



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## MATH FUN

You are on an island and there are three crates of fruit that have washed up in front of you. One crate contains only apples. One crate contains only oranges. The other crate contains both apples and oranges.

Each crate is labeled. One reads "apples", one reads "oranges", and one reads "apples and oranges". You know that NONE of the crates have been labeled correctly - they are all wrong.

If you can only take out and look at just one of the pieces of fruit from just one of the crates, how can you label ALL of the crates correctly?

**SOLUTION ON PAGE 8**



### UETCTM MEETING Tuesday, March 8

**Indian Trail Middle School  
307 Car-Mol Drive  
Johnson City, TN 37604  
423-610-6000**

#### Meeting Agenda

- **4 p.m. Refreshments**
- **4:30 p.m. Business Meeting**
- **5 p.m. Programs**

*1/3* Elementary (Grades 2-5): How can sharing **Best Practices (Professional Collaboration)** increase student achievement?—  
Stephanie Mann and Dianna Cox (Room 422)

*2/3* Middle (Grades 6-8): What are the key **Learning Focus Strategies** for teaching math and building student success? —  
Jennifer Moore (Room 425)

*3/3* High (Grades 9-12): Why are **Word Problems** are so much easier to explain than “the others” for Algebra II Students? —  
Guy Mauldin (Room 424)



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- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## *A message from your President*

Spring is a time for all teachers to finalize their preparations for the TCAP! While working with area teachers I have met two distinct groups: those that get very anxious about the state tests and those that are relaxed. My hope is that whatever feelings the test brings to you that you will trust your teaching. Remember, it is the entire year of teaching that kids need to draw on. Trust your teaching and your students.

Three things you should plan to attend in the coming months:

- 1) The NCTM Annual meeting in Indianapolis in April
- 2) The last meeting of the UETCTM in May
- 3) The fall meeting of the TMTA

Sincerely,

*Ryan Nivens, Ph.D.*

Assistant Professor  
Center of Excellence in Mathematics and Science Education  
Dept. of Curriculum and Instruction  
Claudius G. Clemmer College of Education  
East Tennessee State University



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- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## STEPPING OUTSIDE THE BOX

**By Allyson Morton  
Haynesfield Elementary  
Bristol Tennessee City Schools, 4th Grade**



Teaching outside of the box has been a recurring theme for me this summer. We all tend to get ourselves into a routine when it comes to just about anything in our lives. In teaching, I've discovered it's very easy to fall into a pattern resulting in the same type of teaching over and over again. This results in lessons that are not very exciting for neither the students I am instructing or for me.

The first event which occurred this summer to motivate me into rethinking my teaching practices was visiting The Ron Clark Academy in Atlanta, Georgia. I was able to encounter a different style of teaching and reaching out to the students. I saw and felt the energy the teachers provided and how it affected the students' enthusiasm for learning. As soon as I walked through the threshold of their school, the entire atmosphere was uplifting and positive. The staff and students greeted me and my fellow teachers singing and dancing. I had never experienced any school quite like it.

For the next several hours, I gained first-hand knowledge of how to become more creative by taking music, instruments, technology, and the students' interests and using it in a manner that made learning more interesting and fun. I knew that teaching students through music was effective, but I never realized how intertwined it was with the curriculum. For example, we learned the pattern of Blues music, and then we developed our own Blues song and sang it to the class. It gave me another perspective about not only how to become a more effective teacher, but also to do it in a style which would promote creative thinking for the students by giving them more open-ended assignments.



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- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

The second event to occur this summer which reinforced the idea of thinking and teaching outside of the box was attending the Eastman Mathletes Workshop at East Tennessee State University. There I was awakened to the realization that I was teaching in a method called “prompt education”. I was not helping my students to think creatively or critically. I was instructing my students to learn the process of solving problems but not really connecting the concepts to make more sense to them. I was prompting them to do something without giving them the opportunity to discover it for themselves. My way of teaching was archaic and I could never understand why the students did not “get it.”

My mission for this upcoming school year is to challenge myself to be more creative and allow my students to realize more on their own and to get away from this outdated form of teaching I have been practicing. I do not expect this journey to be easy and I realize I will definitely not be perfect, but I know that during the process I can become a more effective teacher. I also hope to excite and encourage other teachers in my school to step outside of their boxes and to show them some of the techniques to which I have been exposed this summer. I feel that in order for our students to comprehend the skills we are required to teach them, we all need to step outside of our comfort zones and realize there are always better ways to teach the curriculum.



