NCTM

2012 REGIONAL CONFERENCE & EXPOSITION

October 24–26 ■ Hartford, CT

See Valuable COUPONS beginning page 69

NCTM® NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

PROGRAM BOOK

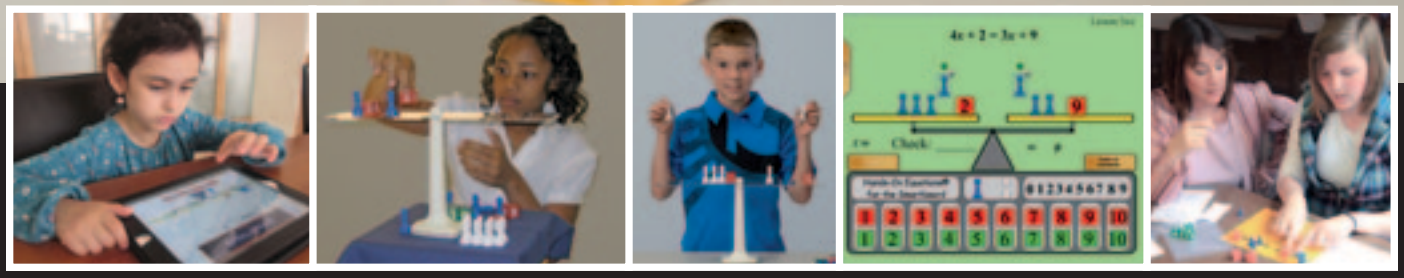
HANDS-ON EQUATIONS®

Making Algebra Child's Play®

(for grades 3 - 9)

Free App for the iPad Available at the App Store!

Visit our Booth #117 to see a demo and to enter a raffle to win a class set of Hands-On Equations!



Attend our sessions on Thursday and Friday from 10:00 a.m. to 11:00 a.m. in room 23. Since 1990, more than 50,000 teachers of grades 3 - 9 have attended the Making Algebra Child's Play workshop to learn how to demystify the teaching of algebra.

Contact us at 800-993-6284 to bring this training to your district!

Borenson and Associates, Inc. ▪ www.borenson.com

NCTM 2012 Regional Conference & Exposition

October 24–26
Hartford, Connecticut

HOSTS
Association of Teachers of Mathematics in New England
Associated Teachers of Mathematics in Connecticut

MEETING FACILITIES
All Regional Conference presentations will be held at the Connecticut Convention Center and the Hartford Marriott Hotel. See pages 59–61 for floor plans.

REGISTRATION

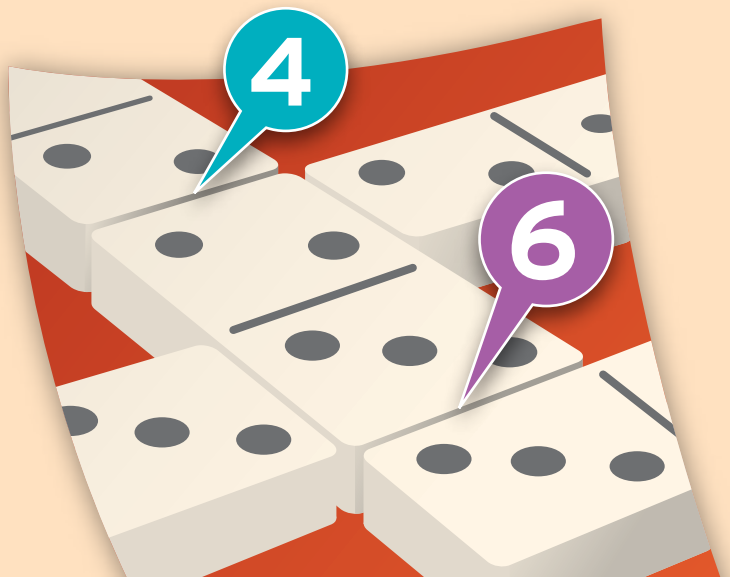
Wednesday	5:00 p.m.	–	8:00 p.m.
Thursday	7:00 a.m.	–	3:00 p.m.
Friday	7:00 a.m.	–	3:00 p.m.

