

# Math Competition Rule Book



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## MATH COMPETITION

There are 4 geographic regions in which competitions will take place:

- **Midwest**
- **Northeast**
- **Southeast**
- **West**

The top 4 teams from each region move onto the national competition hosted at RIT/NTID. For nationals, all travel is paid for by RIT/NTID.

Regionals and Nationals have similar formats:

### **Friday Night:**

Friday night is Spirit Night! Teams should show their school colors, wear school t-shirts, face paint, and wacky headgear to show school spirit. Table decorations are also encouraged. The effort and spirit behind attire, paired with energy, kindness, and sportsmanship displayed through the weekend, will determine the recipient of the annual Ben Hall Spirit Award. This applies to regional competitions only.

### [Tiger Team Challenge](#)

### **Saturday Morning: Individual Rounds**

[Solo Tiger Challenge](#)

[Tiger Strike Challenge](#)

For Regionals only: [Roar your way out](#)

### **Saturday Afternoon: open to the public**

[Tiger Team Championship](#)

[Top Tiger Championship](#)

[Awards Ceremony](#)



## AWARDS

The following prizes are awarded:

### Regional Top 4 teams

All-expenses paid trip to the National competition at RIT/NTID.

### Regional Top 3 individuals

1<sup>st</sup> \$300

2<sup>nd</sup> \$200

3<sup>rd</sup> \$100

### National Top 4 teams

➤ 1<sup>st</sup> \$1000

➤ 2<sup>nd</sup> \$800

➤ 3<sup>rd</sup> \$600

➤ 4<sup>th</sup> \$400

### National top 4 individuals

➤ 1<sup>st</sup> \$500

➤ 2<sup>nd</sup> \$250

➤ 3<sup>rd</sup> \$125

➤ 4<sup>th</sup> \$50

### Top Scorer:

A trophy will be awarded to the Top Scorer from each region and the national competition.

### Ben Hall Spirit Award:

This award recognizes a student's enthusiasm for math, their encouragement of peers, and their positive attitude throughout the competition. It celebrates those who cheer on their teammates and help keep everyone motivated.

### Tiger Team Sportsmanship Award:

This award recognizes a team that demonstrates fairness, respect, and integrity during a competition. They follow the rules and respect the judges and fellow competitors, regardless of the outcome.



## PREPARATION:

Teams are encouraged to use the American Sign Language version of Khan Academy's Algebra Basics, covering diverse topics like negative numbers, absolute values, exponents, square roots, fractions, decimals, and some geometry.

- For instructions on how to access ASL content on Khan Academy, [refer to our how-to document](#).
- Coaches can access tests from previous competitions for studying.
- Topics to review at the 6th, 7th, and 8th grade level:
  - Algebra
  - Geometry
  - Statistics
  - Number Sense

## GENERAL COMPETITION RULES

- Fractions: If the answer is expressed in common fraction, reduce the fraction to the lowest terms.
- Units: Units will be provided on the documents. Do not include units. If an incorrect unit is used, then the answer will be incorrect.
- $\pi$ : If the answer is expressed in terms of  $\pi$ , Write  $\pi$  in your answer
- Ordered Pair: If the answer is expressed as an ordered pair, write your answer in  $(x, y)$ .
- Simplify all your answers: Ex: 25 not 52
- Algebra: Do not include  $x$  in your answer. Numerical answers only.
- For Tiger Team Challenge, an answer sheet will be provided. Answers must be written clearly, and ensure all incorrect answers are erased thoroughly.
- For Solo Tiger and Tiger Strike, answers must be written on the line on the right side of the document.
- Legibility: Answers on documents must be written clearly. During championship rounds, judges may ask for clarification if writing is not clear.
- Calculators:
  - Only a basic four-function Calculator is permitted. A calculator will be provided for all members of the team. Inform the Math Competition team in advance if you need a special large print calculator.
    - Addition, Subtraction, Multiplication, and Division.
    - Square, Square Root, & Percent Key functions are permitted.
  - Scientific and graphing calculators are not permitted.
  - Calculators are allowed in Tiger Team, Solo Tiger, and Tiger Strike Challenges as well as the team portion of the Tiger Team Play in and Championship Rounds.

## COMPETITION FORMAT

### Captain of the team:

Coaches should discuss with their team and choose a captain. The captain's role is to answer for the team, either by writing on the team answer sheet or being the one to write and submit an answer in the Tiger Team rounds. Only the Captain can object to a question.

### Tiger Team Challenge:

All teams will participate in the Tiger Team Challenge. Each team will be given a set of 10 problems to solve within 45 minutes. Speed does not contribute to score, so we encourage teams to take their time. When all 10 problems are complete, the team captain will raise their hand, and a proctor will come to the table and collect the yellow answer sheet. The judges will check the answers and return the problems back to the team if there are any incorrect answers. Each team has at most three checks from the judges within the 45-minute limit. If after three checks all 10 questions are not correct teams will continue to work until 45 minutes is up. At the end of the challenge, all answer sheets will be collected. Each correct answer is worth 2 points towards the team's overall score. Calculators are permitted during the Tiger Team Challenge.

