

Chi Alpha Mu Newsletter

Spring 2014

News From the President

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Kay Weiss
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Serves as an Ex-Officio Member of the Council.

I can't believe that spring is already here—this school year has passed by so quickly. Last Sunday was my favorite day of the year, the beginning of Daylight Savings Time. If you've ever had a classroom with no windows, you know what I'm talking about. I left school many afternoons just to find out that I had missed the sunlight. It was downright depressing!

I hope you have had a fun, productive year, and that you have been able to see your students grow both in their mathematical skills and in their appreciation of mathematics. While your students may be counting the number of days until spring break or summer vacation, you should make them aware that April is Math Awareness Month. Did you know that? The Joint Policy Board for Mathematics sponsors Math Awareness Month each April, so just when you get through celebrating Pi DAY, you get to celebrate math for an entire MONTH. My math team has celebrated Pi Week this week by selling doughnuts before school. It has been a great fundraiser for us. (Now I need to figure out what to do for an entire month!) The Math Awareness Month website has activities posted from other schools and colleges, and they will have a special Math Awareness Month calendar for April featuring a "magical and mysterious" topic each day. I can't promise that all of these topics and activities are suitable for middle school, but I can almost guarantee that they can serve as an inspiration for an appropriate activity for your students.

The web address is <http://www.mathaware.org/mam/2014/>.

If you have any activities you would like to share—Pi Day or Math Awareness Month related or not—please share them with us! Send them to Kay Weiss, Executive Director of Mu Alpha Theta or to Judy Deeley, the Chi Alpha Mu Coordinator, and we can post them on our website or print them in upcoming newsletters! We always like to hear from you!

I hope the rest of your school year goes well and that you have a restful spring break and summer!

Todd Taylor

Todd Taylor, President

Check out the website for merchandise: t-shirts, buttons, certificates, banners and more...

www.chialphamu.org



National Office News from Kay Weiss

This was a tough year weather-wise for many schools. With cold and snow, schools were out more than usual in many states. Everyone is scrambling to catch up. I hope you can find the time to work with your Chi Alpha Mu chapter, even though your life is busy and crammed with trying to get through missed subject material. Find some really interesting puzzles at <http://www.puzzles.com/PuzzlePlayground/WelcomeToPuzzlePlayground.htm> or try something on <http://www.johnrausch.com/SlidingBlockPuzzles/>. Maybe you could get some Rubik's cubes for your club and look up their history and how to solve them at <http://rubiks.com/games/>. Remember we have Chapter Grants to help you purchase materials for your club or to support other activities.

I hope some of you had a chance to try out our free Rocket City Math League competition. While the contest is over for this year, it will run again starting with the Interscholar Test in October. We have students from all over the world that enjoy working together on these problems. I hope you will have your students join in next fall. You just download the contest exams and answers for grading and your students work together on it at your school.

Do you have special students to recognize this year? We offer an Achievement Certificate for \$3. You can view this and other merchandise for your students online at <http://www.chialphamu.org/Merchandise/>. We can enter the name on the certificate for you if you email us names when ordering or write these on the certificate yourself. These are suitable for framing and mean a lot to those students that may have excelled in MathCounts or another math competition during the year.

Many of our Chi Alpha Mu chapters work closely with a Mu Alpha Theta chapter nearby or at the same school. If you are not interacting with the "older kids" now, I hope you will think about this. The Mu Alpha Theta members can mentor your students, provide math activities, or tutoring. This is a great way for the older students to better learn their math as they help your students get ready for a math contest or state test. Need contact information for a nearby chapter? Just email us and we will get you connected.

Have questions? Need anything? Both Judy and I are always available to answer questions and help. I can be reached at matheta@ou.edu.

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.

Chi Alpha Mu Coordinator - Judith Deeley

Guardian Angels Catholic Middle School, Clearwater, Florida

I also hope that everyone is experiencing a fantastic year. Schools in our area are finally enjoying sunshine and warm weather. Our trying times will come during the hurricane season. We watched those in the north struggle with much snow and cold weather. Hopefully spring has sprung for them.

My goal is that you find the newsletter to be a valuable resource in conjunction with the Chi Alpha Mu website. I am always seeking additional items to add to this newsletter. If you have lessons that made a significant impact on your students' understanding of concepts and you are willing to share, please forward the information to me and I will find a place in the newsletter to include it. If you have suggestions for professional development for the upcoming year that you believe would help those of us in this mathematics arena, please forward information that I could include in the Fall newsletter.

If you have any questions or have suggestions for the Fall newsletter,
please email me at jdeeley@gacsfl.com

Free Key Curriculum Tinkerplots Program and Workbooks!

Key Curriculum Press has donated a copy of their TinkerPlots Program, copies of “Digging into Data with TinkerPlots” workbook and copies of their “Survey Toolkit” workbook. One chapter of Chi Alpha Mu will receive a single user copy of the program and copies of each of the two workbooks.

Want to win? Email us with information about what your chapter has been doing during your meetings. Have a fun idea or activity to share with other chapters? We want to hear from you!! Send a picture or two that we may use in our next newsletter. The value of each prize package is about \$450.



Email Kay Weiss at matheta@ou.edu with your

Chapter Grants

Chapter Grants are available for up to \$250 per chapter and may be used to support your activities. No chapter will receive more than \$250 over time, and we may not be able to support all grant requests or provide the full amount you request, but let us know how we can help.