EXHIBITS

Thursday	8:00 a.m.	–	5:00 p.m.
Friday	8:00 a.m.	–	4:00 p.m.

BOOKSTORE AND MEMBER SHOWCASE

Wednesday	5:00 p.m.	–	7:00 p.m.
Thursday	7:00 a.m.	–	5:00 p.m.
Friday	8:00 a.m.	–	4:00 p.m.



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Welcome to Hartford!

On behalf of the Association of Teachers of Mathematics in New England (ATMNE) and the Associated Teachers of Mathematics in Connecticut (ATOMIC), we are honored to welcome you to Hartford for the NCTM 2012 Regional Conference and Exposition. You have the opportunity to participate in almost 250 sessions and workshops covering a wide range of topics designed for your professional enrichment. We hope that you will be renewed and challenged as you endeavor to engage and support all students in the learning of mathematics.

Make sure to attend Wednesday evening's Opening Session presented by Jeremy Bailenson, founding director of Stanford University's Virtual Human Interaction Lab and author of *Infinite Reality*. Bailenson kicks off our conference with an exploration of how virtual reality transforms curricula, assessment, and the very nature of teacher–student relationships. On Thursday, we will continue a long-standing tradition by honoring one of New England's most dedicated mathematics educators at the 25th annual Richard H. Balomenos Memorial Lecture.

While you're in Connecticut, the Constitution State, you'll find that the capitol city, Hartford, is a great place to explore. Take some time to enjoy the wonder of New England's colorful foliage, explore the Connecticut Science Center, or dive into history by visiting the Mark Twain House and Museum, home of America's favorite author. Wander through the Wadsworth Atheneum Museum of Art, the first public art institution in the United States, or take a walk or jog in Bushnell Park, which features a vintage 1914 carousel and the Soldiers and Sailors Memorial Arch.

A heartfelt thank-you goes out to the NCTM staff and to the many presenters, exhibitors, committee members, and volunteers that have made this conference possible. We're glad that you could join us and hope you are enriched by the conference and your time in Connecticut.

Judy Curran Buck
Program Committee Chair
Mathematics Education Consultant
Derry, New Hampshire

Maria Diamantis
Volunteer Committee Chair
Southern Connecticut State University
New Haven, Connecticut

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Program Information

The NCTM 2012 Regional Conference and Exposition officially begins with the Opening Session at 5:30 p.m. on Wednesday. All other presentation days begin at 8:00 a.m. and are scheduled concurrently throughout the day on Thursday and Friday.

We have made every attempt to provide adequate seating for participants at the Regional Conference and Exposition. The room capacity for each presentation is listed on all meeting room signs. For your safety and because of fire regulations, only those with seats will be allowed to stay in meeting rooms.

Please remember:

- All meeting rooms will be cleared between presentations.
- All seats are available on a first-come, first-served basis.
- Reserving spaces in line or saving seats is not permitted.
- In compliance with fire codes, sitting on the floor or standing is not permitted.
- As a courtesy to the speakers and your colleagues, please silence your cell phone during all presentations.

Professional Development Focus of the Year 2012–2013

This year's Focus of the Year is ***Reasoning and Proof: Is It True? Convince Me!*** The conference will highlight this theme as the topic of Thursday's Learn↔Reflect strand, as well as in many other NCTM activities throughout the year. For more information, visit **www.nctm.org/focus**.

Learn↔Reflect Strand

REASONING AND PROOF: IS IT TRUE? CONVINCE ME!
THURSDAY, OCTOBER 25

Plan one full day for the Focus of the Year topic, ***Reasoning and Proof: Is It True? Convince Me!*** The strand begins with a morning Kickoff session and concludes with an end-of-the-day Reflection session. In between, you choose from among several sessions exploring the topic, all marked with the symbol LCR. Immerse yourself in the topic, and collaborate with leaders and colleagues. We ask participants to reflect on the following questions throughout the Learn↔Reflect strand and then discuss them at the end of the strand, during the Reflection session.

