51st Mu Alpha Theta National Convention University of Arkansas & Fayetteville HS June 25-30, 2023







The 51st annual Mu Alpha Theta National Convention is co-hosted by:

Tonia Crow, MAO Governor Region 2

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Please check mualphatheta.org regularly for updates or changes.

REGISTRATION DEADLINE: MAY 1, 2023

Travel information, all participant information, and registration fee (if paid by credit card):

Submitted online by each school by the deadline

Final Registration, Medical, Student Participation Policies forms, and registration fee (if paid by check) must be postmarked by May 1 and snail-mailed to the National Office:

Mu Alpha Theta Convention 2023 c/o University of Oklahoma 3200 Marshall Ave, Suite 150 Norman, OK 73019

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^{*} to be mailed to the National Office

Competitors

All competitors must be full or associate members of Mu Alpha Theta.

Competitions

The Convention will include math competitions at three levels, as well as Topic Tests, Poster, Chalk Talk, Hustle, Relay, Interschool, Speed and Mental Math. Each school is invited to have competitors in **Mu (Calculus), Alpha (Precalculus), and Theta (Algebra II/Geometry) divisions.** The division in which students will compete is determined by the highest-level math course they have completed/are enrolled in as of May 1, 2023.

Registration and Hotel Fees

The \$550 fee must be paid online or postmarked no later than May 1, 2023. The registration fee includes lodging, convention activities, t-shirt, and meals (Sunday dinner to Thursday dinner).



Registration

There are **three (3)** components for registering all participants for the convention:

- 1. All participant information must be **entered online** at <u>mualphatheta.org</u>. This site will be available beginning February 1, 2023. Needed information: names of students attending, division for each student, topic test sign up, chalk talk sign up, t-shirt sizes, and travel information.
- 2. School sponsors need to provide a list of roommates for dormitories. Divide by specific female and male rooms and email to woolfmath@aol.com, tmcrow@uark.edu and info@mualphatheta.org.
- 3. Required forms must be completed for each competitor and sponsor and mail by the deadline.

Staple the three forms for each participant in the following order: Notarized medical release, copy of the insurance card, and student participation form. Place sponsors' form and insurance card copy on top followed by alphabetized participants' stapled forms by last name.

Note: Sponsors are encouraged to keep a copy of these forms while traveling.

Accommodations (Different for 2023)

All member, sponsor, and chaperone accommodations will be in the dormitories at the University of Arkansas from June 25-30. Sponsors must list students and roommate designations on registration. In accordance with University of Arkansas (UofA) policy, males and females will be on separate floors. All fees for rooms and scheduled cafeteria dining will be included in the registration fee for 2023. Linens and towels will be provided, but each participant must bring their own toiletries. Keys will be issued to all participants at sign in and must be returned prior to departure. Schools will be financially responsible for a \$175 fee for any lost key/fob combination. Adohi dorm address: 187 S Stadium Dr, Fayetteville, AR 72701.

For those arriving earlier than June 25, blocks of rooms will be reserved for groups. We are working with Experience Fayettville to receive best pricing; detailed information will follow January 1, 2023. On Sunday, June 25, a shuttle bus may be available at the hotels in Fayetteville to take our members, sponsors, and chaperones to the University of Arkansas dorms.

Wi-Fi – Will be available at the UofA and Fayetteville High School at no charge.

Parking – Parking lots for buses and personal vehicles at Fayetteville High School will be free of charge and is a short walk to the dorms. Parking passes for the UofA costs \$35 per week per vehicle. Please note this on your registration.

Transportation – Shuttle buses, provided by the convention, will run from the airport to the University of Arkansas on Sunday, June 25 (10:00 a.m. until 4:00 p.m.), and from the hotel to the airport on Friday, June 30 (4:00 a.m. until noon). Sponsors need to put their arrival and departure times on the registration form.

E-scooters, bikes, and e-bikes are available around the University of Arkansas campus. Students can access these when they arrive via an app. Sponsors must determine whether their students will be allowed to use these vehicles during the convention. Users will be expected to follow all rules and regulations for their use as stated in the app.

*The University of Arkansas, Fayetteville High School, and Mu Alpha Theta have no liability for any injury, accident, or ticket violations that may occur.



Excursion – On Wednesday, June 28, students will have their choice of excursion destinations: <u>Crystal Bridges</u>
<u>Museum of American Art</u> or an <u>outdoor excursion in the Ozarks</u> of biking and hiking. Transportation and lunch will be included.

Sponsor Duties – The convention requires all sponsors to help with running competitions and activities. Sponsors may select preferences upon registration and will receive assigned duties on or before check in.

Registration/Check Out Time – Registration will begin at 11:00 a.m. on June 25. Checkout time ends at 11:00 a.m. on Friday, June 30. Before check out, participants are required to put trash in the bags provided and put linens and towels in one pile on the dorm floor.

Competitors – Each student must be registered in one of the three levels defined here. The division students will compete in is determined by the math course in which they have completed or are enrolled in as of May 1, 2023. **THETA** level: for associates or members who have completed Geometry and/or Algebra II but have not been enrolled in a higher-level mathematics course.

ALPHA level: members who have completed math courses above Algebra II but have not been enrolled in Calculus.

MU level: for members who are enrolled in or have completed a calculus course.

Free Time – Schools who travel early to the National Convention or stay late have many options for things to do. Here are a few options: <u>Experience Fayetteville</u> and <u>Fayetteville</u>.

Opening Ceremony Picture or Logo – Submit a picture of your MAΘ chapter (members, school, activity, etc.) or school/chapter logo in jpg format to woolfmath@aol.com and info@mualphatheta.org by June 1, 2023.

Sponsors-Only Remind Text Group – All sponsors from each school **must** join the Remind text group. To join, text @maonats2 to 81010.

