Happy Holidays! December is a busy time in the National Office! We will be getting all our orders out before the store closes on December 16. Don’t forget that all seniors must be registered and paid for as official members of Mu Alpha Theta by December 16 to be eligible to apply for our scholarships. All scholarships have the deadline of February 1!

Here are important details for high school scholarship applicants:

1. The Mu Alpha Theta Scholarship for high school students is awarded to exceptional, graduating high school seniors who are members in good standing of an active Mu Alpha Theta chapter. The recipients will have advanced the mission of Mu Alpha Theta by excelling in mathematics, providing exemplary leadership and loyalty to their Mu Alpha Theta chapters, and providing service in the field of mathematics to local projects.
2. Only graduating seniors are eligible to apply for this scholarship.
3. All scholarships will be sent to the recipient’s college/university to be used for tuition, fees, books, or other educational expenses.
4. Scholarships will expire 18 months from the date winners are notified.
5. To receive these funds, the recipient must be enrolled full-time at an accredited college or university.
6. Each chapter may submit no more than two nominations for Mu Alpha Theta scholarships per year. The chapter’s sponsor will determine how nominees are selected according to the above criteria.

Here are important details for two-year college scholarship applicants:

1. The Mu Alpha Theta Scholarship for Two-Year College Students is for outstanding full- or part-time two-year college students who are members in good standing of an active Mu Alpha Theta chapter. The applicant should be enrolled in enough hours so that they will have completed at least 30 semester college credits (or equivalent quarter hours) by the end of the school year in which they apply. The recipient will have advanced the mission of Mu Alpha Theta by not only excelling as a mathematics student, but by providing exemplary leadership and loyalty to their Mu Alpha Theta chapter, participating enthusiastically in local projects, and providing service in mathematics.
2. All scholarship awards will be sent to the recipient’s college or university to be used for tuition, fees, books, or other educational expenses within the 18 months following the date of the award.
3. Each chapter may submit no more than two nominations for this scholarship per year, to be determined at the chapter sponsor’s discretion. Two-year college members are also eligible to apply for the Governors’ Leadership and Service Award.

We are looking forward to reading all of your applications!

Sincerely,

Dana Wade
Executive Director

STUDENT DELEGATE ASSEMBLY:

During each national convention, the student delegate assembly meets to discuss issues of concern to member schools. Each chapter at convention selects a student delegate assembly representative who will cast votes on issues and makes motions on issues. Representatives select the Sister Scholastica Most Committed Sponsor Award winner and elect student officers for the next national convention. See page 3 for your invitation to Zoom meetings!
A MESSAGE FROM YOUR PRESIDENT, RITA RALPH

As the holiday season approaches, I like to reflect on things I am thankful for...

I am thankful for Mu Alpha Theta, which is an organization that highlights students’ successes in the field of mathematics. I am also thankful for you, the sponsors, for taking your time to give back to these students. Mu Alpha Theta would not exist without each one of you. Whether you celebrate the upcoming holidays or not, take time to relax and think of all you are thankful for. Remember good times with friends and family, and yes, even your students. Refresh your mind and soul and remember why you became a teacher initially. Focus on the positive, and maybe you will go back to school with the same warm fuzzy feeling you had on your first day of school. May the New Year bring you a renewed passion for mathematics (and students)!

WELCOME TO THE NEW CHAPTERS CHARTERED, NOVEMBER 2022!

<table>
<thead>
<tr>
<th>School Name</th>
<th>City</th>
<th>State</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Tech HS</td>
<td>Redwood City</td>
<td>CA</td>
<td>1</td>
</tr>
<tr>
<td>Olathe North HS</td>
<td>Olathe</td>
<td>KA</td>
<td>1</td>
</tr>
<tr>
<td>iSchool High The Woodlands</td>
<td>The Woodlands</td>
<td>TX</td>
<td>2</td>
</tr>
<tr>
<td>Lindale HS</td>
<td>Lindale</td>
<td>TX</td>
<td>2</td>
</tr>
<tr>
<td>Alabama School of Cyber Tech and Engineering</td>
<td>Huntsville</td>
<td>AL</td>
<td>3</td>
</tr>
<tr>
<td>Cliffside Park HS</td>
<td>Cliffside Park</td>
<td>NJ</td>
<td>3</td>
</tr>
<tr>
<td>Grenada HS</td>
<td>Grenada</td>
<td>MS</td>
<td>3</td>
</tr>
<tr>
<td>Leflore County HS</td>
<td>Itta Bena</td>
<td>MS</td>
<td>3</td>
</tr>
<tr>
<td>Wilson HS</td>
<td>Florence</td>
<td>AL</td>
<td>3</td>
</tr>
<tr>
<td>Bishop McGuinness Catholic HS</td>
<td>Kernesville</td>
<td>NC</td>
<td>4</td>
</tr>
<tr>
<td>Caesar Rodney HS</td>
<td>Camden</td>
<td>DE</td>
<td>4</td>
</tr>
<tr>
<td>Camp Hill HS</td>
<td>Camp Hill</td>
<td>PA</td>
<td>4</td>
</tr>
<tr>
<td>Corinth Holders HS</td>
<td>Wendell</td>
<td>NC</td>
<td>4</td>
</tr>
<tr>
<td>East Forsyth HS</td>
<td>Gainesville</td>
<td>GA</td>
<td>4</td>
</tr>
<tr>
<td>Miller School of Albemarle</td>
<td>Charlottesville</td>
<td>VA</td>
<td>4</td>
</tr>
<tr>
<td>St. Mary’s Ryken HS</td>
<td>Leonardtown</td>
<td>MD</td>
<td>4</td>
</tr>
</tbody>
</table>

SPECIAL SHOUT-OUTS TO . . .