1. What role does reasoning and proof play in increasing the opportunities for communication to help students develop mathematical understanding?
2. How does stressing reasoning and proof influence your instructional decisions? In addition, how do your instructional decisions influence how reasoning and proof should be stressed?
3. How does reasoning and proof drive the lifelong learning of significant mathematics to all students? How are equity and diversity also promoted by stressing reasoning and proof?
4. How are you thinking differently about your use of reasoning and proof because of participating in the Learn↔Reflect strand? What are some of the steps you plan to take to promote reasoning and proof in your classroom/school?

Learn↔Reflect sessions are open for anyone to attend throughout the day. Participants who attend the Kickoff session, at least one Learn↔Reflect session during the day, and the final Reflection session will receive personalized certificates by mail.

Learn↔Reflect Kickoff Session
Thursday, 9:30 a.m.
Ballroom B (Convention Center)

Learn↔Reflect Reflection Session
Thursday, 3:30 p.m.
Ballroom C (Convention Center)

New and Preservice Teachers Workshop

Wondering how to manage your classroom, work with parents, find engaging lessons, and handle homework—all while keeping your sanity? You're not alone! A must for every new teacher, this interactive workshop is your chance to ask questions on topics of your choice. Plus, you will connect with other new and early-career teachers. If you are in the first five years of teaching or are seeking certification, come get resources, materials, and fun prizes to encourage you and give you insight along your journey.

Thursday and Friday
10:30 a.m.–Noon
Meeting Room 21 (Convention Center)

New Member and First Timers' Orientation

New to NCTM or a first-time attendee at a regional conference? Join us to learn how to maximize your membership experience! From journals, online lessons, tools, and activities, to networking and career-advancement opportunities, you'll discover all that NCTM has to offer you. Also, first-time attendees will learn how to make the most of their time at the conference.

Thursday and Friday
7:15 a.m.–7:45 a.m.
Ballroom A (Marriott)

Program Information

Types of Presentations

All presentations are open to all conference participants. Admission is on a first-come, first-served basis. Reserving spaces in line or saving seats is not permitted.

Sessions (60 minutes) represent a common format where the speaker relates his or her ideas to an audience. The speaker may use audiovisual equipment, technology, and handouts, and he or she may include audience participation. Rooms are set theatre style and vary in size.

Gallery Workshops (90 minutes) have rooms set with round tables for hands-on work and additional gallery seating around the perimeter of the room. The gallery participants will receive the print materials and observe the workshop in a fashion similar to that of a classroom observer.

Exhibitor Workshops (60 minutes) are set theatre style for at least 70 people. Exhibitors showcase their products and services away from the Exhibit Hall. Look for the symbol **ew**, indicating exhibitor workshops, in the program book.

Grade Bands

To assist attendees in finding appropriate presentations to attend, each presentation lists the presentation's target grade-band audience. The grade bands are:

- **Pre-K–2**
- **Grades 3–5**
- **Grades 6–8**
- **Grades 9–12**
- **Higher Education**—university- and college- level issues, including both two-year and four-year institutions
- **Preservice and In-Service**—content and techniques for providers of preservice teacher education, and professional development for practicing teachers, supervisors, specialists, coaches, and mathematics educators
- **General Interest**—applies to multiple grades and audiences

Program Updates

Don't forget to pick up your copy of the **Program Updates,** which includes speaker and program updates, a complete exhibitor directory, and exhibitor workshop information. **Program Updates** are available in the Registration Area.

