KANSAS CITY AREA TEACHERS OF MATHEMATICS

The Summation

VOLUME 11, ISSUE 1 AUGUST 2011

SPECIAL POINTS OF INTEREST:

- NCTM Board: Fall Vote for Rita Barger
- Professional Development Opportunities
- Effects of Homework
- Classroom Activities

INSIDE THIS ISSUE:

Letter from the KCATM President

by Jeanine Haistings, PhD

Another school year in upon us. The excitement of buying new school supplies, setting up classrooms, finding just the right lesson for the first day of school. I have always said that educators are lucky in that we always have a new beginning and an ending to our year. Not many occupations have this luxury. No matter what happened at the end of last year, you have a new start this year! What will you do to make this year different - more motivating, more engaging, more exciting? I hope KCATM can help. As the new president, I will continue the mission of our organization - helping math teachers continue to learn mathematics and find unique ways to teach the awesome content. KCATM is here all year to make your job easier and to motivate you.

Over this summer the KCATM Board spent time preparing for this year. We spent one entire day in a leadership retreat. Nearly twenty people came together to organize events and improve communication with our members. We hope this newsletter is the first of many this year. Our 2012 conference speakers are already committed to making the conference a time to prepare us for the Common Core Standards. The math contest this winter is sure to be one of the biggest and best for our students. And the Signature Series topics will help educators throughout this entire year. It is sure to be an incredible year for KCATM with ***exponential*** rewards for everyone.

As a math educator for 20 years -elementary, middle, junior high and now college - I hope to provide a perspective and leadership style that will lead KCATM into the future. If you have any suggestions, questions, or comments, don't hesitate to contact me. Enjoy the new year!

Dr. Jeanine Haistings
Assistant Professor of Education
William Jewell College

www.kcatm.net

Dr. Rita Barger is running for the NCTM Board of Directors

Our KCATM organization has a chance to impact the nation's mathematics education by having a voice on National Council of Teachers of Mathematics, NCTM, Board of Directors. This fall it will take all of our votes to help Dr. Barger give us this voice. The NCTM Board of Directors sets direction, establishes policy, and oversees the activities of NCTM. Her term would be for three years. Others who have come from Kansas City have been Dr. Vena Long and Mike Koehler, both of whom are still extremely active in mathematics education.

Dr. Barger is the backbone of our KCATM organization! She runs our annual Winter KCATM Math Conference and has served as president of KCATM twice. She is also a Board member of the Missouri Council of Teachers of Mathematics (MCTM). NCTM selected her to be the Local Program Chair for the 2007 NCTM Regional Conference in Kansas City. We need her leadership on the NCTM Board of Directors! **Please vote this fall for Dr. Barger!**

Encourage your colleagues to join NCTM and help us put Rita Barger on the Board! Go to www.NCTM.org today!

Common Core State Process Standards (CCSS)

www.katm.org

1. **Make sense of problems and persevere in solving them.** Students make meaning of the problem and find entry points. Monitor their progress and change course if necessary. Understand various approaches to solutions.
2. **Reason abstractly and quantitatively.** Students make sense of quantities and their relationships. Able to decontextualize and contextualize quantitative relationships. Understands the meaning of quantities and is flexible in the use of operations and the properties.
3. **Construct viable arguments and critique the reasoning of others.** Students analyze problems and make conjectures using data. Listen to the arguments of others and ask useful questions to determine rightness of argument.
4. **Model with mathematics.** Students can apply mathematics to solve problems in everyday life. Able to simplify a complex problem and identify important quantities to look at relationships. Makes sense of the results.
5. **Use appropriate tools strategically.** Students use available tools recognizing the strengths and limitations of each.
6. **Attend to precision.** Students communicate precisely with others. Understands meaning of symbols used in mathematics. Calculates efficiently and accurately.
7. **Look for and make use of structure.** Students look for patterns. Look for an overview and can shift perspectives.
8. **Look for and express regularity in repeated reasoning.** Students see repeated calculations and look for generalizations and shortcuts. Continually evaluates reasonableness of answers.

SMARTER Balanced Assessment Consortium

http://www.k12.wa.us/SMARTER/default.aspx

According to the website, both **Missouri and Kansas** are among the 29 states (as of June 29, 2011) who have contracted **SMARTER Balanced Assessment Consortium (SBAC)** to create state-of-the-art adaptive online exams, using "open source" technology. The online system will provide accurate assessment information to teachers and others on the progress of all students, including those with disabilities, English language learners and low- and high-performing students. The system will include:

1. the required summative exams (offered twice each school year);
2. optional formative, or benchmark, exams; and
3. a variety of tools, processes and practices that teachers may use in planning and implementing informal, ongoing assessment. This will assist teachers in understanding what students are and are not learning on a daily basis so they can adjust instruction accordingly.

