

# 1 Welcome Letter

Dear Math Team Sponsors, Coaches and Students,

You are cordially invited to attend the fourteenth annual James S. Rickards Fall Invitational, a mathematics competition to be held on **Saturday, November 12, 2022**. The Rickards Invitational is one of the largest competitions in the Southeast with nearly 900 competitors from 42 elementary, middle, and high schools last year.

We encourage all middle and high schools to participate, regardless of whether or not they currently have math teams or Mu Alpha Theta chapters. To attract a variety of participants and familiarize new teams with mathematics competitions, we will incorporate the structure and rules of a standard Florida Association of Mu Alpha Theta (FAMAT) Invitational. We hope that this competition will inspire students to pursue the study of mathematics and motivate them to work hard for the upcoming mathematics competition season. It is our goal to ensure the competition runs as smoothly as possible and is an enriching experience for all students.

Registration may be completed online at [www.rickardsinvitational.org](http://www.rickardsinvitational.org). The fee is \$10 per student until Monday, November 1<sup>st</sup>. Late registration will be available until Wednesday, November 6<sup>th</sup> and will be \$15 per student. We strongly urge you to register by the regular deadline to guarantee that there is enough time for hosts to update their records, take inventory, and accommodate participants. On the day of the competition, sponsors will sign-in their teams at Rickards Auditorium and the first testing session will begin at 9:30 AM. A complete schedule of events is attached.

To prepare you for competition events, the rules for our invitational are detailed in this Competition Handbook. In general, rules are in accordance with standard FAMAT policies. Calculators will not be permitted on any test, except for Statistics Individual and Team. We will have Individual and Team tests for the Pre-Algebra, Algebra I, Geometry, Algebra II, Precalculus, Statistics, and Calculus divisions, as well as Open tests for those students not competing in Team Round.

If you have any questions, please contact us at [rickardsinvitational@gmail.com](mailto:rickardsinvitational@gmail.com). We look forward to your participation at our Invitational.

Sincerely,

Hugo Mayorga  
Math Team Sponsor

Sukeerth Goly  
Math Team President

## 2 Competition Format

### Eligibility

All students will compete in their respective Mu Alpha Theta divisions for the 2022-2023 school year (Pre-Algebra, Algebra I, Geometry, Algebra II, Precalculus, Statistics or Calculus). If a student does not participate in Mu Alpha Theta, he or she will compete in the division corresponding to his or her current math class. If you are not sure which division a student may compete in, please see the FAMAT Sponsor's Guide at

<https://famat.pythonanywhere.com/static/downloads/SponsorsGuide2022-2023.pdf>

### Individual Tests

There will be an Individual round for each division (Pre-Algebra, Algebra I, Geometry, Algebra II, Precalculus, Statistics, and Calculus). The Individual tests will consist of 30 multiple choice questions and an allotted testing period of 1 hour. The scoring is +4 points for each correct answer, -1 point for each incorrect answer, and 0 points for a question left blank. Any ties will be broken using the sudden death method (beginning at Question 1) where correct answers trump blank answers which then trump incorrect answers. Past tests are available for download at the Rickards Invitational website: <https://www.rickardsinvitational.org>

### Team Rounds

Each sponsor can select a team of 4 students per division to compete in a Team Round (teams must be selected in advance of the competition). We will only be seating one team per school in each division, and teams must consist of at least 3 members. In the Team Round, the 4 students will be allowed to work together on 12 questions, presented one at a time. For each question, the team will have up to 4 minutes to submit their answers, and may only submit one time during each of the 12 questions.

The scoring system for the Team Round will be standard scoring; that is, 16 points for a correct answer in the first minute, 12 points for a correct answer in the second minute, 8 points for a correct answer in the third minute, and 4 points for a correct answer in the fourth minute. **A sliding scale will be implemented** – every minute without a correct answer shifts the point values down a further minute. Hence, if there are no correct answers in the first two minutes, a correct answer in the third minute earns 16 points, and a correct answer in the fourth minute earns 12 points.