Tips for a Rewarding Regional Conference and Exposition

- Access the Conference App for conference alerts and up to the minute information. Visit **www.nctm.org/confapp**.
- Access speaker handouts at **www.nctm.org/plan**.
- Become familiar with the layout of the Connecticut Convention Center by reviewing the floor plans on pages 59–61.
- Visit the **NCTM Bookstore** for the latest NCTM educational resources, and the **Member Showcase**, where you can pick up free resources and learn more about how NCTM can help you professionally. Save 25 percent off all list-price items.
- Stop by the Information Booth for information on the local area.
- If attending the conference with colleagues, attend different presentations and share your learned knowledge after the conference.
- Wear comfortable shoes and clothes, and dress in layers.
- Turn off cell phones during presentations.
- Visit the Exhibit Hall, where exhibitors will share the latest educational products.
- The more you participate in the presentations, the more you will get out of the conference.
- Tell us about your conference experience by filling out the post-conference online survey.
- Be safe! Remove your name badge when you leave the conference facilities at the end of the day.

Registration and Access to Presentations

You must wear your badge to enter all presentations and the NCTM Exhibit Hall. Please be aware that the fee for a replacement badge is **$5**.

By registering for the NCTM 2012 Regional Conference and Exposition, participants grant NCTM the right to use, in promotional materials, their likeness or voice as recorded on, or transferred to, videotape, film, slides, audiotapes, or other media.

Recycling

Help NCTM Recycle—Finished with your Program Book, plastic name badge holders, or **Program Updates?** Place them in the specially marked containers for recycling, in the registration area.

For Your Child's Safety

Because of the size and nature of the NCTM 2012 Regional Conference and Exposition, this event is not an appropriate setting for children under 16 years of age. Children under age 16 will not be permitted in the Exhibit Hall. We appreciate your understanding and cooperation. Children 16 years and over will need to register as nonteaching guests. To register a nonteaching guest, please visit the Registration Area.

General Information

Member Showcase

Make sure to stop by the **NCTM Member Showcase** located in Exhibit Hall B of the Convention Center and let us help you learn more about how your NCTM membership provides you access to lessons, teaching tips and strategies, research findings, and more. You can take away classroom-ready activities, sample journals, and other materials that you can use immediately in the classroom.

Whether you are a new member, a current member, or thinking of joining, the NCTM Member Showcase is here to help make your job easier!

Renew your membership or join NCTM for the first time onsite and you will receive a **free** 2013 NCTM Annual Meeting t-shirt! Supplies are limited.

Bookstore

Wednesday	5:00 p.m.	–	7:00 p.m.
Thursday	7:00 a.m.	–	5:00 p.m.
Friday	8:00 a.m.	–	4:00 p.m.

Save 25 percent off the list price on all purchases made at the NCTM Bookstore in Exhibit Hall B of the Connecticut Convention Center. Check out our newest titles and best sellers and find NCTM gear for yourself, and friends and family at home. Spreading the word about the importance of math has never been easier. Start your wish list today by previewing NCTM's wealth of resources at www.nctm.org/catalog.

Note on Sales Tax Exemptions: To be considered exempt from sales tax in the NCTM Bookstore, you must provide a copy of a **Connecticut tax exemption certificate** at the time of purchase. NCTM is required by law to keep a copy of the certificate, so we cannot return it to you. To qualify, you must make payment with a purchase order, check, or credit card from the school to which the Connecticut Exemption Certificate is issued. We cannot accept personal checks, personal credit cards, or cash in conjunction with tax exemption certificates. Tax exemption certificates for states other than Connecticut are not valid for this regional conference.

The NCTM Bookstore is not equipped to handle shipping from the meeting site. The Business Center at the convention center can assist you with your shipping needs.

WiFi

The Connecticut Convention Center offers complimentary wireless access on the 4th Floor Landing.

Shuttle Bus Service

Attendees who reserved their hotel room through NCTM's official housing company will receive complimentary shuttle bus service from hotels in the NCTM housing block to the Connecticut Convention Center. Some of the hotels are within walking distance of the convention center and will not require shuttle bus service. Routes and schedules will be posted in your hotel lobby. The schedule will be followed as closely as possible. For a shuttle bus schedule, or if you have questions, please visit the shuttle desk located at the shuttle area at the entrance.