NCTM Implementation Support

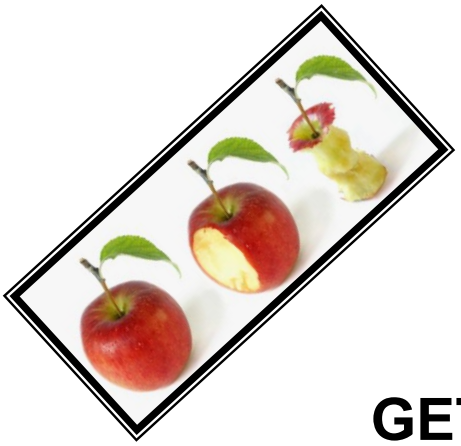
http://www.nctm.org/news/highlights.aspx?id=26084&blogid=6806

The adoption of the Common Core State Standards for mathematics could have significant implications for teachers. NCTM has prepared an overview PowerPoint presentation and other presentations for Pre-K–Grade 3,grades 4–5, grades 6–8, and high school to inform teachers and to support them in implementation of the Common Core Standards. Other presentations for grade bands are under development and will be made available soon.

Missouri State Department of Education Support

http://dese.mo.gov/divimprove/curriculum/common-core-math.htm

CCSS and GLEs/CLEs Crosswalk Alignment Analysis documents provide a comprehensive listing of all CCSS for mathematics and their alignment to the GLEs/CLEs. Crosswalks have been compiled for grades K – 8 as well as high school. These documents will be useful in identifying content to be addressed in each grade or course in updating curriculum and preparing students for assessments aligned to the CCSS.



KCATM SPEAKER PROPOSAL
WINTER CONFERENCE

Saturday, February 18, 2012

UMKC: **Education Building** 1st Floor

On-site registration begins at 7:30am

MATHEMATICS:
GETTING TO THE CORE

All sessions will be 50 minutes in length.

Please print. Return your proposal to:

Dr. Rita Barger
UMKC – Education 309
615 E. 52nd St.
Kansas City, MO 64110

816-235-5655
bargerr@umkc.edu
816-235-5270 (fax)

www.kcatm.net

Name: First:_____ Last: _____

Address: _____

_____

Phone: Work: _____ Home: _____Cell: _____

Email: _____

School/Company: Name: _____

District: _____

Grade Level Range - Select all that apply

_____ Primary (K-3) _____ Intermediate (3-6) _____ Middle (6-8)
_____ High (9-12) _____ General _____ Other (specify)

Title: _____

Description: (Write a concise, specific description of the essential content of your presentation.) Please limit it to **no more than 50 words**. On receipt of your proposal, the description you provide here will be printed in the program.

A/V Equipment: One overhead and one screen will be provided in each meeting room. Check one of the following choices:

_____ No additional equipment required

_____ Additional audiovisual or technology equipment necessary for the success of this presentation. Provide this information on the back of this sheet.

Additional Requests:

Kansas City Area Teachers of Mathematics
Membership Form

www.kcatm.net

KCATM needs a large and active membership to provide the professional support to Kansas City area mathematics teachers. Your membership provides support for the annual math conference for teachers and the annual math contest for students. It also pays for the printing and mailing costs associated with our quarterly newsletter. Please use the form below to join or renew your membership. Duplicate this form as necessary and note that *when 4 teachers from the same school join KCATM together, a fifth teacher may join for free. Mathematically speaking, that reduces each teacher's cost from $10 a year to just $8 a year, a 20% savings!*

VOL

Return this membership form to: **Rita Barger**
UMKC – Educ 309
5100 Rockhill Road
Kansas City, MO 64110

Name _____ Home Phone (____) _____

Home Street Address _____ Apt. # _____

City _____ State _____ Zip Code _____

School Name _____ School District _____

Address _____ City _____ State ___ Zip Code _____

School Phone: (____) _____ ext. _____ Grade Level Taught _____

Email Address _____

Please enroll me as a member of: ***Amount Enclosed***

KCATM ($10 – 1 year/$25 – 3 years) $ _____
(4 memberships from the same school, 5th membership is free)

Student membership ($5 each year) $ _____

If you are interested in helping at the organizational level (or just want information to see if you are interested) please circle the committee of your choice:

- membership
- publications
- contest
- conference

The committee chairperson will contact you to tell you how you can get involved.
Thank you for your interest in the support and teaching of mathematics in the KC area.

