

Governing Council

President: Betty Hood
Brentwood High School
5304 Murray Lane
Brentwood, TN 37027-6205
bettyh@wcs.edu

Past President: Todd Taylor
Vestavia Hills High School
2235 Lime Rock Rd
Vestavia Hills, AL 35216
taylortg@vestavia.k12.al.us

Treasurer: John Albert
Department of Mathematics
University of Oklahoma
601 Elm Ave. Rm 1004
Norman, OK 73019
jalbert@math.ou.edu

Governor Region 1:
Triscia Hochstatter
Teaching and Learning Dept.
1000 W. Ivy Ave.
Moses Lake, WA 98837
thochstatter@milsd.wednet.edu

Governor Region 2:
Doris Parrino
Baton Rouge High School 2825
Government ST
Baton Rouge, LA 70806
dparrino@ebrschools.org

Governor Region 3: Rita Ralph
Fairfield Christian Academy
1965 N Columbus ST
Lancaster, OH 43130
rralph@fairfieldchristianacademy.com

Governor Region 4:
Kim Woolfenden
Tampa Bay Technical HS
14220 N. Hwy 301
Thonotosassa, FL 3352
woolfmath@aol.com

MAA Representative:
Mark Saul
15289 18th Street NW
Washington DC 20036
msaul@maa.org

NCTM Representative:
Laura Entrekin
Hoover High School
1000 Buccaneer Dr.
Hoover, AL 35244
LEntrek@hoover.k12.al.us

SIAM Representative:
Terry Herdman
Virginia Tech
ICAM 0531
Blacksburg, VA 24061
Terry.Herdman@vt.edu

AMATYC Representative:
Kathy Mowers
Owensboro Community and
Technical College
4800 New Hartford Rd.
Owensboro, KY 42303
kathy.mowers@kctcs.edu

Chi Alpha Mu Executive
Director: Kay Weiss
University of Oklahoma
3200 Marshall Ave. Ste. 190
Norman, OK 73019
kweiss@ou.edu

Chi Alpha Mu Newsletter

Fall 2015

News From the President

Summer is over and a new school year has begun! It's time for learning new math concepts, making new friends, preparing for school math nights, and participating in exciting math competitions.

I am extremely honored to be serving as the Mu Alpha Theta President for the next two years. I have been associated with Mu Alpha Theta since 1980 and I am currently the sponsor at Brentwood High School in Brentwood, TN. I am thrilled about the growth of Chi Alpha Mu chapters over the past few years. It's never too early to get students excited about the beauty of mathematics and the wide variety of applications that it has.

Please take some time to peruse the Chi Alpha Mu website and the Mu Alpha Theta website. These sites contain a wealth of information that you will find helpful when planning your new school year -- information on free contests, chapter activities, merchandise, and chapter and convention grants, just to name a few. You can also find schools in your area that have chapters and perhaps you can exchange ideas for club activities.

If you are looking for some money to participate in a competition or to put on an activity, Chapter Grants and Competition Grants of up to \$250 each are available. Many ideas for using a Chapter Grant can also be found on the website -- pi days, math nights, guest speakers. Applications are attached to this newsletter.

So, Sponsors, round up your mathletes and plan some inspiring activities for your Chi Alpha Mu club this year!

Happy calculating!

Betty Hood

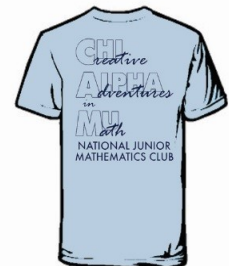
Mu Alpha Theta President

Follow us on Twitter @ChiAlphaMu

Check out the website for merchandise:

t-shirts, buttons, certificates, banners and more...

www.chialphamu.org



Reminder: It is critical to remember to get permission from the National Office before using Chi Alpha Mu's name on your Facebook page or on other social networking sites. A teacher or other approved adult must have administrative oversight of any site using our name.

From the National Office

Hope you have all had a great start to the school year. When looking for activities for club meetings, our website has a number of links to resources. Right now, your students can still sign up for the Rocket City Math League Interschool Test. This group test allows everyone to work together to solve problems and upload your chapter's answers for awards.

See www.rocketcitymath.org for more information on how to register. The contest is free.

Also see the <http://illuminations.nctm.org> website for lots of lesson ideas, many of which can be used to stimulate your members.