Information Booth

The NCTM Information Booth will be in the lobby area of the Connecticut Convention Center outside the Exhibit Hall. Personnel from the area will staff the booth and can answer any questions you may have about Hartford. They will also assist you with directions and local information, from transportation and historical sites to shopping and entertainment.

Lost-and-Found

You may retrieve or turn in lost-and-found items at the NCTM Information Booth. Unclaimed items will be turned over to Connecticut Convention Center Security.

First Aid Station

There will be a first-aid station at the Connecticut Convention Center during the NCTM conference. If you need medical services while in Hartford, please check with the hotel concierge for the closest medical facilities.

NCTM Clear Air Act

In accordance with a resolution of the 1978 Delegate Assembly, smoking is permitted only in designated areas.

Your Opinion Counts!

Thank you for attending the NCTM 2012 Regional Conference and Exposition. In the days following the conference, you will receive an e-mail asking for an evaluation of your meeting experience. Please take a moment to complete the survey. Your feedback is important to us and will be instrumental in the future Regional Conference and Exposition planning process.

Exhibit Hall Information

Exhibits

Be sure to make time in your schedule to visit the NCTM Exhibit Hall. The hours allow ample opportunity to explore, try out, and purchase products and services for use in your classroom or to help you meet your career goals. You'll also be able to meet the people who produce these products, get fresh ideas, and see demonstrations of how products work. Be sure to check out the list of exhibits and a map of the Exhibit Hall on page 62. Please note: Children under age 16 will not be permitted in the Exhibit Hall.

Exhibitor Workshops

Do you want more in-depth, personal interaction with exhibitors? If so, plan to attend the Exhibitor Workshops. These workshops will occur on Thursday and Friday, and they will offer a wide variety of topics. For exhibitor workshop offerings, look for presentations in this program book marked with the symbol ew or see the Program Updates.

Internet Station

Need to check e-mail or want to surf the Web? Stop by the NCTM Internet Station located in the registration area.

Conference Sponsors

A special thank-you goes to our sponsor, Texas Instruments, for providing our volunteer t-shirts. Please stop by their booth when you are in the Exhibit Hall.

Technology at Your Fingertips

Conference App

The NCTM conference app keeps you connected with the Regional Conference's every aspect. The free app allows you to search sessions, speakers, and exhibits; view the Exhibit Hall floor plan; highlight your favorite presentations; get a Twitter feed update (official Twitter hashtag #nctm12); and rate presentations. Stay up to date with the latest program changes. Visit **www.nctm.org/confapp** for more information.

NEW! Presentation Handouts

This year, attendees can access available electronic presentation handouts through the conference app and online planner.

Online Planner

The online planner is a great way for you to search the conference program book, set up your personal schedule, and download available presentation handouts. The online planner is up to date with the latest program changes and presentation information. Visit **www.nctm.org/plan** to check it out.

All Year Long

When you return home, don't forget to download NCTM's Android or iPhone app for free. The NCTM app gives users easy, efficient access to timely NCTM information throughout the year—from updates on new publications and best sellers to the latest information on upcoming conferences and professional development opportunities. Users can be up to the minute on NCTM activities, teaching tips, and classroom resources. The new app also includes Facebook and Twitter feed updates. Visit **www.nctm.org/nctmmobile** for more information and to download the app.

Wednesday **Planner**

5:00

5:30

6:00

6:30

7:00

HIGHLIGHTS

Opening Session (Presentation 1): *The Virtual Revolution of Teaching and Learning*

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REGISTRATION HOURS

5:00 p.m.–8:00 p.m.

BOOKSTORE AND MEMBER SHOWCASE HOURS

5:00 p.m.–7:00 p.m.

FIRE CODES

We have made every attempt to provide adequate seating for participants at the conference, but for your safety and because of fire regulations, only those with seats will be allowed in meeting rooms. To comply with fire codes, we will have to ask persons sitting on the floor or standing to leave the room.

5:30 P.M.–7:00 P.M.