WEB Bits

Mathematics Websites - Alex Omorodion

Introduction by Rita Barger

The World Wide Web is an infinite source of information that has revolutionized the 21st century. A research can access unlimited information and data at any corner of the earth from a tiny desktop computer in a house basement anywhere on the planet. Anyone anywhere can upload information to or download information from the Internet without oversight for authenticity. The motivations for posting information on the web are as varied as the people that are behind the postings – profit, politics, knowledge sharing, and hate (to name a few). The difficulty facing each of us is deciding what websites provide the most accurate and current information without spending valuable time doing so.

Mr. Omorodion did an extensive review of a number of websites available to mathematics teachers. He has generously given us permission to share his results with you through this newsletter. Each issue we will publish his report on one of those sites. If you would like to share a review of one of your favorite websites with us, we would love to print it in coming issues.
Just send your review to Rita Barger at bargerr@umkc.edu. If you prefer to use traditional mail, my address is: UMKC – Educ 309, 5100 Rockhill Road, Kansas City, MO 64110.

The Futures Channel

http://www.thefutureschannel.com/hands-on_math.php

The Futures Channel is a comprehensive educational website that covers a wide range of subjects including mathematics, science, technology, and engineering. It contains a lot of video clips and presents math in a hands-on manner using real-life applications to motivate learning. It uses a project-based approach to mathematics.

Format: The site's pages are attractively laid out in a 3-column format. The first column houses the links to the academic materials, videos, news, and member login. The second column contains various video clips and "contact us," "about us," and "terms of use" links. Column three houses math activities, a newsletter signup section and a commercial advertisement link.
The multi-page website maintains a consistent layout from page to page, which makes the navigation of the website very easy. The navigation menu is available on every page. The pages load quickly and easily, and the graphics are interesting and closely related to the topic of study.

Copyright: The website grants permission to users to copy and transmit the content of the site for education purposes only.
Subscription: Subscription is required in order to gain full access to the materials on the website. However, plenty of materials are available to the average user without subscription.

Objectivity: The futures channel website is highly objective. There are commercial advertisements throughout the site, but they are all math related. Clearly, a lot of time and resources have been devoted to the academic (as opposed to commercial) materials.

The Futures Channel has two math links in addition to other academic links on its index page – Algebra and Mathematics. The Mathematics link leads to the following activities-based topics:

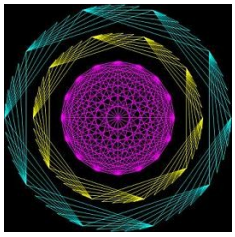
Movies with mathematics activities:
- Counting numbers and integers
- Fractions, decimals, percents, ratios
- Geometry
- Measurement
- Reasoning and communication
- Statistics and probability
- Trigonometry

The Algebra link leads to traditional algebra topics including movies with algebra activities.

Each topic on the site is linked to subtopics, which are then linked to activities. Each activity has two parts to it – a video clip explaining how the activity is done and its real life applications, and a worksheet detailing the step-by-step procedure for doing the activity. The worksheets are designed to help students discover information.

In summary, the site is easy to navigate, appealing, objective, and accurate. It is a good resource for teachers and students. Materials are grouped by age and student worksheets are provided, along with videos, and lesson plans. The one drawback, is that lessons on the site do not include assessment items or information.

EQUALS Math Club



Mike Round, KCATM webmaster, actuary, and passionate mathematician spent last year presenting and sharing his "how to do fabulous mathematics in EXCEL spreadsheets". He will continue to help us explore more spreadsheets this coming school year. All adults and students are welcome to attend. Monthly meeting dates will be posted on our website. **August meeting: Aug. 24th at Olathe East HS, 14545 W. 127th St., Olathe, KS.**

Calendar of Events

- October 8 - 1st Signature Series *(see registration form)*
- November 5—1st HS professional development
- January 21 - 2nd Signature Series *(see registration form)*
- February 4 - 2nd HS professional development
- February 18 - KCATM Winter Conference *(see presenter and registration forms)*
  - Full Membership meeting
- Feb/March - KCATM Math Contest *(date to be announced)*
- May 3 - KCATM Awards Banquet