Background Checks – Required by the University of Arkansas for all sponsors, chaperones, guests, and 2-year college participants 18 years and older. Information and required videos will be available when registration opens on March 1, 2023.

Competitions

A student may take a test at a higher level other than the division in which they are registered ONLY in the following competitions: Topic Tests, Chalk Talk, Relay, Hustle, and Gemini. However, if you are registered as an Alpha, you MUST take the Alpha individual, Alpha ciphering, and Alpha school bowl. <u>No calculators are allowed on any test.</u>

The **OPEN** level topic tests are not limited to students in any particular level. However, students should carefully examine test content descriptions before making their selections.

Individual Tests (Levels: T, A, M)

Sweepstakes Event

- 30 multiple choice question written test covering all topics applicable to the level
- 60-minute time limit
- Scoring will be 5 points for each correct answer, 1 point for a blank, 0 for an incorrect answer
- Ties will be broken by the sudden winner method. (See glossary)
- Trophies or Medals will be given to the top 25 for each division.



Topic Tests (Levels: T, A, M)

Sweepstakes Event

- 30 multiple choice question written test.
- Descriptions of topic tests are included in this packet.
- 60-minute time limit, except History of Math, which has a 30-minute time limit.
- Scoring will be 5 points for each correct answer, 1 point for a blank, and 0 for an incorrect answer.
- Ties will be broken by the sudden winner method.
- Trophies or medals will be given to the top 15 for each test.
- A list of topics are provided on page 10.

Ciphering (Levels: T, A, M)

Sweepstakes Event

- 12 open response questions administered individually.
- 3-minute time limit per question.
- Scoring twelve points for a question answered correctly in the 1st minute, eight points in the 2nd minute, and four points for a question answered correctly in the 3rd minute. A sliding scale will be used.
- Trophies or medals will be given to the top 25 in each division.

Gemini (Levels: T, A, M)

Non-Sweepstakes Event

- 30 multiple choice written test that 2 students from different schools work on together.
- 60-minute time limit.
- Administered to all students not qualifying for school bowl.
- Scoring will be 5 points for each correct answer, 1 point for a blank, 0 for an incorrect answer.
- Ties will be broken by the sudden winner method.
- Trophies or medals will be given to the top 12 teams in each division.
- You must pair up with someone from a school other than yours. Meet someone new!
- We will help you find a person to pair up with, if needed.

School Bowl (Levels: T, A, M)

Sweepstakes Event

- Top 4 individuals from each school per division as determined by the sum of their individual test score and their ciphering score compete as a team.
- Twelve (12) open response questions administered one at a time.
- Time limit 4 minutes per question with points awarded depending on the minute in which the question is answered correctly.
- Sixteen (16) points for a question answered correctly in the 1st minute, 12 points in the 2nd minute, 8 points in the 3rd minute, and 4 points in the 4th minute.
- Schools with at least 3 students in a division MUST participate in School Bowl. 1 or 2 students in a division may choose to participate in Gemini instead.
- A sliding scale will be used.

Chalk Talk (Levels: T, A, M)

Sweepstakes Event

Speeches given by students on the specified topic.

- Each school can have one presenter for each level Theta, Alpha, Mu.
- See judging form included in this packet for more specific information on presentations.
- Ten (10) people from each division will advance to the final round.
- Trophies or medals will be given to the top 10 in each division.
- Students will be writing on whiteboards.
- Students participating in Chalk Talk, Hustle, and Relay must be different as these events occur at the same time.



- Chalk Talk Topics:
 - o Theta "Math, A Diamond in the Rough"
 - o Alpha "Math, Trails and the Cyclists Dreams"
 - o Mu "The Integration of Math and Agriculture"
- The talks must be appropriate to their level. The Mu talk must contain calculus elements. The Alpha talk must contain elements beyond Algebra II and Geometry. The Theta talk must have elements of Algebra I and Geometry.
- Chalk Talk instructions:
 - o Round one (Online) The talk is to be uploaded to YouTube as an UNLISTED video so that anyone with the link can view the video without issues. Their upload is a 7-minute CONSECUTIVE VIDEO WITH NO EDITS. The students can do multiple practice runs with their talk if they'd like. The upload is their final version. It is completely up to the student how they present their work (document camera, use a whiteboard/chalkboard, etc.). The student needs to be comfortable with how they present their talk in whatever format they choose. They must, however, use a writing tool in the video to present their talk.
 - o The video links for all of the school's competitors (1, 2, or all 3) must be in ONE email with the school's name in the subject line and emailed to Kim Woolfenden (woolfmath@aol.com), Tonia Crow (tmwcrow@uark.edu), and Rob Snow (robsnow23@yahoo.com) by 11:59 p.m. on May 31.
 - o The videos will be judged during the week of June 4-10. Finalists will be announced at the opening ceremony!
 - o Round two (Chalk Talk Finals) Finalists will present live in Arkansas during the convention. They will be sequestered during the final presentations until their talk is complete.
 - o If anyone has any questions about the Chalk Talk process, please email Rob Snow.

Poster (Full-team event)

Sweepstakes Event

- Poster topic and information will be given at the opening ceremony.
- Competition poster boards will be provided to each team and must be used for this project.
- See judging sheet in this packet for information.
- Trophies or medals will be given to the top 10 schools.
- Visit the MAO website for past poster entries.

Interschool - Around the World in 80 Minutes

Sweepstakes Event

This is a test that will take you on a journey around the world. Each question can be answered two ways: through trivia knowledge or by solving a puzzle. Each team consists of up to 12 members of students and/or sponsors. The highest-scoring eligible team for each school counts for sweepstakes. A team is eligible for sweepstakes if it meets either of the two conditions below:

- All members on a team are students from the same school.
- All students from a school are on a team.