1
The Virtual Revolution of Teaching and Learning

Opening Session

In 2010, the Kaiser Family Foundation reported that children consume more hours of digital media each day than they spend sleeping. Although this trend is clearly worrisome, unique opportunities for teachers and learners are emerging. Jeremy Bailenson explores how the virtual reality will transform curricula, assessment tools, and the very nature of the student–teacher relationship.

Jeremy Bailenson
Stanford University, California

BALLROOM B (CONVENTION CENTER)

Thursday **Planner**

8:00	
8:30	
9:00	
9:30	
10:00	
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2:30	
3:00	
3:30	
4:00	
4:30	
5:00	

LOR Learn↔Reflect Strand

ew Exhibitor Workshop

HIGHLIGHTS

New Members and First Timers' Orientation (Presentation 2)

Learn↔Reflect Kickoff Session (Presentation 24)

New and Preservice Teachers Workshop (Presentation 44)

Learn↔Reflect Reflection Session (Presentation 101)

REGISTRATION HOURS

7:00 a.m.–3:00 p.m.

EXHIBIT HOURS

8:00 a.m.–5:00 p.m.

BOOKSTORE AND MEMBER SHOWCASE HOURS

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7:15 A.M.–7:45 A.M.

2
New Members and First Timers' Orientation

(General Interest) Session

New to NCTM? Join us to learn how to maximize your membership experience. From journals and online lessons, tools, and activities, to networking and career-advancement opportunities, you'll discover all that NCTM has to offer you. Also, learn how to make the most of your time at the conference.

Lynn Columba
hlc0@lehigh.edu
Lehigh University, Bethlehem, Pennsylvania

BALLROOM A (MARRIOTT)

8:00 A.M.–9:00 A.M.

3
Master Everyday Math in Seconds with the Human Calculator

(General Interest) Session

Scott Flansburg, the human calculator and Guinness World Record Holder, demonstrates his amazing math talent, adding, subtracting, dividing, and even doing square roots all in his head faster than a calculator. Scott shows you how to help your students not to live in fear of math any longer and how math can be fun.

Scott Flansburg
Global Ambassador, World Math Day and Mathletics, New York, New York

BALLROOM B (CONVENTION CENTER)

4
Powerful Actions to Enrich the Implementation of Standards-Based Instruction

(General Interest) Session

Learn about the latest resources from NCSM that support powerful actions to implement a standards-based curriculum. Resources include example mathematical tasks, research, position papers, instruction that promotes students' proficiency in mathematical practices, and a tool for analyzing instructional materials.

Suzanne Mitchell
National Council of Supervisors of Mathematics, Denver, Colorado

BALLROOM C (CONVENTION CENTER)

5
Discovering Data: Collecting, Recording, and Interpreting Data in Pre-K–Grade 2

(Pre-K–2) Session

Come hear about creative ways to teach tallying, data collection, surveying, graphing, probability, and estimation in an early childhood classroom. Learn how to take your students through the complete process of generating a survey question, collecting data, recording data, and interpreting the results in ways that are meaningful and fun.

Joy Souza
jsouza@rimabv.org
Blackstone Valley Prep, Rhode Island Mayoral Academy, Cumberland

Jennifer Efflandt
jefflandt@rimabv.org
Blackstone Valley Prep, Rhode Island Mayoral Academy, Cumberland

MEETING ROOM 24 (CONVENTION CENTER)

6
Making Common Core State Standards Come Alive through Hands-On Fractions

(Pre-K–5) Session

This highly interactive presentation will connect fractions to real-life problem-solving situations and assessment as related to the Common Core State Standards. The session will include strategies for maximizing all students' potential, including regular and special education. Participants will receive a comprehensive handout with materials.

Joan Vas
joanvas@optonline.net
Kean University, Union, New Jersey

MEETING ROOM 26 (CONVENTION CENTER)

7
Math Gym Will Pump *[Clap]* You Up!

(Pre-K–5) Session

Engage brains and bodies through creative, productive, and silly activities. Transform a ball into a ten ball, a bicep curl into a skip-counting drill, and a whiteboard into a Word Problem Silly-Off. Brain research shows the benefits of physical activity; give students the chance to build their number sense while also elevating their heart rates.