2023 Convention Co-Hosts: Tonia Crow & Kim Woolfenden
Test Coordinator: Will Frazer
* All the dedicated sponsors who have spent more than two years planning the 2023 Convention in Fayetteville, Arkansas. They have planned great activities for your chapter members and hope to see you soon! We hope you have a great time at convention in June!*

WE WANT TO HEAR FROM YOU!

Tell us about your chapter’s incredible activities and we may feature your chapter in one of our upcoming newsletters or on our website and social media.

“LIKE” US ON SOCIAL MEDIA!

Remember if you shop at Amazon, you can show your love to Mu Alpha Theta. Just go to smile.amazon.com and choose to support Mu Alpha Theta Educational Foundation, Norman, OK.
MathWorks Math Modelling Challenge (M3 Challenge), is a free online contest for high school juniors and seniors and sixth form students. Teams of 3-5 students solve an open-ended problem about a real issue during their chosen 14 continuous hours over the Challenge weekend. Teams work at the location(s) of their choice, in person or using online collaboration tools. The contest, organized by the Society for Industrial and Applied Mathematics (SIAM), is free and open to all. There is NO BARRIER to participation other than having internet access. MathWorks, as title sponsor, funds key elements so that the Challenge can take place at no cost to students or schools. Scholarships totaling more than $100,000 or £75,000 will be awarded in 2023. The M3 Challenge has given more than $1.75 million in scholarships to date. Additional awards are given to teams that employ outstanding (and completely optional) code in their solutions. M3 Challenge culminates annually with an in-person final event in New York City with all expenses paid for finalists.

For rules, resources, and registration visit M3Challenge.siam.org.

Register by February 24, 2023

Challenge weekend (Friday through Monday): March 3-6 2023

— Olalekan Babaniyi, Mu Alpha Theta SIAM Representative

Chesapeake Public Schools, Chesapeake, VA, announced that Vicki ReDavid is the 2023 Teacher of the Year for Grassfield High School. Vicki teaches mathematics and sponsors the Mu Alpha Theta Mathematics Honor Society. She supports the Grassfield High School community in many ways. She is the 504 Chair, academic advisor, freshman seminar student mentor and mathematics instructional leader for the Grizzlies.

In 2013, Vicki was recognized for her excellence in teaching by receiving the Distinguished Educator Award for Churchland Middle School. In 2007 she received the Dedicated Teacher Award for Norwich High School in New York.

Vicki wrote, “I want to share my favorite part of serving as a Mu Alpha Theta sponsor - our annual Pi Bee Competition to celebrate Pi day! One student, who graduated a few years ago, recited 200 digits of pi in his freshman year. Then, 400 digits in his sophomore year, 800 digits in his junior year, and over 1000 digits in his senior year. Every year, students want to break the record. It is always wonderful to be able to get students excited about mathematics. Can you hear the excitement in her quote?

Vicki resides in Chesapeake with her husband and her two dogs.

Mu Alpha Theta congratulates Vicki and thanks her for her service to our members!
Sponsor’s Page

Office reminders from Karen and Cami:

We will be deleting shopping carts over the holiday break so any members in shopping carts are not members unless the shopping cart is submitted.

Check on dates when ordering; if school is closed, you might want to ship to your home.

December 16th is the absolute deadline for a student to be a member (according to our records) and be eligible for scholarships, awards, and summer grants. Every year there is a student whose sponsor missed the 12/16 deadline and having waited for years to be eligible cannot apply for their dreamed of scholarship or award. Don’t let this happen to your student.

Have a wonderful holiday break, enjoy the season, relax some and return refreshed for the spring semester!

—Karen Kating and Cami Rattan

Convention shuttle buses will run from the XNA (Bentonville airport) to the University of Arkansas on Sunday, June 25 (10:00 a.m. until 4:00 p.m.), and back from the dorm to the airport on Friday, June 30 (4:00 a.m. until noon). Sponsors need to put their arrival and departure times on the convention registration form.

The sponsor packet is posted at https://mualphatheta.org/national-convention

“I’ll be happy to sign your report card, but I’m going to need to see an unredacted version first.”

Thank You!

For a great 2022!
Reindeer Ratios & Rates

1. For each of these statements about reindeer eating habits, write a ratio. Make sure it’s in simplified integer form.

(a) Dasher & Blitzen eat the same amount of food
(b) Dancer eats twice as much food as Vixen
(c) Rudolph eats half as much as Comet & Cupid eat individually
(d) Cupid eats one and a half times as much as Prancer
(e) Comet eats three times as much as Blitzen
(f) Donner eats two thirds of the amount of Comet
(g) Rudolph eats 1.5 times as much as Dasher
(h) Dancer eats two and a half times much as Donner

2. (a) Given that Prancer eats 10 lbs (pounds) of food a day, workout how much food each reindeer eats.

<table>
<thead>
<tr>
<th>Dasher</th>
<th>Cupid</th>
<th>Dancer</th>
<th>Donner</th>
<th>Prancer</th>
<th>Blitzen</th>
<th>Vixen</th>
<th>Rudolph</th>
<th>Comet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Write the ratio of food eaten by the reindeer, leaving it in the simplest form.

(c) What is the total amount of food eaten in one day?

___________________ units