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- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## VERTICAL MEETINGS

**By Ana Buckmaster  
Haynesfield Elementary  
Bristol Tennessee City Schools, 5th Grade**



*M*ost teachers will agree that being on the same page benefits students! Flexibility and being open minded are descriptions that should fit all teachers. When teachers work cooperatively, the teaching is more effective and the learning is enhanced.

At our school we have vertical math meetings, which means, math teachers in grades 3<sup>rd</sup>-6<sup>th</sup> meet periodically to discuss what is going on in their classroom. During the meetings we share ideas and methods utilized in the classroom. We discuss ways to build foundations and address any deficiencies. These meetings have created a close bond between us since it gives us an opportunity to share frustrations and triumphs.

Vertical meetings is a wonderful way to stay in touch with the needs of students who will be coming to you and for making sure the ones you send on are properly prepared for the next grade level.



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- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## THE SINGAPORE APPROACH TO PROBLEM SOLVING

By **Beth Belcher**  
**Holston View Elementary School**  
**Bristol Tennessee City Schools, 5th Grade**



*P*roblem solving exercises are the dreaded part of any math curriculum! However, problem solving prepares our students for real life skills long after graduating from our schools.

Knowing the importance of this aspect of the curriculum, I was amazed when first exposed to model drawing used in Singapore Math, a curriculum geared to problem solving and developed in 1981 in Singapore. The use of bar models in teaching problem solving is regularly used to show and teach one's thinking process in solving an arithmetical problem. This problem solving method can be used across different levels and as a link to algebra at the secondary level. Using this visual method gives teachers the ability to teach students with greater understanding.

Simply putting visual emphasis to a problem while breaking it into parts enables students to follow sequential steps and experience success while solving problems in math class and later in real life situations.

Singapore gained world wide recognition when ranked first in mathematics in 1995 and again in 1999. Knowing this, it might be beneficial to use this bar model method while teaching problem solving in your math class!



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- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## Using Graphing Calculators and Spreadsheets to Generate Trend Lines

By Chris Estep  
Tennessee High School  
Bristol Tennessee City Schools, 9th Grade



One of the skills that is required by students taking the Algebra I end of course exam is to take a data set, determine the trend line or line of best fit, and make predictions using the equation of this line. By using the TI-83 or TI-84 calculator this should be a fairly easy task.

Students should begin by entering the data set into the calculator. This can be accomplished in the following way:

1. Click on the STAT button and select 1: Edit.
2. Delete any data in the columns labeled  $L_1$  and  $L_2$ . Enter the new data in those columns. The independent variable will be in the  $L_1$  column and the dependent variable will go in the  $L_2$  column. Make sure that the number of elements in each column is the same.
3. Go to StatPlot ( $2^{\text{nd}}$  Y=) and select 1: Plot. There are several options that allow for a scatter plot. First the "On" button must be highlighted. Also the "XList" needs to be  $L_1$  and the "YList" needs to be  $L_2$ . This would change if your data is entered in other lists besides  $L_1$  and  $L_2$ . The "Mark" can be chosen to suit the plot.
4. The next step is to graph the scatter plot. There are several ways to accomplish this. Simply pressing the button "Graph" will work if the Window parameters have been set up correctly. Another method is to select "Zoom" and press either 9: ZoomStat or 0: ZoomFit. This will generate the scatter plot on the calculator screen.
5. In order to see the "Line of Best Fit" select STAT. From that screen move the cursor to CALC at the top of the screen. Select either 4: LinReg(ax+b) or 8: LinReg(a+bx). This will generate the same equation, just in a different form. Once selected, "LinReg(ax+b)" appear on the view screen. Press the ENTER key and the something similar to the following will appear:

$$y = ax + b$$

$$a = .1403333333$$

$$b = 1.171111111$$

This indicates that the equation of the line of best fit in written in slope intercept form would be:

$$y = 0.1403333333x + 1.171111111$$



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## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

6. It is important to know how well this equation fits the data. In order to determine this fact a feature must be turned on to give this level of confidence. To select this feature go the Catalog (2<sup>nd</sup> 0). Scroll through the catalog options and select "DiagnosticOn" and click on ENTER twice. Now repeat step 5. The information will be the same with the addition of two new values:

$$r^2 = .980893964$$

$$r = .9904009107$$

The "r-value" is known as the correlation coefficient. It has a value of between -1 and 1. A value of zero indicates the data has no correlation while a value that is close to either -1 or 1 indicates a high level of correlation. The "r<sup>2</sup>-value" is known as the determination coefficient. It is found by squaring the value of r. The value is between 0 and 1. An r<sup>2</sup>-value of 0.9809 means that 98.09% of the variation in y can be explained by the linear relation between x and y, in other words, the trend line.