As an example, School A has 33 students and 3 sponsors, school B has 11 students and 1 sponsor, school C has 8 students, and D has 4 students.

- School A has 2 teams of 12 students each, and 1 team of 9 students and 3 sponsors. The first two teams are eligible to count for sweepstakes, but the team with sponsors is not.
- Alternatively, school A can field 3 teams of 11 students each, with the sponsors joining another team or sitting out. All 3 teams are then eligible.
- School B has 1 team of 11 students and 1 sponsor. This team is eligible to count for sweepstakes.



• Schools C and D combine forces to make a team with their 12 students. This team is eligible to count for sweepstakes for both schools, and both schools will receive the same t-score.

Trophies will be given to the top 10 teams. No use of electronics or reference materials will be allowed. Sponsors are encouraged to form their own team(s) and compete against the students.

Hustle (Four-person team)

Sweepstakes Event

- Each school may have only one Hustle team of up to 4 people from the same school, with no more than 2 students from the same division.
- A school sponsor and an additional sponsor or student to score for another school. All sponsors must work Hustle.
- There will be 5 rounds of 5 minutes each.
- The team is presented with 125 questions, color-coded by 5 math categories: Geometry, Algebra II, Precalculus, Calculus, and Statistics/Probability. There will be 25 of each color/category, and up to 25 total submissions will be graded in each round.
- Before the end of each round, a 1-minute warning will be given. A second 15-second warning will be given at which time the teams should have compiled answers for the judges to grade and will submit the paper with the question which includes the answer in the answer blank.
- Correct responses for Round 1 will receive 6 points, 5 pts for Round 2, 4 pts for Round 3, 3 pts for Round 4 and 2 pts for round 5.
- Trophies or medals will be given to the top 10 teams. Individual awards will be given to each of the 4 student members of the team.
- Students participating in Hustle and Relay must be different.

Relay (Three-person team)

Sweepstakes Event

- The relay team will consist of 3 students: 1 Theta, 1 Alpha, 1 Mu.
- Students will begin seated as Theta, Alpha, Mu.
- After each set of 3 questions, the students will move back one seat with the student sitting in the back moving to the front seat.
- Each student will have their own question to work on.
- There will be a single answer sheet on which to write answers only.
- The answer sheet can be passed to the back or in front during the round
- Students cannot talk to each other.
- If a student wants the answer sheet passed back up to him, the student can snap his/her fingers or tap the person in front of him/her on the back.
- There will be 9 rounds following a practice round.
- The time limit for each round will be 6 minutes.
- Answer sheets can be submitted at the end of 2, 4, or 6 minutes.
- Each correct answer will be worth 2 points.
- Bonus points will be awarded if all 3 answers are correct 12 points at the end of minute 2, 8 points at the end of minute 4, 4 points at the end of minute 6.
- Students participating in Hustle and Relay must be different.

Speed Math (Levels: T, A, M, Sponsor)

Non-Sweepstakes Event

- This is a 15-minute test with 25 open response problems.
- The content will be specific to each division.
- The answer should be written in the space provided.
- All problems require exact answers.



- Fractional answers may be given as improper fractions, mixed numbers, or exact decimals unless otherwise specified.
- Any units within a given problem and its answer are consistent.
- Where applicable, leave answers in terms of π .
- You will receive 1 point for each correct answer.
- No penalty for wrong answers or empty answer spaces.
- You may write on the test paper.
- Three students from each school may compete in Speed Math. An unlimited number of sponsors may compete from each school.
- Trophies or medals will be given to the top 10 students and the top 10 sponsors.
- Each student may only do ONE of the following: Speed Math <u>or</u> Mental Math. Students competing in both Speed and Mental Math will be disqualified from both events.
- Sponsors may take both tests.

Mental Math (Levels: T, A, M, Sponsor)

Non-Sweepstakes Event

- This is an 8-minute test with 40 problems.
- ALL PROBLEMS MUST BE SOLVED MENTALLY.
- There is to be NO writing on the test other than the answer.
- Writing other than the answer(s) will result in disqualification of the test taker.
- The answer should be written in the space provided.
- No pen erasures may be made to an answer once written.
- No writing over an answer.
- Use a pen with blue or black ink only.
- All problems require exact answers.
- Fractional answers may be given as improper fractions, mixed numbers, or exact decimals unless otherwise specified.
- You will receive 5 points for each correct answer.
- 1 point for each question skipped
- 0 points for each incorrect answer.
- Wait for the signal to begin then you will have 8 minutes of working time.
- A warning will be given at 1 minute left and 15 seconds left in the testing time.
- Three students from each school can compete in Mental Math. An unlimited number of sponsors may compete from each school.
- Trophies or medals will be given to the top 10 students and the top 10 sponsors.
- Each student may only do ONE of the following: Speed Math or Mental Math. Students competing in both Speed and Mental Math will be disqualified from both events.
- Sponsors may take both tests.

<u>Awards</u>

Division Awards

• These will be given to the top 10 schools in each division by combining the top 4 individual scores (determined by the sum of their individual test score and their ciphering score) with the bowl score.

Blue Ribbon Award

- Awards will be given to the top 3 schools.
- Only the schools outside of the top 15 are eligible.
- The score is computed as a sweepstakes score divided by the number of students or 8, whichever is greater.



Sweepstakes

• Awards will be given to the top 15 schools.

Scoring

Sweepstakes Scoring

The overall sweepstakes award is calculated from the scores of all tests and competitions. The sweepstakes score is calculated as follows.

- 1. A t-score is calculated for each individual competition score.
- 2. A t-score is calculated using the formula t = 10z + 50.

In the above formula, z is the standard score (or z-score) and represents the number of standard deviations above or below the mean a particular score is located. The z-score is equal to (x - mu)/sigma, where x is the actual team score, mu is the mean score, and sigma is the standard deviation of all the team scores. t-scores have a mean of 50. After each t-score is calculated, it is multiplied by a weighing factor so that each competition has a value relative to its importance.