Kansas City Area Teachers of Mathematics

Find all of this and more on our new website: **www.kcatm.net**

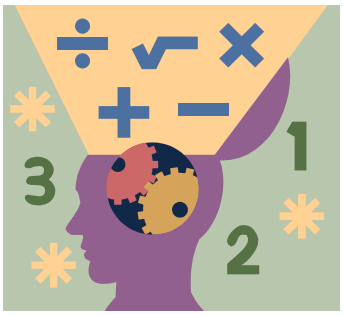
- Board of Directors
- Signature Series
- Annual Contest & Past Exams
- Annual Winter Conference
- Newsletter
- Useful Links
  - Equals Club
  - Common Core State Standards
  - NCTM: www.nctm.org
  - MCTM: www.moctm.org
  - KATM: www.katm.org
- Calendar
- Monthly Challenge

NCTM, MCTM, and KATM Calendar of Events

- September - NCTM voting begins

If your individual NCTM membership is current as of mid-August 2011, you will be eligible to vote in this year's election, which begins in September 2011. But you must make sure your e-mail address is up-to-date. It's easy and takes just a few moments. **Go to www.nctm.org and l**ogin to your profile today to confirm all your contact information is correct.

- October 3—KATM State Conference in Topeka (Washburn Rural)
- **October 26-28 - NCTM Regional in St. Louis**
  - Preregister by Sept. 28 to save up to 24%
  - Volunteer to help!
- March 15 - Deadline for FAME grant



My Mind on Math and Math on my Mind

Brain Teaser

by Rita Barger

Last issue's brain teaser (repeated on the last page of this issue) involved bagging up tennis balls. It said:

> Lucky you! You have nine tennis balls and four shopping bags. Your challenge is to put all the balls in the bags in such a way that there are an odd number of balls in each bag. That is, each bag must contain 1, 3, 5, 7, or 9 balls. How do you do it?

Three people actually sent in a correct answer: Nick Perna, a middle school pre-service teacher, Ann Riggs, a music educator who saw the answer immediately, and her husband, Bob Riggs who provided a mathematical explanation.

The first answer is to put all 9 tennis balls in one bag, and then put that bag into the other bags. The key to working this problem is to realize that no combination of odd numbers will allow you to solve the problem without putting one bag inside another. Once you've had that insight, there are multiple answers.

An extension which I leave to you is to determine all possible solutions to this problem. If you do play around with this, I hope you'll send me your final answer.

For this issue, I've chosen a problem from the 2004 Bernoulli Trials – a competition in which contestants only have to determine whether a mathematical statement is TRUE or FALSE. I read about the competition and the questions in the June 2006 issue of Mathematics Magazine (pages 199-205). For each question, contestants have 10 minutes in which to determine their answer. So, set your timers, and see how you would do. This was the first question in the trials.

TRUE or FALSE?
In the following list of statements, there is exactly one false statement:

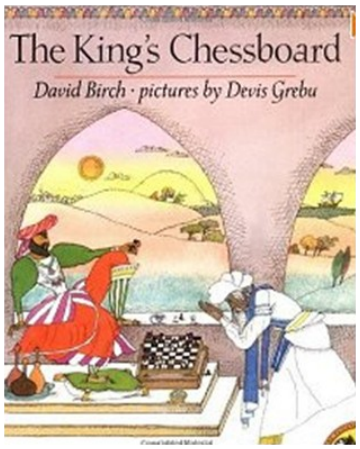
(a) $2004^3 - 2004$ is divisible by 3;
(b) $2004^5 - 2004$ is divisible by 5;
(c) $2004^7 - 2004$ is divisible by 7;
(d) $2004^9 - 2004$ is divisible by 9;
(e) $2004^{11} - 2004$ is divisible by 11.

As always I encourage you to send me your solutions as well as your suggestions for future brain teasers for this column. Send things to bargerr@umkc.edu, or to

Rita Barger
UMKC – Educ 309
5100 Rockhill Rd.
Kansas City, MO 64110

The King's Chessboard:
A Lesson on Exponential Growth for Middle School Students

Adapted by Dr. Clare Bell



Briefly, the story of *The King's Chessboard* involves a king who wanted to show his appreciation to a wise man who had served him well. The wise man proposed that the king reward him by placing grains of rice on the chessboard, first one, and then doubling the amount on each successive square each day thereafter. There are 64 squares on a chessboard. The request seemed simple enough, and so the king agreed. (There are quite a few on-line variations of this story available.)