7. It is possible to graph the scatter plot and trend line on the same graph. There are two ways to enter the equation of the trend line. In either case select the "Y=" button. One way is to simply input the equation as it is written in step 5. The other way is to select the "VARS" button, then select option 5:Statistics, move the cursor on the top of the screen to "EQ", and select option 1:RegEQ. This will automatically input the same equation from step 5. Now when the "GRAPH" button is pressed the scatter plot along with the trend line appears.
8. The equation of the trend line can be used to make predictions for data that would not appear on the graph.

The data that was used to determine the trend line above was found in the Tennessee Algebra I End of Course Practice Test. The problem is continues on the next page.

## MATH FUN—SOLUTION

Take a piece of fruit from the "apples and oranges" crate. If it's an apple then you know that is the "apples" crate since ALL THE CRATES ARE LABELED INCORRECTLY. This means the crate marked "apples" must be "oranges" and the crate marked "oranges" must be "apples and oranges".

[www.mathisfun.com](http://www.mathisfun.com)





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- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

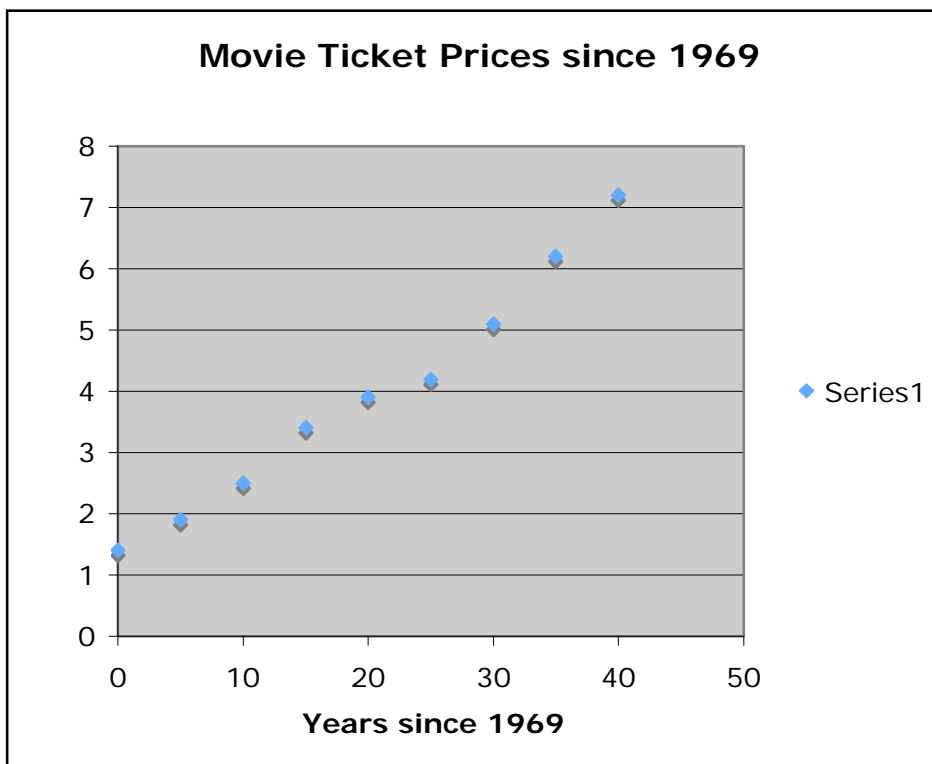
In order to predict the price of the movie ticket in 2024, use the equation of the trend line,  $y = 0.1403333333x + 1.171111111$ , where  $y$  = Average Ticket Price and  $x$  = Number of years since 1969. Since 2024 is 55 years since 1969, 55 would be used for  $x$ . The equation  $y = 0.1403333333(55) + 1.171111111$  yeilds a value of 8.889444444 or \$8.89. That answer is closest to the answer H.

Another method for solving this problem would be to employ Microsoft Excel. The following procedure will produce similar results.