So that sponsors and students can get a better feeling for the relative importance of each competition, the following table gives the weight and an approximate percentage for each competition.

Competition	Num	% Each	Total %
Division (indiv+cipher*, bowl) *Top 4 students M,A,T	3	15	45
Topic Tests: Top 1 student in each test	30	1.3	39
Interschool	1	2.4	2.4
Hustle	1	4	4
Relay	1	4	4
Poster	1	2	2
Chalk Talk: Top student in each division	3	1.2	3.6
<u>Total Weighing Points</u>			100

Tiebreaker System

- 1. In case of a tie, Mu Alpha Theta uses the automatic tiebreaker system. Tied scores on individual tests, topic tests, and ciphering will be broken by examining the first difference in the tied papers.
 - A right answer will defeat a blank or incorrect answer.
 - A blank answer will defeat an incorrect answer. For example: Alice, Bob, and Cindy have the same score on a test and identical answers for questions 1 through 9. For question 10, Alice missed it, Bob got it correct, and Cindy left it blank. Bob would place the highest, followed by Cindy and Alice in that order.
 - o In case of Ciphering, a right answer in an earlier minute will defeat a right answer in a later minute.
- 2. In the case a sudden winner is not sufficient (two or more identical papers), a tie breaker question will be written by the dispute room and administered. The ties are broken first by correct and incorrect responses. For the correct responses, a faster response wins the tiebreaker. For the incorrect responses, a faster response loses the tiebreaker. In other words, the first student to turn in a tie breaker question will either be first or last in said tie breaker.



- 3. Team Tiebreaker using automatic tiebreaker system, compare the final team totals, compare team scores per question by points until there is a discrepancy.
- 4. Division Tiebreaker using sudden winner tiebreaker system, compare the final team totals, compare team scores per question by points until there is a discrepancy, the highest number of points on that question breaks the tie, and compare individual scores with the highest scoring team member.
- 5. Sweepstakes Tiebreaker using the automatic tiebreaker system, compare the highest division scores in the following order: Mu, Alpha, Theta. Note that it is extremely unlikely that there is a tie for sweepstakes.

Topic Tests

Each student must register for one topic test for each round. Please indicate the number of students taking each test when you register online. Students may take any topic test in their division, a higher division, or any topic that is designated as open.

Round 1	Round 2	Round 3
Triangles - Theta	Theta Applications- Theta	Analytic Geometry- Theta
Circles & Polygons- Theta	Equations & Inequalities- Theta	Logs & Exponents- Theta
Area & Volume- Theta	Combinatorics & Probability- Theta	Sequence & Series- Theta
Analytic Geometry - Alpha	Alpha Applications - Alpha	Complex Numbers - Alpha
Trigonometry - Alpha	Equations and Inequalities - Alpha	Math in Physics - Alpha
Matrices & Vectors - Alpha	Combinatorics & Probability - Alpha	Sequence & Series - Alpha
BC Calculus - Mu	Mu Applications - Mu	Area and Volume - Mu
Limits & Derivatives - Mu	Integration - Mu	Math in Physics - Mu
Comprehensive - Mu	Combinatorics & Probability - Mu	Sequence & Series - Mu
History of Math - Open	Number Theory - Open	Discrete - Open

Theta Level Tests (Written at Algebra II/Geometry level)

Triangles – all concepts involving triangles (including special right triangles).

Circles and Polygons – all concepts involving circles (including some conics) and polygons.

Area & Volume – geometry topics that involve area and volume.

Equations & Inequalities – elementary equations and inequalities.

Theta Apps – applications of Algebra II and geometry concepts.

Analytic Geometry – concepts covering all conic formulas and basic analytic geometry.

Logs & Exponents – elementary logarithms and exponents.

Combinatorics & Probability – concepts involving probability, permutations, and combinations.

Sequences and Series – problems involving any type of series, including applications.

Alpha Level Tests (Written at the Precalculus level)

Trigonometry – concepts involving the use of trigonometry.

Math in Physics – concepts based on material from AP Physics I and II.

Alpha Applications – applications of precalculus concepts, may include trigonometry.

Analytic Geometry – 2D and 3D analytic geometry, conics, alternative coordinate systems.

Sequences and Series – problems involving any type of series, including applications.

Complex Numbers – concepts involving complex numbers.



Matrices and Vectors – problems involving matrix operations and vector properties and operations. *Equations & Inequalities* – elementary equations and inequalities.

Combinatorics & Probability – concepts using probability, permutations, and combinations.

Mu Level Tests (Written to cover all levels of math up to Calculus, but not limited to Calculus)

Limits & Derivatives – concepts relating to limits and derivatives of functions of one variable or graphs.

Mu Applications – applications of calculus, including optimization and related rates.

Areas & Volumes – all methods of finding or approximating areas under curves or between curves.

including polar and all possible methods of finding volumes of solids of rotations as well as volumes of irregular shapes using cross sections.

Sequences & Series – all sequences and series topics, including calculus-based series such as Taylor series. Integration – concepts relating to integrals of one variable.

BC Calculus – topics on the AP Calculus BC syllabus from the AP office.

Math in Physics – concepts based on material from the AP Physics A, B, and C courses.

Combinatorics & Probability – advanced problems using probability, permutations, and combinations.

Some questions will require calculus knowledge.

Math Comprehensive – these problems will cover all levels of math.

Open Level Tests (Available to all students)

History of Math – the topic is open...there is no specific era or topic.

Number Theory – advanced number theory, factors, primes, modulo, bases, etc.

Discrete Math – covers math topics related to discrete-valued variables.