Try Archimedes' Puzzle, <http://illuminations.nctm.org/Lesson.aspx?id=2523> , if your students enjoy tangram puzzles.

Or maybe explore some light physics with <http://illuminations.nctm.org/Lesson.aspx?id=798>, which looks at the relationship between mass and the distance from a fulcrum in terms of balance points.

Want something a bit more challenging with a concept from Abstract Algebra that can still be explored with middle school students?

Try **Arithme-Tic-Toc**, <http://illuminations.nctm.org/Lesson.aspx?id=2280> on modular arithmetic.

Whatever activities you try, you will be stimulating student interest in mathematics and giving your students a chance to enjoy math outside of the classroom.

Kay Weiss

Executive Director

Free TI-84 Plus Calculators!

The National Office has TI 84 Plus Color calculators to give away. The first few chapters to email and request one will receive one calculator each.

****Chapters that have received a calculator in the last five years are not eligible.****

Email Kay Weiss at matheta@ou.edu



Chi Alpha Mu Coordinator - Judith Deeley

Guardian Angels Catholic Middle School, Clearwater, Florida

I also hope that your year is off to a great start. Our mission is to offer you a variety of resources, activities, competitions and grants for both your classroom and your students. Please take a look through this newsletter for the many links to this information. There are also numerous additional links on the website.

I am looking for chapter activities/lessons to share in the spring newsletter. Throughout the year, if you try something that is effective and engaging, please submit a short write up and most importantly photos with media release. It is always nice to see your students in a newsletter especially one that is distributed nationwide. Simply email the documents to me and I will incorporate into the next newsletter.

Have a wonderful year.

jdeeley@gacsfl.com

Opportunities for Students and Teachers

Honeywell Hometown Solutions (HHS) is now accepting applications for the 2015

Honeywell Educators @ Space Academy (HESA), a week-long, high-energy learning program for middle school science and math teachers. Hosted by the U.S. Space & Rocket Center in Huntsville, Alabama, HESA is designed to inspire teachers to develop a new generation of scientists in their classroom. Teachers learn new teaching practices in STEM education by participating in a series of astronaut-style exercises and simulations, build and test their own rockets, meet veteran astronauts and so much more. Since 2004, more than 2000 HESA alumni from 56 countries, have reached more than 2 million students, inspiring many to pursue STEM education and careers.



Applications for 2016 will be available in November, 2015

Scholarship includes: Tuition for the five-day program, round-trip airfare, meals, accommodation and program materials. Apply at

<https://educators.honeywell.com/the-academy>



Raytheon's Math Moves U - all of the following are found at

<http://www.mathmovesu.com/>

Raytheon's MathMovesU is an innovative program designed to engage middle school students with math. To include algebra, geometry, decimals, fractions and word problems. MathMovesU.com can be used to supplement your classroom curriculum. There are also a variety of resources such as classroom ideas, partnerships, games and scholarships.

Math Moves U Scholarships



Do you have a 6th, 7th or 8th grade student interested in competing for a \$1,000 scholarship to either save for college or to use for a summer institute or camp?

Watch for the posting of the MathMovesU scholarship

Entries will be due in February 2016.

A matching grant is awarded to the math program of the school in which the student was awarded the scholarship. This past year, the prompt was Math is in the world all around us. Morning, noon, and night – how does math move you or the world around you?

Math Hero Grants

Nominate a Math Hero. Math teachers and volunteers who work with students are eligible to receive a \$2,500 Math Hero Award which is accompanied by a matching \$2,500 grant to their school or approved math-related nonprofit organization of their choice. This is awarded to individuals once per career.



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Competitions

American Mathematics Competitions

<http://www.maa.org/math-competitions>



Dedicated to strengthening the mathematical capabilities of our nation's youth, the AMC program identifies, recognizes, and rewards excellence in mathematics through a series of national contests. The American Mathematics Competitions (AMC) are math competitions run by MAA. The AMC 8 Contest is for students in the sixth, seventh, or eighth grade (as well as accelerated fourth or fifth graders). See the "Give Aways" page for information about preparation materials.