1. Open Excel (or a similar spreadsheet program).
2. Create a table of values similar to the following:

Years since 1969	Average Ticket Price
0	1.4
5	1.9
10	2.5
15	3.4
20	3.9
25	4.2
30	5.1
35	6.2
40	7.2

3. Highlight the date from 0 to 7.2.
4. Create a scatter plot of the data by selecting "Insert", then select "Chart", select "XY (Scatter)", and finally select the first choice. Follow the prompts to select the title, x-axis label, and y-axis label. The scatter plot will be similar to the following:



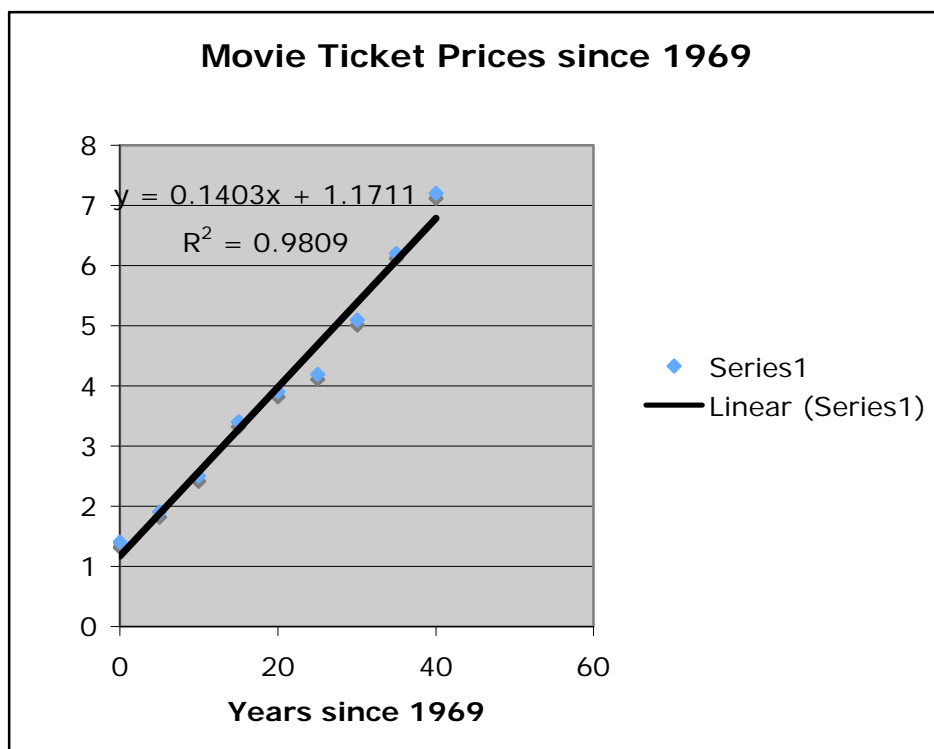


# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

5. The next step is to add the trend line, equation of the trend line, and determination coefficient. Select one of the points on the scatter plot and click on the point. All of the points in the scatter plot will be highlighted. Select the "Chart" button in the menu and click on "Add Trendline". Select the "Linear" trendline. In the "Options" tab check the boxes for "Display the equation on the Chart" and "Display the R-squared value on the Chart". This will produce a new chart similar to the one shown below.



6. The data used in determining the scatter plot is the same data from above. To determine the value of  $y$ , simply replace  $x$  with 55.

$$y = 0.1403(55) + 1.1711$$

$$y = 8.89$$

Either method yields the same answer. It is important that students be able to work with data using either a graphing calculator or a spreadsheet program. Most college laboratory sciences require a general knowledge of spreadsheets.



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## STRENGTHENING NUMBER SENSE

By Cynthia Johnson  
Bristol Tennessee City Schools

Most teachers realize the importance of keeping students actively working to review basic facts, word problems, geometry, fractions, ratios and measurement.

We often provide students with various handouts from a variety of companies. Recently, I attended a strategy-based math workshop presented by Dr. J. Michael Dugan that suggested warm-up activities that promote number sense. The following is a sample of some possible questions:

My number is \_\_\_\_\_  
What is 300 more than my number? \_\_\_\_\_  
What digit is in the hundred's place? \_\_\_\_\_  
What is  $\frac{1}{2}$  of my number? \_\_\_\_\_  
Round my number to the ten's place. \_\_\_\_\_  
Is my number odd or even? \_\_\_\_\_  
Is my number prime or composite? \_\_\_\_\_  
Write my number in expanded form. \_\_\_\_\_  
Write my number in 4 different ways. \_\_\_\_\_

Questions can be adjusted for many different skill levels. Students can even take turns selecting their number for the class!