### Open Tests

Students not competing in Team Round can compete in an Open test. The format and scoring for these tests are identical to the Individual tests. A description of each test is provided below:

#### *Euclidean Open*

The Euclidean Open is for students in **Pre-Algebra and Algebra I**. It draws upon concepts from both of these divisions, and is intended to be very approachable for students in either division.

#### *Theta Open*

The Theta Open is for students in **Geometry and Algebra II**. It draws equally upon concepts from Geometry and Algebra II.

#### *Mu-Alpha Open*

The Mu-Alpha Open is for students in **Precalculus, Statistics, and Calculus**. It can draw upon concepts from Geometry, Algebra II, Precalculus, and Calculus.

### Mini-Events

Speed Math and Mental Math will be held during lunch and are open to all divisions. A maximum of 5 students from each school may compete in each Mini-event.

### 3 Awards and Sweepstakes

A breakdown of the awards given is given below:

#### Individual Tests

Awards will be given to the top 15 competitors in each Individual test.

#### Team Awards

Awards will be given to the top 5 teams in each division. A team's total score is calculated by adding the Individual test score of each member of the team to its Team Round score.

#### Open Tests

Awards will be given to the top 15 competitors in each Open test.

#### Mini-Events

The top three competitors in each event will be recognized; however, keep in mind these events are just for fun and do not count towards sweepstakes.

#### Middle School Sweepstakes

Sweepstakes awards will be given to the top 3 middle schools, as determined by adding the T-scores from the Pre-Algebra, Algebra I, and Geometry (or Algebra II, if a school has no Geometry team) divisions of each school.

#### High School Sweepstakes

Sweepstakes awards will be given to the top 5 high schools, as determined by adding the top 4 T-scores from the Geometry, Algebra II, Precalculus, Statistics and Calculus divisions of each school.

### 4 Preliminary Schedule

*Please note that this is a preliminary schedule of events, and is subject to small changes prior to competition day. An official schedule of events, complete with room numbers/event locations, will be distributed in the competition program on the morning of the competition. Any updates prior to competition day will be posted on the Invitational website: [www.rickardsinvitational.org](http://www.rickardsinvitational.org).*

8:00 – 8:45 AM	Registration (Auditorium)
9:05 – 10:30 AM	<b>Round 1 Testing</b>
	Individual Tests: Precalculus, Statistics, Calculus, Euclidean Open, Theta Open
	Team Rounds: Pre-Algebra, Algebra I, Geometry, Algebra II
10:30 – 10:50 AM	Disputes
10:50 AM – 12:10 PM	<b>Round 2 Testing</b>
	Individual Tests: Pre-Algebra, Algebra I, Geometry, Algebra II, Mu-Alpha Open
	Team Rounds: Precalculus, Statistics, Calculus
12:10 PM – 12:30 PM	Disputes
12:30 – 2:00 PM	Lunch and Mini-Events
2:15 – 3:45 PM	Award Ceremony (Auditorium)

## 5 Registration

Registration may be completed online at [www.rickardsinvitational.org](http://www.rickardsinvitational.org). The fee is \$15 per student until the November 1<sup>st</sup> deadline. Schools that pay after the deadline but by November 6<sup>th</sup> will be charged \$0 per student. Once again, we strongly urge you to register by the regular deadline to guarantee that there is enough time for hosts to update their records, take inventory, and accommodate the participants. Once you complete registration, you will receive a confirmation email within 48 hours that holds an invoice, details on how to pay your registration fees, and any other details that need to be addressed.

We will be assigning ID numbers for each of your students after you register online with a list of students competing. Furthermore, we will be using the below software to create and bubble the necessary sections of the scantron for you. The ID, student name, and test name will already be bubbled for you. When you come to the competition, we will hand you the scantrons for your school and then you can distribute them to the correct students.

<https://anirudhrahul.github.io/FAMATBubbler/>

We will also have additional, empty scantrons. Each of your students will be assigned to a classroom to take the Individual test. When you arrive on the morning of November 12<sup>th</sup>, you can sign-in your school in the Rickards Auditorium, where you will be given a packet with scantrons (unless you have printed your own) and room assignments.

We hope to see you on November 11<sup>th</sup>! Thank you.