### Solo Tiger Challenge:

All individuals will participate in the Solo Tiger Challenge, where competitors work alone. This round is 40 minutes and consists of 30 math problems that feature mathematical reasoning and problem-solving processes. Students are to remain seated the full time. Speed does not impact scores. We encourage students to review their questions if there is still time remaining. Calculators are permitted during the Solo Tiger Challenge.

### Tiger Strike Challenge:

Following the Solo Tiger Challenge, all competitors participate in the Tiger Strike Challenge and work alone. This round is 20 minutes and consists of eight math problems that feature multi-step problems that engage students in mathematical reasoning and problem-solving processes. Students are to remain seated the full time. Speed does not impact scores. We encourage students to review their questions if there is still time remaining. Calculators are permitted during the Tiger Strike Challenge.

### Roar Your Way Out:

Students will be grouped with students from different teams. These new teams will work together to solve 4 different puzzles to decipher a code that unlocks a prize! Possible puzzles for Roar Your Way Out are:

- Math Pyramid
- Sudoku
- Shape Equations
- KenKen (5x5)
- Logic Puzzles

Puzzles will change year to year

### Tiger Team Play-In and Tiger Team Championship:

- Teams that place 5th – 10th based on scores from Friday night and Saturday morning will compete in a Tiger Team Play-in Round for a chance to secure the final two spots in the Championship Round.
- Teams that placed 1st- 4th based on scores from Friday night and Saturday morning are automatically in the Championship Round.
- Visit the scoring section for more information for how scoring works.

► **Tiger Team Play-in Round**

After the play-in concludes, the Math Competition moves to the Tiger Team Championship Round with the top 6 teams: the 1st - 4th place teams and the two winners of the play-in round.

The Tiger Team Play-In and Championship Rounds consist of one round of 6 team questions. Teams will have 90 seconds to answer each question, and 2 points are awarded for each correct answer. Teams can work together to answer the questions with the use of a calculator.

► Before the round starts the team should decide who will be player 1, 2, 3, 4 for the individual portion of the team round. This order cannot be changed.

► Following the team round, there will be one round of 8 individual questions. Team members have 90 seconds to answer each question. Teams are awarded 1 point for each correct answer.

Teams with 4 competitors will be able to answer all 8 individual questions.

Teams with 3 competitors must sit out for questions 4 & 8.

Competitors will answer the questions without use of calculators.

► **Objections:** Captain must inform judges of any objection before the next question is shown.

► **In the event of a tie**

Tied teams will continue up to 1 more round of 4 individual questions until the tie is broken.

Two teams remaining

- If there is still a tie after one round, a sudden victory round of 4 individual questions will be played.

The first person to answer a question correctly wins. Players have 45 seconds to answer the question.

- If there is still a tie, teams that had the highest score based on Friday Night and Saturday morning will be named the winner or move on to the championship round.

More than two teams remaining

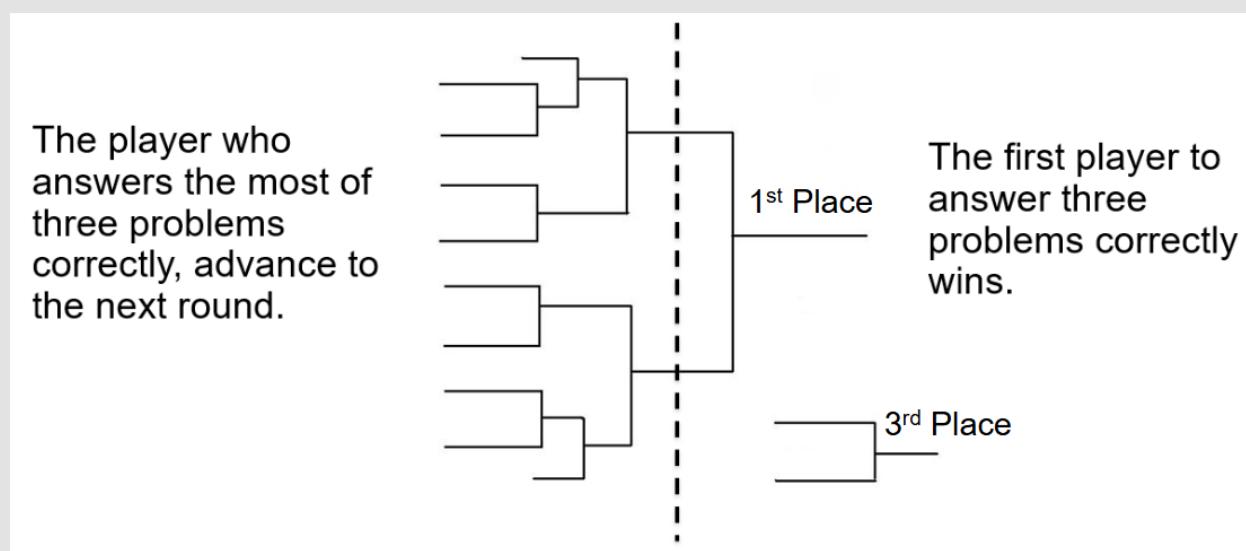
- If there is still a tie after one round, there will be another round of 4 individual questions until the tie is broken.