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- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?

By **Deidre Pendley**  
**Bristol Tennessee High School**  
**Bristol Tennessee City Schools, 9th grade**



Did you study before you took the ACT? A common response to this question from most high school students would be a simple, “No, not really.” After a decade of teaching ACT/SAT Preparation elective classes at Tennessee High School, numerous private tutoring sessions, and even developing a private ACT/SAT “Cram” Review Course, I have developed several strategies for improving ACT math scores. When working with students, my first objective is to familiarize them with specific formulas, share test-taking strategies, and then practice mathematics content from Pre-Algebra through Trigonometry.

When I ask students, “How long has it been since you have had geometry class?” most students will tell me that it has been anywhere from six months to two years. The topic with the largest percentage of questions on the math ACT is geometry. Yet, some school systems are teaching the geometry course to students as early as the eighth grade. Typically, students take the ACT for the first time during their Junior year in high school. This can create a huge gap! Many students have simply forgotten the formulas and, unfortunately for test-takers, the ACT does not provide formulas.

My most prized teaching tool for helping students prepare for the ACT Math Test is my “ACT Math Formula Sheet” which I have developed after extensive experience with a multitude of practice tests. In teaching math courses, it is certainly considered a “Best Practice” to help students discover and develop formulas to ensure a more meaningful experience. However, when preparing for the ACT, students simply must have the formulas memorized to be successful on several of the test items. This formula sheet helps students to narrow down the formulas they actually “need” to know, instead of trying to memorize every single formula within the tested topics.



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

The formulas sheet consists of the following: Complementary and Supplementary Angles (Definitions), Distance and Midpoint, Slope, Slope-Intercept Form, Point-Slope Form, Slope of Parallel and Perpendicular Lines, Properties of Horizontal and Vertical lines (slope and equations), Sum of Interior Angles in Polygon, Sum of Exterior Angles in Polygon, Pythagorean Theorem, Pythagorean Triples, Circumference of a Circle, Area of the following: Circle, Rectangle, Triangle, Parallelogram, Trapezoid, Rhombus or Kite, and any Regular Polygon; Special Triangles (Label 30-60-90 and 45-45-90), Ratios to find Area of a Sector and Length of an Arc, Trigonometry (Sine, Cosine, and Tangent), Standard Equation of a Circle, Percent Proportion, Percent of Increase or Decrease, and the Quadratic Formula (However, all ACT quadratics can be solved by factoring).

After reviewing the topics included on the ACT Math Formulas Sheet, students need to become aware of several test-taking tips. If I could give students just one piece of advice it would be to SLOW DOWN! Most students are extremely intimidated by sixty questions with only sixty minutes. The questions increase in difficulty from the beginning to the end of the test, therefore, students need to take their time on those at the beginning (first 30 questions) to avoid careless errors. Students need to realize that with getting merely a little over half of the questions correct (about 32 out of 60); they can achieve the coveted scaled score of a 21 which often guarantees scholarship money!

Additional test-taking strategies include stressing the importance of drawing pictures, underlining, and back-solving. Many questions do not include diagrams, so drawing your own helps represent the question visually (especially those referring to geometric figures). Underlining important information in the test booklet is helpful in keeping the student engaged in the problem and sorting through the language of the test items. Every math question on the ACT is multiple-choice, thus, students are able to try the five answer choices in some problems in order to eliminate incorrect answers and select the one that satisfies the problem.



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

Finally, and most importantly, students need to know content from math courses beginning with Pre-Algebra through Trigonometry. Several students are intimidated by the content due to the fact that when they take the test, they often have not completed a trigonometry course. Students' minds can be put to ease in finding out that typically there are only about 2-3 questions at the very end of the test (within the last 10 questions) that would require content from a course such as Advanced Algebra with Trigonometry. The most effective process in preparing for the ACT math test is to PRACTICE taking ACT math tests! After a student has simulated test taking conditions and completed a test, they can focus on those problems they are missing in order to learn the content. After learning the content for incorrect problems, students begin to recognize the "types" of problems typically included on the test.

Taking the ACT is an important step in every student's path to college. Results on this culminating test can play an integral part in determining admission to college, the requirement of "remedial" courses in college (typically below a scaled score of 19 in a particular subject), and the amount of scholarship money available. With so much on the line, students need to PREPARE for this test in advance. Math scores can be improved in several ways including memorizing and applying the appropriate formulas, becoming aware of helpful test-taking strategies, and PRACTICING taking ACT math tests in order to review the content. The investment of time in preparation for the test will certainly pay off in increased scores. When asked, "Did you study for the ACT?" the well-prepared student can be confident and reply, "Yes, I did!"



