



Central Texas Council of Teachers of Mathematics CTCTM Newsletter Spring 2020



Message from the President, Arash Abnousi



Greetings!

Our Fall Meeting was a great success! The dedication of our Central Texas teachers was once again demonstrated by their turnout on a school night. On that note, thank you to all those who participated, and presented at this event.

Looking ahead, we are very excited for our upcoming February 1st Spring Conference. This year's event will be held at Midway Middle school. We are planning some great breakout sessions for participants, as well as a display of several vendors and plenty of door prizes. We are honored to announce that this year's keynote speaker is the President Elect of the National Council of Teachers of Mathematics (NCTM), Dr. Trena Wilkerson!

We encourage you to register for this event and spread the words among your colleagues and school district.

On behalf of our Executive Council, I thank you all for your continuous support of this organization and look forward to seeing you on February 1st!

Mark Your Calendar

CTCTM 2020 Spring Conference

February 1, 2020
Midway Middle School
Hewitt, Texas

Interested in Presenting?

- Submissions due January 6, 2020
- Find the Speaker Proposal Form at www.ctctm.net
- Email form to Rachelle_Rogers@baylor.edu

Keynote Speaker: Dr. Trena L. Wilkerson

Catalyzing Change: Engaging in Critical Conversations and Taking Action to Empower and Engage Our Students in Mathematics

What are our individual and collective opportunities and responsibilities in taking action to effect student mathematical learning? Lets' talk, do the math and act to empower our students and ourselves!

| | |
|--|-------------|
| Breakfast | 7:45 – 8:15 |
| Opening Meeting | 8:15 – 8:30 |
| Keynote Speaker: Dr. Trena Wilkerson | 8:30 – 9:30 |
| Break-Out Sessions and Scheduled Time to visit Vendors | |
| Pre-Service Teacher Luncheon | 1:00 – 2:00 |



ARE YOU A PRESERVICE TEACHER?

Join us for the PreService Teacher Luncheon.
Sign up when you register for the conference.

From the VPs

News from Your VP University Representative

For the fall semester I had a change of employment and I ended up working with foreign students at Baylor University. It was an interesting cultural exchange. The students' conversational skills were great. Many of them had previously studied in the USA. What was interesting to me was not the differences, but the similarities between these students and American students. The foreign students' basic arithmetic skills (adding, subtracting, multiplying, and dividing) were on average, better than American students, but when we got into the skills of algebra there is almost no difference in abilities.

I found that I was using the same techniques in my teaching tool bag that I have always used, albeit with a slower speech pattern for better understanding (something I probably always should have been doing anyway). For example, I was teaching logarithms near midterms. The lesson started off with a review of exponential equations. After solving a couple of simple exponential equations I put an equation on the board that needed a log to solve. Without a clear idea how to solve the equation we explored what could be done if the equation was not exponential, but just multiplication. The students knew that they would need to divide to solve, but the general idea of undoing an operation was an unknown concept. As we moved through the semester I continued to stress that in mathematics there has to be a way to undo whatever has been done, for every operation there is an inverse.

The more I work with students of diverse backgrounds the clearer a piece of advice that I got from a high school teacher becomes, "Meet the students where they are and move them to where they need to be." Regardless of the level that we all teach at, there are going to be students that missed out on a key concept and it is our job to make sure that they have what they need to move forward.

For everyone out there I encourage you to share your ideas with the greater mathematics community. Teaching at all levels is a creative activity and your classroom activities, exemplar lessons, manuscripts puzzles or classrooms stories can act as a catalyst for others. Send your ideas to the Texas Council of Teachers of Mathematics publication, Texas Mathematics Teacher at editor@txmathteachers.org.

Sincerely,

Trace Bowen, Vice President - University

Experimenting with Different Test Reviews

Greetings from your vice president of pre-service teachers! During my time teaching as a pre-service teacher, I noticed that my Algebra I students were accustomed to receiving test reviews in the form of an independent practice worksheet. I wondered if this style of test review was effective, or if students would benefit more from a more interactive style of test reviews. I wanted to provide my students with a review that would leave them feeling confident and prepared for the test.

With the assistance of my mentor teacher, I conducted an inquiry research to determine if independent practice worksheets were the best option for our students. To do this, I had two tests in which each class period had a different style of test review, such as a guided practice worksheet, stations, Quizizz, or a whiteboard competition. Although the styles of reviews differed, the questions were the exact same for each class period. I based my results on student test scores, teacher observations, and student surveys.

I discovered that the whiteboard competition was the least effective for our students, while the stations and Quizizz were more effective when considering class averages. On the other hand, the students who participated in a guided practice worksheet felt the most prepared for the test. On average, the students said they would prefer a more interactive style of review than the independent practice worksheet. That being said, I encourage you to try out different test reviews! Every class is different, and I plan to keep exploring what method of test review is the most effective for my students.

Elyse Meyer, Vice President – Pre-Service Teachers

High School News: Review Time!

This time of year, there are extra tests, especially with final exams drawing near. With these tests, come test reviews. Want to mix it up a little? Get students more involved? Cut out “copying” and actually have students dig in? Try a little process called “Showdown!”

To prepare, instead of running off the test review or assigning a packet for homework, pick a method for showing the problems one at a time, either: a) under a doc camera, or b) by snipping each problem on it’s own slide in a PowerPoint or Google Slides.

As class begins, group students into academically homogeneous groups of 4. This will allow students to “compete” against other students of similar levels, so each student will feel like they’re “in the game” throughout the activity. Each student should have paper and pencil, Noteability, or a whiteboard. You are then set to begin!