Content objectives: Understand patterns, relations, and functions
- represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic rules
- relate and compare different forms of representation for a relationship
- identify functions as linear or nonlinear and contrast their properties from tables, graphs, or equations

Select process objectives:
- Apply and adapt a variety of appropriate strategies to solve problems
- Make and investigate mathematical conjectures
- Communicate mathematical thinking coherently and clearly to peers, teachers, and others
- Analyze and evaluate the mathematical thinking and strategies of others
- Recognize and apply mathematics in contexts outside of mathematics

Activity:

1. Suggest to students that they look for a pattern in the story of The King's Chessboard. If reading from the version suggested below, stop after this sentence: "Dear me," said the Weigher to himself on the twelfth day, "soon I will be counting grains all day long."
2. Briefly discuss how multiplication is used in the story. The students will discover that the pattern increases by multiplying each term by two. Allow students to experiment with calculators to extend the pattern in the story. (How many grains of rice will the King owe the wise man on the 64^{th} day? How much for all 64 days combined?)
3. After sufficient exploration time, lead a whole-class discussion toward the idea of powers of two and exponential growth.
4. Draw the students' attention to Pascal's Triangle and challenge them to find the pattern. (This can be very difficult to locate as it involves adding the numbers going across each horizontal row. However, some students may see it if given enough time to explore. Giving hints is a good idea. The first term is 1. The second term is found by adding 1 + 1 to get 2, the third term is 4 (1 + 2 + 1), and so on.)
5. Finish reading the story!
6. Relate the concept of exponential growth to our base-ten number system.
   a. What if the wise man had asked the King for ten times the number of grains of rice on each successive day?
   b. At what point can the students no longer name the amounts (number of grains of rice) for each of the squares on the chess board.

Possible journal prompts: What is a pattern? Describe the pattern found in the book The King's Chessboard. How do you know what number comes next in the pattern found in the story? How could Pascal's Triangle have helped the king? How are the number pattern from the story and our base-ten number system related?

Resources: The King's Chessboard, by David Birch, pictures by Devis Grebu

Pub. Date: July 1993
Publisher: Penguin Group (USA)
Format: Paperback, 32pp
Series: Picture Puffin Books Series
ISBN-13: 9780140548808
ISBN: 0140548807

Materials: calculators, paper and pencil, numeric patterns worksheet, journal prompts, math journals, and Pascal's Triangle.

Adapted by Clare V. Bell from: http://www.cfep.uci.edu/uci-sati/faculty/carole_bersani_full.html

Shoes for Geometry— Elementary

For this activity you will ask students who are wearing tennis/athletic shoe to remove one shoe - yes, just one. Next, put a paper on the sole of the shoe and use a crayon (or a pencil held for shading) to color the paper held against the shoes

Geometric shapes can be found on soles of athletic shoes.

sole. The sole pattern will emerge. Identify them!

These patterns can be displayed in your classroom. Students will be able to see many Geometric Shapes depending upon the shoe brand and their personal sophistication with the geometric shapes,

-Marybeth Swartz O'Malley

Dan Meyer: Math Class Needs a Makeover

If you haven't seen Dan Meyer's video yet, please take a few minutes to get excited about what we can do in our math classes to enhance the learning experience of our students.
http://www.ted.com/talks/dan_meyer_math_curriculum_makeover.html

Coding & Decoding - Algebraic Notation

The challenges of using the abstractions of written language may be even more pronounced when using Algebraic Symbols. Using a puzzle for which the solution may be an algorithm characterized by algebraic symbols may help exercising students in the challenge of coding and decoding...Algebraically.

The classic "Cannibals & Missionaries" Puzzle lends itself to a solution algorithm that could be used to program a computer solution and be characterized with algebraic-type symbols.

The Puzzle

If there are 3 Cannibals and 3 Missionaries on 1 side of a river with a 2-passenger boat, then how will you get them all to the other side of the river without letting the Cannibals outnumber the Missionaries on either side of the river (the Cannibals may be left alone) in as few moves as possible?

The Coding (Legend)

Let n = N = the Number of
+ = Missionaries
- = Cannibals
r = Riders
t = Trip number
| | = River
___ = Boat

- Alan M Gilmore

See the KCATM Website : www.kcatm.net for the accompanying worksheet.

"Using a puzzle for which the solution may be an algorithm characterized by algebraic symbols may help exercising students in the challenge of coding and decoding...Algebraically."

Licorice and Radians - What is a Radian?

Materials: red string licorice, compass, protractor, paper

1 - Each student constructs a circle on their paper making sure to mark the center.
2 - Use a straight edge to mark one radius.
3 - Measure the radius with a piece of red string licorice. Pinch to cut.
4 - Lay the licorice on the circle and mark one length - one RADIAN!
5 - Continue to measure and mark radian measures around the circle.
6 - How many radians did you measure? Why?