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## A LEARNING ENVIRONMENT

**By Ellan Kitzmiller**  
**Bristol Tennessee High School**  
**Bristol Tennessee City Schools, 9th grade**



Teaching is an ever evolving learning experience. I work in a school system that constantly encourages academic growth in our field and aides in our search for better and more effective ways to reach our students. My subject area is math and I have been teaching for more than 17 years. This is plenty of time to think you know it all, but then another method of approach to a particular problem comes to my attention that I have never seen before. The mind is so very complex and there are multiple ways that people logically think through a problem. It is important that we listen to our students because they could be correct in their approach even if it is nothing like the “normal” way to find the answer. This is one way that I have learned, through my students’ eyes.

Another way that I have learned is through collaboration with other teachers. I feel very blessed to have the wealth of knowledge that I have around me. Our math department is always hungry for new ideas and we do a great job of transferring knowledge with each other. We have an excellent math department of which I am proud and fortunate to be associated. I am surrounded by teachers that are committed in their field of study. Our school encourages cross-curricular learning. By interacting with other teachers, valuable insight is gained into how math is an integral part of other subject areas. This includes curriculums such as wood shop, interior design, cosmetology, chemistry, business, and art. I consider myself to be a team player and realize that I cannot do it all on my own, so having the support of everyone else makes me a better teacher.



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

In the last few years I have been wonderfully overwhelmed with new technology. Wonderful because I am extremely fortunate to have the opportunity to have this technology; overwhelmed because there is so much to learn. I have gone from chalkboards to a promethean board, basic to graphing calculators, and from overhead projectors to document cameras. This technology has been a wonderful addition to my classroom. These new technologies have allowed me to help the more visual and hands-on learners in my classroom succeed. I am continually learning about these tools and utilizing them to help bring math to life for students.

The leaders in our school system have one common vision, which is to maximize our students' success, and as a result they have done a great job helping to maximize the teachers' success. They realize the importance of incorporating the expertise and support of our corporate community partners into the educational environment. The end result is to provide our students with the maximum potential to succeed by developing quality teachers, encouraging corporate partnerships, investing in innovative technologies and techniques, and creating an environment where learning is fundamental.





# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM

By George Laoo  
Haynesfield Elementary School  
Bristol Tennessee City Schools, 5th grade



Now that you have the Accelerated Math (AM) program how do you deploy it in the classroom? You may have learned that jumping into it was a bad idea. I imagine it was too chaotic! Every time you turned around someone needed your help or the program did not print off a new assignment. This Article will explore several aspects of how I successfully implemented Accelerated Math in my classroom. Most of my strategies came from attending an AM seminar.

### Planning

The key to successful implementation of AM is planning. My planning starts with preparing the materials I need, creating procedures, and ending with management of the actual program. When I started the program I wanted to make sure students kept up with their work. AM really creates a large paper trail and the teacher and student must stay on top of organizing that paper. I found that a two sided folder was a great way to stay organized. I put my students name on the outside, and labeled the inside new assignment side and old assignment side. The next thing I created was a “Whoops Board” and “Whoops box.”

The whoops board is a board that hangs right beside the printer. The board has directions for those students that did not meet a score of 90% on practice. Example: If a student makes below 90% on their practice, that student must go back and rework each problem. They can seek help first in their book, then Google, then teacher. When they are done they will place their AM folder in the “Whoops Box.” The “Whoops Box” hangs right below the “Whoops Board.” When students are done with “Whoops” assignments or do not have anything else to do they should place the folder in the “Whoops Box.” That will let the teacher know without disrupting the teacher that the student needs further direction. It is important to keep a close eye on what the program is printing out for students.



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

It will be a big hassle if you wait until AM time to manage student's goals. Prior to school beginning, I take 5 minutes to scan over AM records. Accelerated Math provides an excellent resource, called Classroom Status, to help identify who is excelling and who needs intervention. Prior to the school year, I create a folder which lists all of the Student Performance Indicators for the year. I assign five SPI's at a time to students. Once they have shown mastery level I will test them and assign them five more SPI's. They will continue moving until they have mastered all SPI's.