Regulations and Glossary of Terms

Alpha – Full members who have completed math courses above Algebra II/Geometry but have not been enrolled in Calculus.

Calculator Usage – No calculators are to be used on any test.

Ciphering – Similar to an "team round," but for individual students. 3 minutes per question.

Disputes – Each competition has a window of time for participants to submit a written disagreement with a given question or answer on tests or bowl questions. The location and time period are listed on the schedule.

Division – Refers to the three major strands of the competition. The three divisions are THETA, ALPHA, and MU. Division scores are computed by adding the TEAM score with top 4 individual scores as determined by the sum of

their individual test score and ciphering score.

Interschool Test – A test that anyone from a school may work on.

Level – Determined by the highest course a student has completed prior to attending the convention. A student is allowed to take a test at a higher level, but not at a lower level, on the following competitions for the 2023 convention: Topic Tests, Chalk Talk, Relay, and Hustle. From lowest to highest, the levels are Theta, Alpha, and Mu. **Mu** – Full members who have completed a calculus course.

Multiple Choice Tests – Sixty minute, 30-question tests. Multiple choice questions are scored as follows: 5 points for a correct answer, 1 point for no answer, and 0 points for an incorrect answer, with sudden winner tiebreakers.

Open – Open to all students from any level.

Sliding Scale – The first correct answer received will be awarded 16 points regardless of the minute in which the question was answered. Correct answers received in the next minute will receive 12 points, and so on until the

four-minute time limit has been reached. For example, if a correct response is received in the third minute, then that response and all other correct answers in the third minute will receive 16 points. Correct answers received in the fourth minute will receive 12 points. (See team scoring)

Team Scoring – 12 one question rounds of four minutes. Correct responses in the first minute receive 16 points, second minute 12 points, third minute 8 points, and fourth minute 4 points. A sliding scale will be used. **Theta** – Associate or full members who have completed Geometry and/or Algebra II but have not been enrolled in a higher-level mathematics course.



MU ALPHA THETA NATIONAL CONVENTION TRANSFER OF SPONSORSHIP

Home School Information

Name of School	Chapter ID#
Name of Principal	Phone ()
Mu Alpha Theta Sponsor's Name	
Home School Principal Signature	Home School MAO Sponsor Signature
Receiving So	chool Information
Name of School	Chapter ID#
Name of Principal	Phone ()
Mu Alpha Theta Sponsor's Name	
MAθ's policy states that every student that competes of school sponsor that is either a teacher or administrator school named above is transferring sponsorship respondention to the receiving sponsor identified above. To participate at the national convention. The receiving sponsor for the home school student(s) for the entire convention.	r at that school with them at that event. The home nsibilities for the National Mu Alpha Theta This allows the stated home school's students g sponsor assumes the responsibility of acting as
Receiving School Principal Signature	Receiving School MAO Sponsor Signature



* FINAL REGISTRATION *

Postmark Deadline: May 1, 2023

Please print information clearly.

School Name		Chapter ID
School Address		
City, State, Zip		
Contact Person	Sı	ımmer Email
City, State, Zip		
Phone		
of all sponsors attending the co	nvention.	ut. Please include names and email addresse
Number of students registering All students must be registered as Number of sponsors registering	sociate or full members o	x \$550 = f Mu Alpha Theta. x \$550 =
Single rooms, if available (addi		x \$200 =
(\$550 includes room, food, t-shirt, all ac	•	
If paying by check, make it payable to: Mu Alpha Theta Educational Foundation	NOTE: If the National member of your grous specifying the names	1 1 1
Memo: 2023 Convention		
Mail to:		
Mu Alpha Theta Convention c/o University of Oklahoma		
3200 Marshall Ave, Suite 150		
Norman, OK 73019		



Participant's name (please print)		School

STUDENT PARTICIPATION POLICIES

Please read the following and indicate your acceptance by your signature(s) where applicable.

Rules of Conduct

- Participant agrees to conduct him/herself in a manner appropriate for a member of an honor society.
- Participant agrees to join all scheduled activities, to keep his/her sponsor informed of whereabouts before leaving the group/housing during unscheduled times, and when permission is given to leave the group, to travel in groups of two or more.
- Participant agrees not to visit the rooms of the opposite sex. No visits are allowed after curfew.
- Participant agrees not to bring with him/her or to acquire during the trip, illegal drugs of any kind including alcohol or smoking materials. Marijuana use is not allowed anytime during the convention.
- Participant agrees to permit the sponsor to keep any prescription medicines during the trip.
- In matters of dress and deportment, participant agrees to follow the requirements and suggestions of the convention host, Governing Council, and school sponsor.
- Participant agrees to adhere to curfew as determined by the convention host and to permit occasional room and baggage checks during the trip.
- Participants agrees that failure to follow any of these rules may result in confinement to housing assignment and/or in the return home of the participant (on the first available flight) at participant's own expense, or, if a minor, at the expense of the parent or legal guardian of participant, and without benefit of any refund.

Participant's name (print)		Participant's signature	Date
Parent Signature	arent Signature Date Sponsor's s		Date
Release and Indemnity Agreen	nent		
consideration of being permitter valuable consideration do hereb convention committee from all I injury or death or loss of person ground or air travel which may be	d to attend the Mu A by release, waive and manner of action, ca al property, and any be incurred by either	legal guardians of the participant lpha Theta National Convention, and discharge Mu Alpha Theta, its Gouses of action, suits, damages, juctors, damage, expense or cost incention the undersigned participant or the ticipation in the national convention	nd for other good and verning Council and Igments, or claims for personal Iuding any lodging, meals, e undersigned parents or legal
Council and convention commit	tee for any financial	legal guardians agree to indemnify liability or damages incurred whice pant while attending the national	ch were caused in whole or in
 Participant's signa	ature Date	 Parent/Guardian's s	 signature Date

NOTE: NO **STUDENT** WILL BE ALLOWED TO THE NATIONAL CONVENTION WITHOUT THIS SIGNED FORM ON FILE.