Extend the discovery:
7 - Use a straight edge to mark a second radius from the first radian mark to form a central angle equivalent to one radian measure.
8 - Two students compare angle measures by holding the papers in the light with concentric circles. - JoAnn Hiatt

High School Signature Series Focuses on Reasoning

KCATM is pleased to announce a series of workshops designed especially for high school mathematics teachers. The two-day workshop will focus on developing reasoning and sense-making in high school mathematics. The sessions will provide teachers with ideas for developing reasoning through algebra, geometry, and data/probability activities.

Common Core State PROCESS Standards:
1. **Make sense of problems and persevere in solving them.**
2. **Reason abstractly and quantitatively.**

Dates: Saturday, November 5, 2011
Saturday, February 4, 2012
Time: Registration begins at 7:45 a.m.
Sessions begin at 8:30 a.m. and end at noon
Location: UMKC – Education Building – Ground Floor

Each participant will receive two books from the National Council of Teachers of Mathematics. One book provides an overview of a reasoning and sense-making approach. The other will focus on a specific content strand and participants will be allowed to choose which book they wish to receive.

The registration fee of $10 covers both sessions, the two NCTM books, and a year's membership in KCATM. To register, complete the registration form included with this newsletter and return to Dr. Rita Barger, UMKC, Educ 309, 5100 Rockhill Road, Kansas City, Missouri 64110.

A Push for the Metric System!

If you attended school in the 1970's, then you know how our whole measurement system was supposed to change to metrics. We watched track convert the races to 100 meters, 200 meters, 400 meters, 800 meters, and 1600 meters, but that was the extend of seeing metrics in our everyday lives. We realized, through error of instruction, that we should not convert from one system to the other, but rather we should **learn to measure** in the metric system. Where are we today? Today our cars have both metric and customary tools, we drink from the 1 and 2 liter bottles of pop, we see metric and customary measures on our food labels, and we run 5K races. Our science classes and texts strictly use metric measures, but in our mathematics classes and texts we are using both measures in our problems. We need to change! Let's revolt! Let's take action! Let's push for the metric system as our unit of measure!

Just think of a world where accuracy is to the nearest half of a millimeter. WOW! Our students would not have to decide if the linear measure was 1/4, 1/8, or 1/16 of an inch. We would be able to raise our children comfortable with metrics as they become nurses, doctors, engineers, scientists, construction workers, but most importantly, **world travelers**.

Our number system is base 10, as is the metric system. Let's learn metrics first in schools. Our children can help parents and grandparents feel comfortable with metric measures the way they help them with technology! Children are quick learners! The meter is 1/10,000,000 the distance from the equator to the North Pole, a meaningful accurate measure! Who's foot was 12 inches anyway???

- JoAnn Hiatt

"Kilometer, hectometer, decameter, meter, decimeter, centimeter, millimeter too,
I know metrics, how about you?

www.kcatm.net

Effects of Homework on Mathematical Learning in High School

by Dr. Rena Shull, PhD

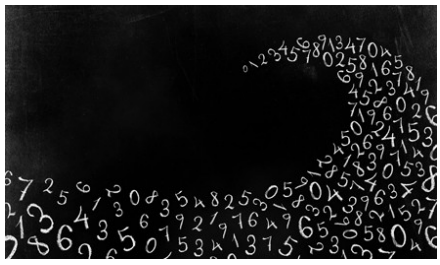
The effectiveness of homework has been a topic of interest in educational research for many years. My article focuses on sharing substantiated conclusions from action research for those stakeholders that believe in homework as an important learning tool. Two colleagues, Dr. Cathy Clemmer and Dr. Joy Lee, conducted a study and found that "Participants in this action research study applied the work of Marzano(2006) and Cross (1998) as a basis for incorporating reflection with homework ..." The study found that students and teachers working as collaborative partners can use homework as a formative assessment which can move student learning forward for all students. The study showed that homework, grades and descriptive feedback effectively engaged students in self-reflection and accurate self-assessment.

By using homework as a reflective tool, and not just as a class assignment, we can improve our students' mathematical understanding here in the Kansas City area.

Marzano, Robert J., Debra J. Pickering. (2007, March) *The Case for and Against Homework.* Educational Leadership, pp. 75-79.