### Procedures

It is very important to have procedures in place. I take the first two weeks to review my classroom procedures for Accelerated Math. My procedures are as follows:

**Step 1** – Student picks up AM folder when Teacher announces AM time

**Step 2** – Students work on New Assignment. If no Assignment exist the student places folder in "Whoops Box."

**Step 3** – Students fill in Form number on scan card. Then they transfer their answers from test to scan card.

**Step 5** – Students go to 1<sup>st</sup> dot on floor, which is the scan card dot, with AM folder and scan card (Only 3 students up at one time.)

**Step 6** – Students scan card

**Steps 7** – Students slide down to 2<sup>nd</sup> dot, which is the printer dot, and wait for TOPS report printout. Students staple TOPS report to completed assignment. (TOPS report on top). Students wait for new assignment report.

**Step 8** - Student slide down to the 3<sup>rd</sup> dot, which is "Whoops Board/Box dot. If students receive 90% above on assignment/TOPS report that student returns to seat and complete new assignment. Once new assignment is complete repeat STEPS 3-10



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## THINGS TO REMEMBER:

If students receives below a 90% on assignment/TOPS report that student places that report in the “Done” side of folder. Student needs to wait for new assignment printout. Place new assignment in “new assignment” side of folder. Place ACCEL Folder in “Whoops” box.

If your folder is in “Whoops” box you need to work on assignment on “Whoops Board”

Teacher will review all “Whoops Folders” and meet with the student to discuss issues. Once those issues are discussed the student will return to seat and work on new assignment located in the “New Assignment” section.

If no “Whoops” issues, teacher will meet with students that show up on “Status of class Report” that are having difficulties.

Not only do I discuss the procedure with the students, I post the procedures on the wall. It is important to have your computer near the scanner, and the scanner near the printer. As I mentioned in the steps, I have 3 dots in the floor labeled 1, 2, and 3. Only 1 child can be standing on a dot at one time; therefore, that means only 3 students up at one time. If a student is waiting to get on a dot he/she must be reviewing their answers while they are waiting. Dot #1 is in front of the scanner. Dot #2 is in front of the printer. Dot #3 is in front of the whoops board. Marking the stations helps prevent any bottlenecking at the AM area. Remember if a child simply does not know what to do he/she should place folder in “Whoops Box.”

I use AM 4 days a week for 15 minute intervals. On the fifth day I conduct “Guided Math” or you might call it “Activity Station Math.” I have five stations and one of those stations is Guided math. This is when the students come to me and we discuss their AM folders. I review practice tests, ask if anyone is having a problem, and clean out folders. This is a very import part of my program and I encourage you to make the time for small group meetings.



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

Every program has its flaws and AM is not perfect. You will constantly be running to computer to un-jam the scanner. To help prevent this problem make sure you spend time explaining the importance of filling out the form number section on students' scan cards. Too often my "Whoops Box" fills with folders because they do not have anything to work on. To avoid this problem make sure you take time in the morning to review each student's status. "I don't know what to do Mr. Laoo." Post those procedures and rules where students can see it. Take the time to explain procedures. Another problem I ran into at first was what students do if their AM folder is in the "Whoops Box?" At first I had them read, but I realized that we can utilize more of our time if they have something mathematical to work on. So I started the rule, if your folder is in the whoops box you must pick up a Coach book and complete a lesson. All students start on Lesson 1 and move forward. Students must read the lesson then answer the quiz in their coach notebook. When I call the students to come get their folder I will look at their Coach notebook exercise.

Accelerated Math is a wonderful teaching tool that allows you to create math assignments tailored to each student's current level. There is no grading, plotting data, or making practice, intervention, or test worksheet. Students and teachers get immediate feedback on how they are doing and what they need to do to master an objective. AM can become a overwhelming, but if you take the time to plan, create procedures, and take the time to be organized the program will be a success in your classroom.



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

## POWER

By Gwen Talley  
Vance Middle School  
Bristol Tennessee City Schools, 8th grade



*P*ower' is a word that is often associated with education and learning – “With knowledge comes power!” We need to step back and look at the real power that we as teachers have. In reality, we have the power to make or break a child. We can instill a love of learning along with an atmosphere of respect and concern, or we can squash the innate curiosity of the child by getting wrapped up in the curriculum, and make school seem cold and uncaring. It is also said that with power, comes responsibility. That statement could not be more true.