Rocket City Math League

<http://www.rocketcitymath.org/>

If your chapter has not participated in this competition before, we highly recommend that you do. Please explore the website and make a plan to include this on your calendar. The Rocket City Math League is a free, international, math contest that is open to all middle, high school, and two-year college students enrolled in Pre-Algebra through Precalculus and above math courses. This competition is completely FREE due to a generous grant from Mu Alpha Theta. General information about the Rocket City Math League: There are three 45-minute tests for each division, each consisting of 10 questions. The Interschool Test will run from November 2-15, 2015. Teams of students will work on a 15 question test for 30 minutes using a single answer sheet. Teams will compete at 2 levels.

Testing dates for the 2015-2016

competition will be:

Interschool Test: November 2-15, 2015

Round One: January 11-24, 2016

Round Two: February 8-21, 2016

Round Three: March 7-20, 2016

Other National math contests and State competitions can be found at:

<http://www.chialphamu.org/Contests/Contests.aspx>

Mathcounts: Mathcounts offers a national team competition in May each year. It is hoped that local high school Mu Alpha Theta chapters will provide coaches or team mentors to help your school compete. Go to mathcounts.org for details. Registration for the year has begun.

Purple Comet! Math Meet: This is an annual, free, online, international, team mathematics competition for middle and high school students.

National STEM Video Game Challenge: A free youth video game making competition for students in grades 5-12 to promote skills related to science, technology, engineering, and math.

Toshiba/NSTA ExploraVision: This is a competition for students from all grade levels. The students must pick a technology and project what it will be like in the future and what discoveries will need to be made in order for the changes to be realized. Groups of two, three or four will describe their research in both a written description and five simulated web page graphics.

And many more...

Please go to <http://www.chialphamu.org/Contests/Contests.aspx> for all of the details and links.

Study Buddy—Mu Alpha Theta volunteer tutors

If a student in your class or after school club needs a tutor and has access to the internet either at home, at school or at an after school club, the qualifying student can be registered for help through Study Buddy :

<http://www.studybuddyhelp.org/>

Mu Alpha Theta is encouraging their members to participate in Study Buddy as tutors as a way to give back and to receive community service and volunteer hours. The goal for the Study Buddy organization is to seek and create partnerships with school districts, schools, and after-school organizations to reach and support those students who need math or science help. Please visit the website for full details about qualifications and registration.

Looking for your local Mu Alpha Theta club?

It is simple. Any school can go to <http://mualphatheta.ou.edu/Roster/ChapterRoster.aspx> . The name, city, and state for every chapter can be brought up by the search functions there. Any Chi chapter can then check the internet for phone numbers for those schools. Mu Alpha Theta clubs host math competitions and could provide mentors and tutors for your Chi Alpha Mu club.

Chapter activity

Holdrum Middle School

Committed to Excellence

Maria Giannantonio

See activity details on page 6

393 Rivervale Road, River Vale, NJ 07675



Holdrum Middle School Volume Activity—canned food

Have students work in groups of 3 or 4. Discuss how they will be finding the total volume of canned goods collected using the Volume formula. Final data will be recorded on a LARGE piece of paper.

Hand out materials: rulers, work paper, reference sheets (volume and area), pencils, calculators

Your task today is to find the volume of your cylindrical canned good. You can find the volume of most solids by multiplying the area of the base and the height of the solid.

As a group discuss

What is the difference between area and volume?

Are your canned goods cylindrical?

Who's canned good in your group looks like it has the greatest volume?

Who's canned good in your group looks like it has the least volume?

Circulate the classroom to make sure students answered 1 and 2 and are working on number 3.

Please remind students that every student should individually measure 3-4 canned goods.

Students should be doing all their work on the WORK paper. When measuring the radius... students should be measuring the diameter, then dividing by 2.

REMINDE STUDENTS THAT THEY ARE MEASURING IN INCHES

Have groups record GROUP TOTALS on the large piece of paper.

As a class, find the CLASS TOTAL VOLUME.

Show class the box that held all the materials. Have each group guess which volume is greater, the CLASS TOTAL VOLUME or the Volume of the box.

Using wooden ruler provided, measure the length, width, and height of the box. Share the results with the class. Have each group find the Volume of the Box.

Discuss which Volume is greater.

If there is time, ask students to consider....

What if each of their canned goods was really a cone?

Have students find the volume of their canned good imagining it was a cone and not a cylinder.

How would this change the volume?

Don't be afraid to ask them questions that will make them think...

For example....