2012 ∑ KCATM 2011

Eastern Kansas Math Education Summit



The Eastern Kansas Math Summit at Johnson County Community College (JCCC) on July 14-15th, brought together middle school, high school, community college, and university educators along with business members for community conversations on what is being taught, how it is being taught, and what support can be given to provide the best possible product for our community. Key points from the conference include creating "thinkers" and teaching students how to approach unique problems. The keynote speaker was learning futurist, Dr. Maria Andersen from Muskegon Community College, Michigan. Danica McKellar concluded the conference with her uplifting math conversation to approximately 400 educators, youth, and parents. Jeff Frost, dean of mathematics at JCCC can be contacted at jfrost@jccc.edu for more information, and look for the follow-up of the Math Summit soon on the website:http://www.jccc.edu/mathematics/mathsummit/index.html .

Please post the fliers and registrations included in The Summation:

- Signature Series (Pre-K/Elem/MS)
- Signature Focus Series (HS)
- Winter Conference

Kansas City Area
Teachers of Mathematics
6578 Hallet Street
Shawnee, Kansas 66216
www.KCATM.net

Brain Teaser

As stated in the last issue, I chose this problem from the book Classic Mathemagic by Blum, Hart-Davis, Longe and Niederman. It stated:

Lucky you! You have nine tennis balls and four shopping bags. Your challenge is to put all the balls in the bags in such a way that there are an odd number of balls in each bag. That is, each bag must contain 1, 3, 5, 7, or 9 balls. How do you do it?

As I previously stated that you should think outside the box in solving this one:
As always, I remind and encourage you to send me your solutions as well as your suggestions for future brain teasers for this column. Send things to bargerr@umkc.edu or to

Rita Barger
UMKC - Educ 309
5100 Rockhill Rd.
Kansas City, MO 64110

www.kcatm.net

www.kcatm.net

Measuring Up in Mathematics from a Common Core Perspective

2011 – 2012

Signature Series

Do your students ***measure up*** in math? Do you want to learn more about the Common Core State Standards for Mathematics?

KCATM invites you to participate in the 2011-2012 Signature Series. The focus of this year's Series is on the development of measurement concepts described in the ***Common Core State Standards,*** http://www.corestandards.org/the-standards/mathematics, for mathematics. Participants in the Signature Series will have the opportunity to spend two days with experts in the field to learn engaging ways to enhance students' measurement skills. In addition, participants will gain information about the Common Core State Standards and the impact these standards will have on classrooms in Missouri and Kansas.

Dates: Saturday, October 8, 2011
Saturday, January 21, 2012

Location: UMKC – Education Building – Ground Floor

Schedule:	8:30	Registration/refreshments
	9:00-9:40	General Session October 8 – The Common Core State Standards January 21 -Response to Intervention (RTI)
	9:45 – 11:45	Grade Band Workshops Pre K-2 Grades 3-5 Grades 6-8

- ***The registration fee of $20 covers both dates.***
- **A group rate of $40 is offered to groups of three teachers who register together.**
- Payment can be made the day of the first session with checks should be made payable to KCATM.

To register, complete the registration form and return it to:

Dr. Rita Barger
UMKC - Educ 309
5100 Rockhill Road
Kansas City, MO 64110

2011-2012

Signature Series

Measuring Up in Mathematics from a Common Core Perspective

Return this **registration form** to: **Rita Barger**
UMKC – Educ 309
5100 Rockhill Road
Kansas City, MO 64110
BargerR@UMKC.edu

Name _____Home Phone (____) _____

Home Street Address _____ Apt. # _____

City _____ State _____ Zip Code _____

School Name _____ School District _____

Address _____ City _____ State ___ Zip Code _____

School Phone: (____) _____ ext. _____ Grade Level Taught _____

Email Address _____

Please register me for (check one):

[ ] Pre K-2
[ ] Grades 3-5
[ ] Grades 6-8

Payment of $20 is due the first day of the workshop. Make check payable to KCATM. To take advantage of discount price of $40 for three people, please submit registration forms at the same time.

http://www.kcatm.net

Registration Form

2011-2012 Signature Focus Series

Focus on Reasoning and Sense-Making in High School Mathematics

Return this registration form to:

Rita Barger
UMKC – Educ 309
5100 Rockhill Road
Kansas City, MO 64110
BargerR@UMKC.edu

Name _____Home Phone (____) _____

Home Street Address _____ Apt. # _____

City _____ State _____ Zip Code _____

School Name _____ School District _____

Address _____ City _____ State ___ Zip Code _____

School Phone: (____) _____ ext. _____ Grade Level Taught _____

Email Address _____

All participants will receive 2 books from NCTM. All participants will receive "Reasoning and Sense-Making in High School Mathematics". You will then receive on content-specific book of your choice. Please check below to indicate your preference.