We all continue to strive to be high-performing teachers. A complete understanding of basic algebra is imperative for academic progress in high school mathematics. These skills are the foundation on which all other future math skills will be built. Because of the emphasis on SPIs and GLEs and standards, teachers are constantly reminded (unnecessarily) of the importance of the content we are to teach. But what we really teach is children. These children have predisposed ideas and expectations. Their respective futures are as open as the sky. We must create a more comfortable and caring environment if we ever hope to see all children stay in school. We also have to remember that they are not all headed towards the same destination. Although many will go to college, others will find more benefit in the life lessons they learn as they grow up and head into the real world.



# UETCTM News

## IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

Parents have high hopes for their children as they drop them off for their very first day of elementary school. We know that they are trusting us with the most important thing in their lives. They want their child to be nurtured, but at the same time, they expect to see emotional, physical and academic growth. They must be convinced that we care about and believe in their child. We must always be aware of the student as a child first. This is especially true for middle schoolers. A middle school aged child has so much going on. Physically, some pretty big changes are occurring; emotionally, they sometimes appear to be nothing but a bundle of mixed up thoughts and feelings. There are few feelings more powerful than being understood and accepted; before the learning process can even begin, each child must believe in those feelings.

The climate of a classroom also has an enormous impact on the comfort level of individual students. The physical aspects like lighting, temperature, room arrangement, aesthetics, although important, do not compare to the importance of the attitude and demeanor of the teacher who resides within those walls. It should be our initial goal to see that the child is at least willing, but preferably is looking forward to coming back to our room the next day. There is only one chance at making a first impression. Drill and kill, worksheets, class assignments and homework will not create a yearning to participate, live and learn.

As teachers, we hold the power to reach the children that we are given to teach. Ultimately, our goal must be to use that power to reach every last one.



# UETCTM News

### IN THIS ISSUE:

- MATH FUN
- UETCTM MEETING AGENDA
- A MESSAGE FROM THE PRESIDENT
- STEPPING OUTSIDE THE BOX
- VERTICAL MEETINGS
- THE SINGAPORE APPROACH TO PROBLEM SOLVING
- USING GRAPHING CALCULATORS AND SPREADSHEETS TO GENERATE TREND LINES
- STRENGTHENING NUMBER SENSE
- ACT MATH...WHAT DO STUDENTS NEED TO KNOW TO BE SUCCESSFUL?
- A LEARNING ENVIRONMENT
- MAKING ACCELERATED MATH WORK IN YOUR CLASSROOM
- POWER
- UPCOMING CALENDAR DATES
- ARTICLE SUBMISSIONS
- OFFICERS
- MEMBERSHIP

### UPCOMING CALENDAR DATES



#### UPPER EAST TENNESSEE COUNCIL OF TEACHERS OF MATHEMATICS

Tuesday, March 8, 2011  
 Indian Trail Middle School, Johnson City, TN

Monday, May 2, 2011  
 Bristol City Schools, TBA



#### NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS 2011 REGIONAL CONFERENCES AND EXPOSITIONS

2011 RESEARCH PRESESSION  
 April 11– 13, 2011  
 Indianapolis, IN

2011 Annual Meeting and Exposition  
 April 13—16, 2011  
 Indianapolis, IN

#### NCTM 2011 REGIONAL CONFERENCES

- Atlantic City, New Jersey—October 19–21
- St. Louis, Missouri—October 26–28
- Albuquerque, New Mexico—November 2–4



#### TENNESSEE MATHEMATICS TEACHERS ASSOCIATION



#### SOUTHWEST VIRGINIA COUNCIL OF TEACHERS OF MATHEMATICS

## Request for Article Submissions

**W**e are always looking for people to contribute articles to our ongoing "Math Perspectives" series. Every month, we would like four submissions for the series: a preservice undergraduate student, a preservice graduate student, a current classroom teacher, and one of our local math coordinators. Each person will voice their opinions, concerns, or observations upon a particular aspect of teaching mathematics. There are no set topics for this series.

Another section will be included in the next issue dedicated to mathematics problems. We are looking for submissions on favorite problems focused on various grade bands.

*If you or someone you know would like to contribute to this column, please contact **Ryan Nivens, Newsletter Editor.***

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# UETCTM

## Membership Application



***Mail completed form to:***

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***Membership Fee: \$10***

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**The Upper East Tennessee Council of Teachers of Mathematics is an organization for anyone involved in mathematics education from preschool through college in the greater -Cities region. We meet six afternoons per year in various locations across the region. The purpose of UETCTM is to promote excellence in teaching mathematics and to share best practices among mathematics educators.**