- If the tie is still not broken, teams that had the highest score based on Friday Night and Saturday morning will be ranked accordingly.

In the event of a technical issue, please write your answer on a piece of paper and raise it in the air before time runs out. Judges and Proctors will make the final decision.

### Top Tiger Championship:

- Top individuals from Saturday morning competition will participate.
  - At least 10% of students will participate with a maximum of 16 students.
  - Calculators are not permitted.
- Competitors will compete in a bracket-style tournament where a quick and accurate response to questions are the key to victory.
- In rounds before third place and championship rounds, competitors have 45 seconds to figure out the answer. The competitor who gets the best out of three correct answers in the quickest amount of time advances. Should the round end with a tie, the round goes to “sudden victory” and the competitor who gets the correct answer first, advances. If after 10 additional questions there is still a tie, the winner of that round will be based on individual scores from Saturday Morning.
- In the third-place round and championship round, competitors have 45 seconds to figure out the answer. The first competitor who answers three problems correctly wins.
- In the rare case that students submit the answers at the same exact same time, judges will accept the correct answer. If both students answer correctly, both students will get the point.
- Objection: Students must inform judges of any objection before the next question is shown.
- In the event of a technical issue, please write your answer on a piece of paper and raise it in the air before time runs out. Judges and Proctors will make the final decision.



## SCORING

**Solo Tiger Challenge:** Total of 30 questions, worth 1 point each.

**Tiger Strike Challenge:** Total of 8 questions, worth 2 points each.

**Tiger Team Challenge:** Total of 10 questions, worth 2 points each.

**Individual Score:** Solo Tiger + Tiger Strike = Total Score

**Team Score:** Sum of Team Individual Scores divided by 4.

Note: Regardless of how many players are on the team, it will always be divided by 4.

### Tiebreaking Rules:

#### ► Individual Score

- First, use the Solo Tiger tiebreaker subset: 30, 29, 28, 27, 26, 25, 24, 23, 22, 21.
- Total number correct from first Solo Tiger tiebreaker subset.
- Individual comparison of subset problems compared in the order listed above.
- Compare problems from the Tiger Strike in the following order: 8, 7, 6, 5, 4, 3, 2, 1.
- Second, use the Solo Tiger tiebreaker subset: 20, 19, 18, 17, 16, 15, 14, 13, 12, 11.
- Total number correct from second Solo Tiger tiebreaker subset.
- Individual comparison of subset problems compared in the order listed above.
- Third, use the Solo Tiger tiebreaker subset: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1.
- Individual comparison of subset problems compared in the order listed above.

### Team Score

- Sum of team members' Solo Tiger scores.
- First, use the Team Challenge tiebreaker subset: 10, 9, 8, 7, 6.
- Total number correct from first Team Challenge tiebreaker subset.
- Individual comparison of subset problems compared in the order listed above.
- Second, use the Team Challenge tiebreaker subset: 5, 4, 3, 2, 1.
- Individual comparison of subset problems compared in the order listed above.



## REGISTRATION

### Eligibility:

- You must be a deaf or hard-of-hearing student enrolled in grades 6-8.
- You must be age 15 or younger.
- You must be a part of a registered team.
- Teams must consist of four qualified competitors and up to two coaches.
- Coaches must be employees of the school or district.

Coaches must be a teacher, paraprofessional, or other school/district representatives. Each team may have up to two coaches. Please contact us if you have questions about who can be a coach.

Coaches will work in tandem with the NTID Youth Programs team in relaying information to interested students, distributing and collecting completed registration forms, and coaching/readying the competitors for all levels of the competition.

- Each team must compete in their regional competition to advance to Nationals.
- Competitors on a team must be a part of the same school district, live in the same county/parish, or live within 75 miles of each other.
- Teams must pay a \$200 registration fee.
- This fee is automatically waived for teams from the host school.

### How to Register:

- Register a team online (school name, location, coach name, and shirt size)
- Complete student online registration (student's name, address, parent's information, and additional information needed)

Submit registration information and paperwork for each member of their team

If your school or district is interested in applying for a spot in your regional competition, coaches may apply and secure a place in the competition prior to finalizing their team roster.

## FORMS

There are forms that you will need to review and sign prior to participating in the math competition event. Forms are for the participants and the coaches (listed with asterisk for coaches). The forms need to be filled out and signed prior to the competition. Here is a list of the forms, you can find them at [rit.edu/mathcompetition](http://rit.edu/mathcompetition) to download, fill out then send it through fax, email, or mail. Email is recommended for the quickest method; [mathcompetition@rit.edu](mailto:mathcompetition@rit.edu).

Participant Code of Conduct\*

Release Agreement

Eligibility Requirements & Parental Permission

Emergency Contact Information\*

Participant Rules\*