[ ] Reasoning and Sense-Making in Algebra
[ ] Reasoning and Sense-Making in Geometry
[ ] Reasoning and Sense-Making in Data and Probability

Payment of $10 is due the first day of the workshop. Make check payable to KCATM.

http://www.kcatm.net

The Kansas City Area Teachers of Mathematics announces the

2011-2012 Signature Focus Series

Focus on Reasoning and Sense-Making in High School Mathematics

Are you looking for ways to help your high school students make sense of mathematics? KCATM invites you to participate in the 2011 – 2012 Signature Focus Series.

WHO: Kansas City area high school mathematics teachers

WHAT: 2-day workshop

Session 1 – Saturday, November 5, 2011
- Overview of Reasoning and Sense-Making Approach
- Content Session – Reasoning and Sense-Making in Algebra
- Content Session – Reasoning and Sense-Making in Geometry

Session 2 – Saturday, February 4, 2012
- Common Core – Changes and Implications
- Content Session – Reasoning and Sense-Making in Algebra
- Content Session – Reasoning and Sense-Making in Data and Probability

WHEN: Registration begins at 7:45 a.m.
Sessions begin at 8:30 a.m. and end at noon

WHERE: UMKC Education Building, ground floor

COST: $10 (Includes both sessions, two books from NCTM, KCATM membership)

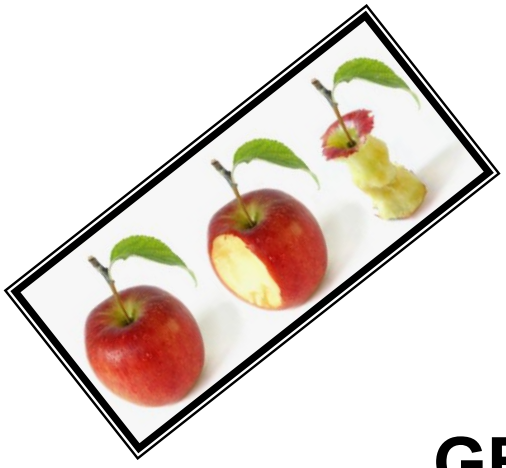
To register, complete the Registration Form and return to:

KCATM

www.kcatm.net

Dr. Rita Barger

UMKC – Educ 309
5100 Rockhill Road
Kansas City, MO 64110



KCATM Winter Conference

Saturday, February 18, 2012

UMKC: **Education Building** 1st Floor

On-site registration begins at 7:30am

MATHEMATICS: GETTING TO THE CORE

7:30	Registration	10:30	Breakout Session III
8:30	Breakout Session I	11:30	Breakout Session IV
9:30	Breakout Session II	12:30	Closing Session

Registration includes free continental breakfast, snacks, and drinks, and the opportunity to win valuable door prizes.

Preparing for the Common Core State Standards
Assessment to drive instruction
Games for learning mathematics
Fractions: making them meaningful
Measurement: ideas that work
Number Activities for all ages
Geometry: It is not just for the end of the year
Data throughout the curriculum
Reaching the ELL Learner
Integrating technology
Strategies for the math classroom

For more information, contact Dr. Rita Barger at 816-235-5655 or bargerr@umkc.edu.

Updated information is available at www.kcatm.net

REGISTRATION FORM
KCATM Winter Conference
February 18, 2012

MATHEMATICS: GETTING TO THE CORE

Name _____ Current KCATM Member? ____

School _____ District _____

School Address _____ Grade Level Taught _____

City _____ State _____ Zip _____

Day Phone _____ Email _____

Home Address: _____

City _____ State _____ Zip _____

Home Phone _____ Home Email _____

Have you attended a previous KCATM Conference? _____

Fee Payment: Please make checks payable to KCATM and mail with this form to the address above or bring payment to the registration table at the conference. (Sorry, we cannot take credit cards.)

		Renewing Member	
		Member	* Non-Member
____	**Registration** (includes continental breakfast / snacks) *Receive a certificate for 5 hours of professional development*	$15	$25
____	**Student and Para-professional registration** *Includes 1-year membership*	$10	$10
____	**Payment by Scholarship** (to apply, simply check this line, and return this form)	_____	_____

*** Non-Member fee includes 1-year membership in KCATM**

For more information and to email this registration form, contact Dr. Rita Barger at 816-235-5655 or bargerr@umkc.edu. OR mail to

Dr. Rita Barger
UMKC – Education 309
615 E. 52nd St.
Kansas City, MO 64110
816-235-5270 (fax)

For updated information go to www.KCATM.net