Partici	nant's	name	nlease	nrint)
raitici	pancs	manne i	Lbrease	: pi iiic/

STUDENT MEDICAL RELEASE FORM

	(This form MUST	be notariz	zed.)	
,	, as legal guardiar	n of		
or I,				
necessary to protect the health understand that such treatment nsurance, write NONE in the Cor medical needs of this student w	n and safety of participant wh may include obtaining the serv mpany line and realize the parer while at the convention. Skip th	ile in atterices of heants of the steel	lical treatment (including hospitalization ndance at and traveling to/from the collth care providers. If your student is with udent accept all financial obligations incomed Subscriber lines, but fill in all other ponsibility for such care not covered by the	onvention. I nout medical urred by the lines of this
Company	Policy #			
Subscriber:	Legal Guardian's S	ignature		
Emergency Contact 1:	Phone Number: ()	Relationship	
Emergency Contact 2:	Phone Number: ()	Relationship	
The foregoing instrument was ack	F knowledged before me this (name of person acknow	day of		
Printed Name of Notary			(NOTARY SEAL)	
Signature of Notary Public				
Personally KnownOR F	Produced Identification			
Type of Identification Produce	ed			
ATTACH a copy of both sides o	f your insurance card(s) to this form (with the Poli		ng with the signed Student Participation top).	n Policies
	e of the prescription medication		ers) must be left in the possession of the osage. Please list other medical condition	•
convention that may appear	online at the Mu Alpha to be part of the videotaping, p	during the	ase Form e convention as well as writing articles ebsite. I agree to allow my child y, and/or media. I further release Mu Alp	or myself,
any liability from this endeavor	Legal Guardian's Sig	nature		
NOTE: NO STUDENT WILL BE A	•	-	ON WITHOUT THIS SIGNED FORM ON	FILE.



SPONSOR OR CHAPERONE MEDICAL RELEASE FORM

(This form MUST be notarized.)

medical treatment (including hospita traveling to/from the convention. I un medical insurance, I will write NONE	hool, officers of Mu Alpha The lization) as deemed necessary nderstand that such treatmen in the Company line and leav I accept all financial obligation	eta and member y to protect the h t may include ob e the Policy # and ns incurred by ma	s of the conve nealth and saf staining the se d Subscriber li e for medical r	ntion staff, to initiate such first aid and other ety of participant while in attendance at and ervices of health care providers. If I have no ines blank. (All other lines are to be filled out needs while in attendance at the convention.
Company	Policy #			
Subscriber:	Sponsor or Guest S	Signature		
Emergency Contact 1:	Phone Number: ()	Relationsh	nip
Emergency Contact 2:	Phone Number: ()	Relationsh	ip
STATE OF COUNTY OF				
The foregoing instrument was ack	nowledged before me this	day of	, 20,	by
	(name of person acknowle	edging).		
Printed Name of Notary			1)	NOTARY SEAL)
Signature of Notary Public				
Personally KnownOR P	roduced Identification			
Type of Identification Produce	d			
ATTACH a copy of both sides of Also include other medical con	form (with the	Policies form o	n top).	igned Student Participation Policies nould be aware of:
	Video/Photo/M	ledia Relea	se Form	
Mu Alpha Theta may be videota articles about the convention t Theta for any liability from this	ping/photographing spo hat may appear online at , to be part of the videot	onsors or gues the Mu Alpha	ts during th Theta web	e convention as well as writing
Sponsor or Gue	est Signature		Date	e



MU ALPHA THETA CODE OF CONDUCT

Print front and back and sign.

Mu Alpha Theta National Mathematics Honor Society strives to integrate community, inclusivity, communication, and teaching & learning across all its work. MA $\boldsymbol{\Theta}$ is advancing the understanding and enjoyment of mathematics and strives to facilitate and support environments that foster this goal. As an honor society, MA $\boldsymbol{\Theta}$ is committed to providing an inclusive climate that encourages the open expression and exchange of ideas, that is free from all forms of discrimination, harassment, and retaliation, and that is welcoming and comfortable to all members and to those who participate in its activities. In pursuit of that commitment, MA $\boldsymbol{\Theta}$ is dedicated to the practice of equal opportunity, respect, treatment, participation, and outcomes for all regardless of gender, gender identity or expression, sexual orientation, race, color, national or ethnic origin, religion or religious belief, age, marital status, disabilities, veteran status, political affiliation or belief, field of expertise in all interactions and activities. This philosophy applies to all MA $\boldsymbol{\Theta}$ activities including conventions, publications, programs, and governing structures and bodies.

MA Θ expects the standards set in this Code, as articulated below, to be upheld by its members; leaders; staff; awardees; and participants in meetings, conventions, events, or social media exchanges regardless of the capacity in which they are performing (be it as an individual, organizer, delegate, speaker, sponsor, exhibitor, or in any other capacity). The professional behavior and communications of MA Θ members, sponsors, and staff must reflect an environment that is safe, respectful, and supportive of others.

The code applies to the behavior of members of MA Θ and individuals who interact with MA Θ in their professional lives. These expectations apply to the teaching, research, service and other duties carried out by MA Θ members in their workplace and their behavior in the mathematical community. Violations of any part of this Code can be reported to the MA Θ Governing Board and may result in consequences described herein.