SHOWDOWN

1. Teacher poses a question to the class (on screen).
2. Teammates each work out/write their own answer *privately*, then turn their paper facedown in the middle of the group.
3. When all teammates in a group have entered their answers, there is a “**showdown.**” Teammates flip over and show their answers to each other and discuss.
4. When all groups have had their showdown and debated answers, the teacher gives the correct answer to the class, followed by appropriate discussion, then proceeds to the next question for a new showdown.

Depending on the class, points can be kept within each team. Give Showdown! a try, and see how lively your test reviews become!

Submitted by Dr. Lorri Sapp

Pólya and Our Process Standards



Since 2015, Texas teachers and students from kindergarten through 12th grade have been utilizing the Process Standards. Our standards state that “the student uses mathematical processes to acquire and demonstrate mathematical understanding.” George Pólya would be very excited to see our Process Standards! Pólya, a mathematician, described four steps for solving math problems in his 1945 book, How to Solve It.

Steps to solving math problems:

1. Understand the problem

- ✓ The problem solver must think about what they know and what is still left to find.

2. Make a plan

- ✓ Next, the problem solver thinks about problems he/she has worked in the past. They will use this knowledge to decide what to do with this current problem.

3. Carry out the plan

- ✓ During this step, the problem solver may discover that their original plan did not work so they may need to return to previous steps.

4. Look back at your work

- ✓ When the problem solver feels that they have successfully solved the problem, they need to check their work and think about other ways that they would be able to solve this problem.

Process Standards:

One of our Process Standards mirrors Pólya’s steps.

1(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution

In the Classroom:

It may be tempting to reduce Pólya’s steps and the requirements of 1(B) to things that students are expected to do each time that they solve a STAAR-formatted problem, however, having students circle numbers and key words and underline questions does not require them to truly understand the problem. It is much more beneficial to have students thinking deeply about the problems. We may not be able to see the evidence of these steps on their paper, but we can assess that they truly do understand the problems and what they are thinking while they solve the problems by having them discuss their thinking with you and their peers. Spending quality time working on a few problems using the skills outlined by Pólya and standard 1(B) will have a greater impact than working numerous problems at a surface level. Pólya will be so proud of the great mathematicians you are growing!

Here are a few Suggestions:

1. Spend more time on a few problems.
2. Get students working with peers.
3. Require students to discuss the problem and their strategies.

Happy Problem Solving!

Brandy Crowley
NCTM Representative
Brandy_Crowley1@Baylor.edu

Central Texas Council of Teachers of Mathematics
CTCTM Membership / Information Form

All information provided is confidential and not available to outside sources without the express written permission of the CTCTM Executive Council.

First Name _____ Last Name _____
Mailing Address _____
City _____ State _____ Zip _____
Name of School _____ Your Position _____
Home Phone (_____) _____ Work Phone (_____) _____
Preferred Email _____

Are you a member of NCTM? (Circle) yes no Are you a member of TCTM? (Circle) yes no

Please join or renew your membership to NCTM online (www.nctm.org), using the pull-down menu to indicate that you are a member of CTCTM. NCTM gives CTCTM a small portion (\$3 - \$5) of your membership, which really helps us.

Please check one of the following:

School Type: _____ Public
 _____ Nonpublic

Check those that best describe your level of involvement:

_____ Teacher _____ P-2
_____ Student _____ 3-5
_____ Counselor _____ 6-8
_____ Principal _____ 9-12
_____ Supervisor _____ University
_____ Other: _____

Annual Dues:

Regular Membership \$15.00
Student Membership \$5.00

Make check payable to **CTCTM**.

Mail to:

Molly Bowen
Baylor University
One Bear Place #97314
Waco, TX 76798

ADMINISTRATIVE USE ONLY

Date Entered/Renewed _____ Amount Paid _____
Membership Expiration _____ Acknowledgment Sent _____

.....
Members: Has your membership information changed?
Contact Molly Bowen at Molly_Bowen1@Baylor.edu to update your information.
.....

Officer Position Elections

As a member of CTCTM, we want to encourage you to become more involved in this organization. There are opportunities to serve as an appointed or elected position on the Executive Council. Please consider nominating colleagues or yourself for these important positions. Also, if you are interested or have questions, you may contact Arash Abnoussi at aabnoussi@esc12.net.

Elected officer positions available are:

Vice President for Elementary

NCTM Representative

2019 - 2020 Officers

President

Arash Abnoussi
Region 12 ESC
aabnoussi@esc12.net

President-Elect

Rachelle Rogers
Baylor University
Rachelle_Rogers@baylor.edu

Treasurer

Cheryl McDuff
China Spring ISD
Cherylmcduff1@gmail.com

**Vice President –
Pre-Service Teachers**

Elyse Meyer
Baylor University
Elyse_Meyer@baylor.edu

**Vice President –
College/University**

Trace Bowen
Baylor university
Bowentrace@gmail.com

**Vice President –
Middle School**

Ryan Armstrong
Midway ISD
Ryan.Armstrong@midwayisd.org

Membership Chair

Molly Bowen
Baylor University
Molly_Bowen1@baylor.edu

Secretary

Danielle Boucher
China Spring ISD
Dboucher@chinaspringisd.net

Newsletter & Website Editor

Melissa Donham
Baylor University
Melissa_Donham1@baylor.edu

NCTM Representative

Brandy Crowley
Baylor University
Brandy_Crowley1@baylor.edu

Community Relations Representative

Lindsey Helton
Waco ISD
Lindsey.Helton@wacoisd.org



CTCTM
One Bear Place #97314
Baylor University
Waco, TX 76798