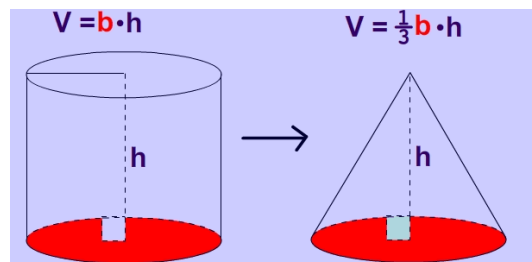
If our class had a total Volume of _____ what do you think the grade level volume will be.

There are 7 classes doing this activity.

If you stack up all the canned goods in the class...how tall will it be....DO NOT STACK UP ALL THE CANNED GOODS. (Add up all the heights) How many feet is that?

If you line up all the canned goods on the floor...how long will it be...(add up all the diameters) How many feet is that?

Keep asking questions!!!!!!!



Try a puzzle or two

Kenken

1-		10+	
2÷	12×		
			2÷
9+			

5+	8+			4-
	9+		3+	
4-	7+			7+
		9+		
3-		2-		2

The heavily outlined areas are called cages. The top left corner of each cage contains the target number and math operation. The numbers entered in the cage must produce the target number using the provided operation and numbers matching the grid size (example: 4 x 4, use digits 1, 2, 3, 4). No number can be repeated in a row or column. For more details about solving and for more puzzles, go to:

<http://www.kenkenpuzzle.com/howto/solve>

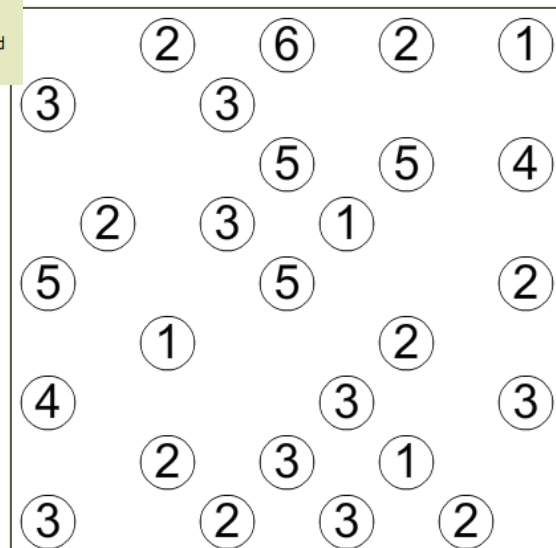
Hashi

Each puzzle is based on a rectangular arrangement of islands where the number in each island tells how many bridges are connected to it. The object is to connect all islands according to the number of bridges so:

- There are no more than two bridges in the same direction.
- Bridges can only be vertical or horizontal and are not allowed to cross islands or other bridges.
- When completed, all bridges are interconnected enabling passage from any island to another.

Go to <http://www.conceptispuzzles.com/>

Select Hashi for more details and puzzles.



Grants Available

Chi Alpha Mu

Chapter Grant

Chi Alpha Mu is offering grants of up to \$250 per active chapter to support chapter projects that help to inspire interest in and promote the enjoyment of mathematics. No chapter will be awarded more than \$250 in a five year period. Funds are available on a first come/first serve basis until our budget for these grants is depleted. **There is no deadline for the application, but once funds are gone, further grants will not be possible for the remainder of that fiscal year.**

Please note that there is no promise that every grant will be approved nor that the full amount requested will be available.

Please apply before incurring expenses, when possible, to determine what funds we have available. Once a grant is approved, receipts or invoices for expenses should be sent no later than one month after incurring the approved expenses. Funding will be adjusted to cover actual expenses. Please estimate a bit high, since once an amount for the grant is approved, additional funds will not be available to cover excess expenses.

When sending in receipts or invoices, make sure to tell us to whom the check should be written.

An active Chi Alpha Mu chapter may use grant funds

- to travel somewhere of mathematical interest
- to pay an honorarium or provide a gift to a guest speaker
- to help defray costs for Chi Alpha Mu members to participate in a math event
- to host a math activity for students or teachers from other schools
- to run a fun math event, applied math day, or a Pi Day Celebration with math activities

You come up with the idea, we will try to help. Funds will NOT be granted for an event that is meant to be a “fundraiser”.