We expect that the MA Θ staff, MA Θ sponsors, MA Θ members, and affiliated parties (non-members attending or supporting MA Θ events) will:

- promote the enjoyment, study, application, teaching and understanding of mathematics;
- act with integrity, and strive to be objective, unbiased, and truthful in all aspects of our work;
- act to support MAθ's commitment to promoting diversity, equity and inclusion;
- never intentionally discriminate against another person on the basis of gender, gender identity or expression, sexual orientation, race, color, national or ethnic origin, religion or religious belief, age, marital status, disabilities, veteran status, or field of expertise
- avoid biased, demeaning, intimidating, coercive, or harassing/hostile conduct or commentary, whether seriously or in jest (e.g., based on power differential, gender [sex, identity, expression], sexual orientation, race, ethnicity or national origin, religion, marital status, veteran status, age, body size or other physical appearance, disability, or other identities);
- never bully, abuse, victimize, or engage in harassment of any kind, including sexual harassment, whether via spoken or written words, emails, offensive images or graffiti, social media posts, or any other means;
- avoid injuring others, their property, reputation, or employment by false or malicious action;
- be respectful of the privacy of others and the protection of their personal information and data;
- accept and offer honest criticism of technical work, acknowledge and correct errors, and credit properly the contributions of others;



- do not claim authorship of something that is not yours and do not claim sole authorship of something created with another person or in a group setting;
- demonstrate that differing perspectives are valued by critiquing only ideas (not people);
- answer questions about conduct concerns in a forthright and complete manner;
- assist colleagues and co-workers in their professional development and support them in following this code of conduct;
- avoid real or perceived conflicts of interest whenever possible, and disclose them to affected parties when they do exist.

Violations of this MA Θ Code of Conduct by any member, sponsor, or affiliated parties may result in:

- Written reprimand from the MA**O** Governing Board
- Removal from the MA $oldsymbol{\Theta}$ event or convention
- Banning of individual or group from future MA**O** conventions

These consequences would be regardless of status, role, or title.

I understand and agree to abi attending a Mu Alpha Theta event or re me, and the consequences will also app	epresenting Mu Alpha	heta Code of Conduct expectations Theta. I understand that this Code o	
Print participant's name		School	
Participant's signature	 Date		

NOTE: NO **STUDENT, SPONSOR, OR CHAPERONE** WILL BE GRANTED ACCEPTANCE TO THE NATIONAL CONVENTION WITHOUT THIS FORM ON FILE.



Chalk Talk Topics and Guidelines/Judging Sheet

- Topics for each division are:
 - Theta "Math, A Diamond in the Rough"
 - Alpha "Math, Trails, and the Cyclists Dreams"
 - Mu "The Integration of Math and Agriculture"
- Students are allowed 7 minutes for their presentation on the topic above and must time themselves during recording.
- FINALS: Students will be given 7 minutes of uninterrupted time for their FINAL presentation on the topic above. Warnings will be given when one minute remains and when 15 seconds remain. Presentations will be cut off at the 7-minute mark. Students may only use one 3" by 5" index card during the final presentation. A second 3 x 5 index card will be given to the judges during the FINAL round that contains all sources the presenter used to prepare their talk. Participants will write on dry erase boards or similar with different markers from school/home. Any student or sponsor may attend chalk talks in the Finals round at the Convention.
- Chalk Talk presentations will be judged on the scale shown below. Two judges will be assigned each presentation in the pre-taped preliminary rounds, for a total of 100 points. Three judges will be assigned each presentation in the final round, for a total of 150 points.
- The math for each talk must be specific for the speaker's division. Mu: must have elements of calculus. Alpha: must have elements of precalculus, which can include trigonometry and introductory limits. Theta: must have elements of algebra/geometry.
- Each school may enter one person per division, and must register on the online competition sign-up form.

Chalk Talk Judges Sheet

Note: any score below 3 must include a comment.

Knowledge of subject Accuracy of math used Appropriateness of math used	1	2 2	3 3	4 4	5 5	
_		2	3	1	5	
Appropriateness of math used			•	7	5	
	1	2	3	4	5	
Originality	1	2	3	4	5	
Relevance of facts to topic	1	2	3	4	5	
<u>Presentation</u>						
Clear articulation	1	2	3	4	5	
Addressed to audience	1	2	3	4	5	
Use of white board	1	2	3	4	5	
Wow Factor!!	1	2	3	4	5	
Use of time	1	2	3	4	5	



Poster Competition Judging Sheet

School Name	School ID #
Judge's #	
•	egories on the left. Total these and write subtotals for each
category on the right.	
Use of any unauthorized materials or attachment	s will result in points deductions.
,	
Placement of school name on front of poster will	result in a 20-point deduction per judging sheet.
I. Content (40 points, maximum)	Total Points
A. Originality (10 points)	
B. Theme Related (15 points)	
C. Math Related (15 points)	
II. Artistic Quality (60 points, maximum)	Total Points
A. Lettering (10 points)	
B. Artwork (10 points)	
C. Color Coordination (10 points)	
D. Style/Layout (10 points)	
E. Attractiveness/Neatness (10 points)	
F. Eye Catching Design (10 points)	
Deductions: Use of unauthorized materials or attack	nments: 20 points
School name, logo, initials or any other identifying e	•
	Total Points
	(100 maximum)
Comments:	



Mu Alpha Theta National Convention Schedule (TENTATIVE)

