Answers must be legible

Answers must be **exact** unless otherwise indicated in the question

Scoring: Correct answers worth 2 points each; 40 points possible per team member

Team Score: The top 4 scores count toward the team score; 5th and 6th scores are used for tie-breaking

Maximum 160 points per team

8-PERSON TEAM COMPETITIONS - EVENT SUMMARY

Freshman-Sophomore 8 Person Team

Team Make-up: maximum 8 students, freshmen and sophomores only, no more than 4 may be sophomores

Questions: 20

Time: 20 minutes

Format: Team members work together and submit one answer sheet

NO Calculators permitted

Answers must be legible

Answers must be **exact** unless otherwise indicated in the question

Scoring: Correct answers are worth 5 points each; Maximum 100 points possible per team

Junior-Senior 8 Person Team

Team Make-up: maximum 8 students, no more than 4 may be seniors

Questions: 20

Time: 20 minutes

Format: Team members work together and submit one answer sheet

NO Calculators permitted

Answers must be legible

Answers must be **exact** unless otherwise indicated in the question

Scoring: Correct answers are worth 5 points each; Maximum 100 points possible per team

CALCULATOR TEAM - EVENT SUMMARY

Team Make-up: maximum 8 students;

2 freshmen; 2 freshman or sophomore; 2 freshman, sophomore, or junior; 2 students from any grade

Questions: 20

Time: 20 minutes

Format: Team members work together and submit one answer sheet

All battery operated calculators permitted, including CAS-type; students may use more than one calculator

Answers must be legible

Answers must be **rounded to 4 significant digits** unless otherwise indicated in the question. Answers must be simplified and in the **specific form if so stated. Except where noted, angles are in radians.**

Answers must be in standard notation. **Do not use scientific notation unless specified in the question**

Scoring: Correct answers are worth 5 points each; Maximum 100 points possible per team

2-PERSON TEAM COMPETITIONS - EVENT SUMMARY

Freshman-Sophomore 2 Person Team

Team Make-up: maximum 2 students, freshmen and sophomores only in any combination

Questions: 10 (initial competition)

For regionals: additional questions are available for use in case of procedural issues with any of the initial questions

For state finals: additional questions are available for tie-breakers, to replace questions with upheld appeals or for use in case of procedural issues with any of the initial questions

Time: 3 minutes per question

Format: Team members work together and submit one answer sheet

Questions 1-5: NO Calculators permitted

Questions 6-10: All battery operated calculators permitted, including CAS-type

Questions 11-15 (if needed): All battery operated calculators permitted, including CAS-type

Answers must be legible

Answers must be **exact** unless otherwise indicated in the question

Scoring: Correct answers submitted in the 1st minute are worth 6 points; correct answers submitted in the 2nd minute are worth 4 points; correct answers submitted in the 3rd minute are worth 3 points; the first team with the correct answer to each question earns a 2 point bonus.

Junior-Senior 2 Person Team

Team Make-up: maximum 2 students, any grade levels

Questions: 10 (initial competition)

For regionals: additional questions are available for use in case of procedural issues with any of the initial questions

For state finals: ties are broken, if possible, by the number of “first correct” answers. If there are still ties, additional questions are available for tie-breakers, to replace questions with upheld appeals or for use in case of procedural issues with any of the initial questions

Time: 3 minutes per question

Format: Team members work together and submit one answer sheet

Questions 1-5: NO Calculators permitted

Questions 6-10: All battery operated calculators permitted, including CAS-type

Questions 11-15 (if needed): All battery operated calculators permitted, including CAS-type

Answers must be legible

Answers must be **exact** unless otherwise indicated in the question

Scoring: Correct answers submitted in the 1st minute are worth 6 points; correct answers submitted in the 2nd minute are worth 4 points; correct answers submitted in the 3rd minute are worth 3 points; the first team with the correct answer to each question earns a 2 point bonus.

ORAL COMPETITION - EVENT SUMMARY

Team Make-up: maximum 2 students, any grade level

Time: Preparation: 10 minutes (students may work together during this time and use any resource materials)

Presentation: 7 minutes for the initial presentation; 3 minutes for the extemporaneous questions.

Format: Presentation: During the first 7 minutes, students will present the solutions to the judges, using only the notes prepared in the preparation room. At the end of the 7 minutes, the students will be handed a copy of the extemporaneous questions.

During this event, either or both students may participate in the presentation. It is up to the students to determine if, or how, they will collaborate on the presentation and/or extemporaneous questions.

All battery operated calculators permitted, including CAS-type in the preparation room only

Scoring: Students will be judged on knowledge, presentation and extemporaneous questions;

Each judge will award up to 25 points per team: Knowledge is worth 0-13 points;

Presentation is worth 0-8 points; Extemporaneous questions are worth 0-4 points.

Scores from the two judges will be added for a maximum of 50 points per team.

ORAL COMPETITION - SPECIFICS

The Oral team consists of at most two students. Either or both students may present the solutions to the judges. The students may collaborate on their answers and the presentation.

NOTE: Coaches and/or students from the presenters' school may observe the presentation, space permitting. No communication of any type is allowed between observers and the students in the competition.

Oral Preparation Room Instructions:

Only the oral contestants may enter the oral preparation room.

Contestants may bring reference materials (including rulers, compasses, protractors, calculating devices and written materials or texts) into the oral preparation room.

Contestants should write their names and school on two copies of the judge's rating sheets.

Contestants will be given the question(s) in time to allow for 10 minutes of preparation prior to the presentation.

Contestants must remain in the oral preparation room after receiving the question(s).

Contestants may prepare notes in the oral preparation room only on the colored paper provided by the oral preparation room proctor.

While giving the presentation, the presenter(s) may use only the notes on the provided colored paper that were prepared in the oral preparation room. No calculators may be used during the presentation, but they may be used in preparing answers to the extemporaneous questions.

Oral Presentation Room Information:

Either or both students may present the solutions to the judges. The students may collaborate on their answers and the presentation.

A chalkboard, chalk and erasers and/or a whiteboard and markers will be provided in the presentation room.

Upon entering the presentation room, one student should hand the rating sheets to the judges.

The initial presentation has a maximum of 7 minutes of uninterrupted presentation time. At the end of 6 minutes, a cue will be given by the timer indicating that 1 minute remains to complete the presentation.

The presentation is to stop immediately at the end of 7 minutes.

After the presentation stops, teams will be handed a copy of the extemporaneous questions. The teams then have exactly 3 minutes to prepare and present their solutions to the extemporaneous questions. Either the presenter or the assistant may answer the extemporaneous question(s). The students may collaborate on their answers to these questions.

There are two judges and a timer in each presentation room. A judge may act as a timer if personnel is limited.

The judges rate the contestants according to the following scale, using the questions below as suggested guidelines:

Knowledge (0-13 points)

- Is an appropriate approach to the problem used?
- Is the solution accurate and complete?
- Are the facts correct?
- Is the logic correct?
- Is the use of vocabulary and notation correct?
- Are relevant theorems, axioms, etc. used and mentioned when they contribute to a desired result?
- Are important ideas emphasized/outlined/summarized?

Presentation (0-8 points)

- Is time used effectively?
- Are ideas explained in a logical manner?
- Is the presentation clear and well-organized?
- Is sufficient detail used?
- Are oral, visual and verbal techniques used effectively?

Responses to extemporaneous questions (0-4 points)

- Are the extemporaneous questions answered correctly and adequately?

Judges should not give or deduct points based on whether one or two students participated in the presentations.