If possible, email, fax, or mail the completed application to:

Chi Alpha Mu Chapter Grant
c/o University of Oklahoma
3200 Marshall AVE, Ste. 190
Norman, OK 73019

If emailing, please scan or fax the signature page. No application will be considered without a signature page.

Chi Alpha Mu

Chapter Grant

APPLICATION FORM

1. Please email information or **type/print** in black ink.

Name of School: _____

School Address: _____

Street Address

City

State

Zip

Sponsoring Teacher's Name: _____

Teacher's Email: _____

Total dollar amount being requested: _____

Write a description of the project for which you are asking for funds. Include all details necessary to support your project, including what, when, where, and who will benefit from the funds. Explain how this activity will inspire interest or enjoyment of mathematics. (You may use a separate page.)

3. Please itemized expenses you would like us to reimbursed or pay.

By accepting funds from Chi Alpha Mu, we agree not to receive funds to reimburse us for the same expenses from any other source.

Teacher's Signature: _____ Date: _____

Principal's Signature: _____ Date: _____

New Competition Grants!

Approved by the Governing Council in January 2015, Competition Grants will provide up to \$250 to help a Chi Alpha Mu chapter to compete in a math competition at their school or away. Funds may be used for entrance fees, transportation, or other needed expenses. Funds are limited, but please apply. We want to support activities for your members. Download the application here:

[Competition Grant Application](#). Questions? Email: matheta@ou.edu for more information.”

No chapter will be awarded more than \$250 in a five year period. Funds are available on a first come/first serve basis until our budget for these grants is depleted. **There is no deadline for the application, but once funds are gone, further grants will not be possible for the remainder of that fiscal year.**

Please note that there is no promise that every grant will be approved nor that the full amount requested will be available.

Please apply before incurring expenses, when possible, to determine what funds we have available. Once a grant is approved, receipts or invoices for expenses should be sent no later than one month after having expenses approved. Funding will be adjusted to cover actual expenses. Please estimate a bit high, since once an amount for the grant is approved, additional funds will not be available to cover excess expenses.

When sending in receipts or invoices, make sure to tell us to whom the check should be written.

An active Chi Alpha Mu chapter may use grant funds for expenses to travel somewhere for a math contest, to help defray other costs for Chi Alpha Mu members to participate in a math competition, to pay entrance fees or per student costs to compete.

If possible, email, fax, or mail the completed application to:

Chi Alpha Mu Competition Grant
c/o University of Oklahoma
3200 Marshall AVE, Ste. 190
Norman, OK 73019

If emailing, please scan or fax the signature page. No application will be considered without a signature page.

Chi Alpha Mu
Competition Grant

APPLICATION FORM

1. Please email information or **type/print** in black ink.

Name of School: _____

School Address: _____

Street Address

City State Zip

Sponsoring Teacher's Name: _____

Teacher's Email: _____

Total dollar amount being requested: _____

2. Write a description of the contest for which you are requesting funds.

3. Please itemized expenses you would like us to reimburse or pay.

When sending in receipts or invoices, make sure to tell us to whom the check should be written.

By accepting funds from Chi Alpha Mu, we agree not to receive funds to reimburse us for the same expenses from any other source.

Teacher's Signature: _____ Date: _____

Principal's Signature: _____ Date: _____

Start Planning For Your Students' Summer Now...

Summer Grants!

Chi Alpha Mu will provide a Summer Grant of up to \$500 to support a middle school student in a Chi Alpha Mu chapter who will attend a summer math program. Middle school members may request grants through the summer after eighth grade. Click on [Summer Grants](#) to download an application! If you have a student that would like support, please have them submit a grant application. The Mathworks camps in TX provide great summer programs.

Below that link is a link to numerous other programs at the AMS website:

Residential Junior Summer Math Camp or Half Day programs:

<http://www.txstate.edu/mathworks/camps/residential-jsmc.html>

<http://www.txstate.edu/mathworks/camps/half-day-jsmc.html>

<http://www.ams.org/programs/students/emp-mathcamps>

We hope you all have a wonderful fall and winter. In the spring, another newsletter will be distributed. It would be nice to incorporate some news, activities or accomplishments from your chapter. Simply send an overview, examples and photos with media release forms.

If you have any suggestions for summer student opportunities, please submit those as well.

All information can be submitted to Judy Deeley at jdeeley@gacsfl.com



Follow us on Twitter @ChiAlphaMu