Sunday, June 25		
Time	Event	Location
11:00 a.m5:30 p.m.	Registration	Adohi
5:00-7:15 p.m.	Dinner	Fulbright Dining Hall
6:00-7:15 p.m.	Dinner Meeting - Lead Coaches Only	Fulbright Dining Hall
7:30-8:30 p.m.	Scavenger Hunt	Greek Theatre
9:00-10:30 p.m.	Opening Ceremony	Fayetteville High School
11:15-11:30 p.m.	Curfew	Your own room
Get some rest! Tomor	row will be a LONG day and you need	to sleep!
Monday, June 26		
Time	Event	Location
6:00-7:00 a.m.	Yoga Stretch - bring mat or towel	Adohi
6:30-8:00 a.m.	Breakfast	Pomfret Dining Hall
	New Sponsor Breakfast	Pomfret Dining Hall
8:30-10:00 a.m.	TOPIC TEST 1	Hillside
Triangles - Theta Circles & Polygons - Theta Area and Volume - Theta	Analytic Geometry - Alpha Trigonometry - Alpha Matrices & Vectors - Alpha	BC Calculus – Mu Limits & Derivatives – Mu Comprehensive – Mu
	History of Math – Open	
8:30-9:30 a.m.	Sponsors: Texas Instruments Tom Reardon	
5.55 5.65 dilli		
10:00-10:15 a.m.	Disputes Open	Hillside
10:00-10:15 a.m.	Disputes Open Sponsors: Texas Instruments Tom Re	
10:00-10:15 a.m. 10:45-11:45 a.m.	· · ·	
10:00-10:15 a.m. 10:45-11:45 a.m. 10:30 a.m12:00 p.m.	Sponsors: Texas Instruments Tom Re	ardon
10:00-10:15 a.m. 10:45-11:45 a.m. 10:30 a.m12:00 p.m. 12:00-12:15 p.m.	Sponsors: Texas Instruments Tom Re Individual Tests: Mu, Alpha, Theta	ardon Hillside
10:00-10:15 a.m. 10:45-11:45 a.m. 10:30 a.m12:00 p.m. 12:00-12:15 p.m.	Sponsors: Texas Instruments Tom Re Individual Tests: Mu, Alpha, Theta Disputes Open	ardon Hillside Hillside
10:00-10:15 a.m. 10:45-11:45 a.m. 10:30 a.m12:00 p.m. 12:00-12:15 p.m. 12:15-1:30 p.m.	Sponsors: Texas Instruments Tom Re Individual Tests: Mu, Alpha, Theta Disputes Open Lunch	ardon Hillside Hillside 1021 Dining Hall
	Sponsors: Texas Instruments Tom Re Individual Tests: Mu, Alpha, Theta Disputes Open Lunch Delegate Meeting w/ lunch	ardon Hillside Hillside 1021 Dining Hall Bell Engineering



		T
5:30-7:30 p.m.	Governor's Meeting Kailin	Stem Center
5:00-7:00 p.m.	Dinner	Brough Dining Hall
7:30-9:30 p.m.	Interschool Test	Hillside
11:15-11:30 p.m.	Curfew	Your own room
Tuesday, June 27		
Time	Event	Location
6:00-7:00 a.m.	Yoga Stretch - bring mat or towel	Adohi
6:30-8:00 a.m.	Breakfast	Pomfret Dining Hall
	New Sponsor Breakfast	Pomfret Dining Hall
8:30-10:00 a.m.	TOPIC TEST 2	Hillside
Theta Applications - Theta Equations & Inequalities - Theta Combinatorics & Probability - Theta	Alpha Applications - Alpha Equations and Inequalities - Alpha Combinatorics & Probability - Alpha	Mu Applications – Mu Integration – Mu Combinatorics & Probability – Mu
	Number Theory - Open	
10:00-10:15 a.m.	Disputes Open	Hillside
10:30-11:30 a.m.	5 Speaker Sessions	5 rooms Bell Engineering
11:30 a.m1:00 p.m.	Lunch	Brough Dining Hall
	Delegate Meeting w/ lunch	Bell Engineering
1:15-4:15 p.m.	5 Speaker Sessions	Bell Engineering
2:30-5:30 p.m.	Chalk Talk Finals	
	Mu	Hillside larger room
	Alpha	Hillside smaller room
	Theta	ТВС
	Holding Room	Bell 2273
5:45-7:00 p.m.	Dinner	1021 Dining Hall
7:30-8:45 p.m.	Hustle	Fayetteville High School Café
7:30-8:45 p.m.	Relay	Lecture Hall FHS
8:45-9:00 p.m.	Disputes Open	Fayetteville High School Café
9:00-10:15 p.m.	1st Awards Ceremony	Fayetteville High School
11:15-11:30 p.m.	Curfew	Your own room
•	•	



Time	Event	Location
6:00-7:00 a.m.	Yoga Stretch - bring mat or towel	Adohi
7:00-8:30 a.m.	Breakfast	Pomfret
8:45-10:00 am	TOPIC TEST 3	Hillside
Analytic Geometry - Theta Logs & Exponents - Theta Sequence & Series - Theta	Math in Physics - Alpha	Area and Volume – Mu Math in Physics – Mu Sequence & Series – Mu
10:00-10:15 a.m.	Disputes Open	Hillside
10:15 a.m.	Depart for Excursions	
6:30-8:00 p.m.	Dinner	Dining Hall
8:00-10:00 p.m.	Award Ceremony	FHS PAC
11:15-11:30 p.m.	Curfew	Your own room
Thursday, June 29	9	
Time	Event	Location
6:00-7:00 a.m.	Yoga Stretch - bring mat or towel	Adohi
6:30-8:00 a.m.	Breakfast	Pomfret
8:30-9:45 a.m.	School Bowl (no 1-person teams)	Fayetteville High School Café
	*Gemini (non-school bowl)	Fayetteville High School
9:45-10:00 a.m.	Disputes Open	Fayetteville High School
11:30-1:30 p.m.	Lunch	Pomfret
11:00-1:00 p.m.	Delegate meeting w/ lunch (mtg starts at 11:30 a.m.)	Adohi
Verification sheet	s are due BEFORE 2:00 p.m.	
1:30-4:30 p.m.	Speaker Sessions/UofA tours	
5:00-7:00 p.m.	Dinner	Pomfret
7:30-10:00 p.m.	Final Awards - a dressy affair!	Fayetteville High School PAC
11:15-11:30 p.m.	Curfew	Your own room