Funds could be used for activities during Math Awareness month or for next year’s Pi Day celebration. Other options would be to invite a special speaker to talk to your students, travel to a math competition, purchase math games or software for your club. The grant application can be found online under *Chapter Grants* at www.chialphamu.org

Summer Grants—get them before it’s hot

Chi Alpha Mu will award up to four \$500 Summer Grants to support middle school students, in a Chi Alpha Mu chapter, who wish to attend a summer math program. These grants will be given on a first come/first serve basis to outstanding math students who apply. Not all applications may be approved. Funds will be sent directly to the program and may be used to pay for tuition, transportation, or living expenses. The application form can be found online at our website, along with suggested summer programs.

Please email the office at matheta@ou.edu prior to sending in the application to see if grant money is still available. Students may receive a grant only once during their middle school years.

Give Always and Grants

Chapter News

Laura King, from Cranberry Middle School in Elk Park, North Carolina had students discover for themselves the distance formula on the coordinate plane. "It was incredible to watch them think through the process and come up with a rule that works! Had I just given them the 'scary-looking'

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

...they would have shut down or merely plugged and chugged through the math without knowing where the formula came from or what it means. Instead, students made the connection to the Pythagorean Theorem and discovered a distance formula that was all their own!" The activity started with students using the Pythagorean Theorem with graph paper and evolved to students discovering the distance formula. Interestingly to me was that most students stated, "you find the change in x and the change in y, those are the legs. You plug those in to the Pythagorean Theorem." Their rule looked like $\sqrt{((\Delta x)^2 + (\Delta Y)^2)}$ which is different from the classic textbook formula. I feel that they chose to represent the formula in this manner as they learned slope as the change in y over the change in x. So, in reality, they made many more connections than I had expected! (See the activity below)

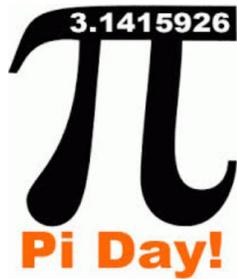
Laura King
Cranberry Middle School
6230 North Highway 19-E
Elk Park, NC 28622



Distance formula activity

Your friend (use a student name) has been out of school for a week now with a cold. Your friend noticed on our math webpage that we have been working with distance on the coordinate plane and decides to give you a call. You are very excited to help your friend because you think that this stuff is super easy. The only problem is that your friend does not have any graph paper at his/her house. You ask your friend to give you a little time so that you can figure out how to explain finding distance without any graph paper. You happen to find a crumpled piece of graph paper in your book bag. You start out by graphing the points (-3, 2) and (4,7) which helps you to work through a method to solve the distance between these two points without graph paper. What are you going to say to your friend when you call him/her back?

While working on the explanation for your friend, you got to thinking. You decide to see if you can figure out a generic rule that works for any points. You write down (x_1, y_1) and (x_2, y_2) and discover how to find the distance between any two coordinate pairs.



Sandra Daire

Ada Merritt K-8 Center

660 SW 3rd Street
Miami, Florida 33130



My school had an AWESOME Pi-Day Celebration!

In the morning we received a Proclamation from the Dade County Mayor, Carlos Gimenez, designating March 14, 2014 as Ada Merritt's Pi-Day!



Several students participated in the Program

-Hannah G. (8th grader) talking about the History of Pi

Moises C. (8th grader) talking about our participation in Math Activities and Competitions,

Michael D. (a fifth grader) reciting Digits of Pi



The guests from the Mayor's office shared PI(e) and treats with the Math Club, the Geometry students, and some of the faculty.



Puzzles and Problems and Activities

Try the following ‘Guess That Year’ with your students:

On February 13th, (guess this year), Croatian Jesuit R.J. Boscovich died. He was instrumental in the development of mathematical physics. He was a professor of mathematics and pioneer of work in the mathematical philosophy of nature.

Solve the following to discover the year in which R.J. Boscovich died.

- My hundreds, tens and units digits form a palindrome with a sum of 22.
- The two-digit number formed by my thousands and tens digits is equal to $3^2 \times 2$.
- The sum of all my digits is equal to $5^2 - 2$.

Guess that year:

Thousands	Hundreds	Tens	Units
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<http://www.faculty.fairfield.edu/jmac/sj/scientists/boscovich.htm>

Walch Publishing offers “Daily Warm-Ups” in Algebra, Math Word Problems, Pre-algebra, Math Brain Teasers, Algebra II, Geometry, Logic. Most recent publications include the Common Core Standards for each of the above mentioned books.

<http://walch.com/daily-warm-ups-text-books/>

Simple riddles:

- *Seven is an odd number. How can it be made even? (Take away the S)*
- *Why is an hourglass made small in the middle? (To show the waist of time)*
- *If I smashed a clock, could I be accused of killing time? (Not if it could be proved that the clock struck first)*

Mathematics and Humor—NCTM



Sizzlin' Summer Suggestions

Go to www.chialpahmu.org for details about a few options available for the summer. Many more exist in which the summer grants are available:

Residential Summer Math Camp



Residential summer math program for select 6th-8th grade students— June 8 - 21, 2014



Math Zoom Academy
Transform Gifted Youth into Successful Leaders!

Math Zoom Academy will offer two residential summer camps in 2014. The eastern site is [Boston College](#). The western site will be held at [UC Berkeley](#) from June 22 to July 12, 2014.

Free TI-84 Plus Calculators!

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

****Chapters who have received a calculator in the past two years are not eligible.****

We still have a few free copies of an AMC (American Mathematics Competition) CD left to give away. These include the American Junior High Mathematics Exams from 1985 – 1999 and the AMC8 Exams from 2000 – 2007. This is a \$25 value that we will send you free, on request. Just email for your copy, while they last.

Check out that website for details about the competition

www.maa.org/math-competitions