Alan Donaldson
adonaldson@cathedralnyc.org
Cathedral School, New York, New York

BALLROOM A (MARRIOTT)

8:00 A.M.–9:00 A.M.

8
Spaghetti and Meatballs in Korea, Cyprus, and the United States

(3–5, Preservice and In-Service, Research) Session

In 2011, I taught the same three-day lesson to third graders in Korea, fifth graders in Cyprus, and fifth graders in the U.S. The lesson began with a Marilyn Burns book and used manipulatives to work with perimeter and area. Find out how the different groups related to this lesson and how the findings relate to Liping Ma's research.

Larry Feldman
larry.feldman@iup.edu
Indiana University of Pennsylvania, Indiana, Pennsylvania

CAPITAL ROOM 3 (MARRIOTT)

9
Are You Working Hard Enough or Hardly Working?

(3–8) Session

Want to incorporate PE in your math class? Have your students determine whether they are working hard enough or hardly working. This session will use math to determine whether one is physically working hard enough in regard to heart rate. (You will be active in this session.) Participants will leave with a lesson they can implement immediately.

Donna Russell
donna.russell@blountk12.org
Blount County Schools, Maryville, Tennessee

BALLROOM B (MARRIOTT)

10
If They Can't Read the Test, They Can't Pass It

(6–8) Session

We will explore vocabulary instructional strategies for at-risk students through the lens of language supports suggested for English language learners. Participants will learn multiple instructional strategies to take home and try. I will also share results from a pilot study exploring this phenomenon.

Shere Salinas
shere.salinas@ccisd.us
Corpus Christi Independent School District, Texas

BALLROOM E (MARRIOTT)

11
$(PR)^2$: Promoting Rigor and Proportional Reasoning in Middle Grades Mathematics

(6–8) Session

Proportionality has been called the capstone of elementary school mathematics and the cornerstone of advanced mathematics. This session presents an overview of research on proportional reasoning as well as a series of problems and tasks to help middle school students develop proportional-reasoning skills.

Jean McGivney-Burelle
University of Hartford, Connecticut

John Tapper
University of Hartford, Connecticut

Nicholas Balisciano
Connecticut Center for Advanced Technology, East Hartford

MEETING ROOM 16 (CONVENTION CENTER)

12
Using Technology to Increase Conceptual Understanding in Algebra and Geometry

(6–12) Session

Many topics in algebra and geometry are difficult to address conceptually and tend to be taught procedurally. We'll explore interactive applets that let students "notice and wonder," talk about mathematical situations, and develop conceptual understandings of triangle properties, linear equations, systems of equations, and factoring trinomials.

Annie Fetter
annie@mathforum.org
The Math Forum @ Drexel, Philadelphia, Pennsylvania

MEETING ROOM 17 (CONVENTION CENTER)

13
Sinuosity, Crookedest Street in the World, Rivers, and $y = \sin x$

(9–12, Preservice and In-Service) Session

Lombard and Vermont Streets in San Francisco are two of the most crooked streets in the U.S. We will use Sketchpad and Nspire CAS to explore sinuosity, a ratio used to measure the crookedness of these streets, of rivers, and of $y = \sin x$. Connections to mathematical topics will include trigonometry, circles, distance between two points, and arc length.

Ron Lancaster
ron2718@nas.net
Ontario Institute for Studies in Education, University of Toronto, Toronto, Canada

BALLROOM D (MARRIOTT)

8:30 A.M.–9:30 A.M.

ew

13.1
Reaching The Depth Required In The Common Core State Standards With An Integrated Approach To Learning

(K–6) Exhibitor Workshop

Through activities in this workshop, participants will develop an understanding of each of the Standards for Mathematical Practice and see how various types of learning tasks and questioning strategies can engage students in order to develop understanding and proficiency in mathematics.

Pearson
Upper Saddle River, New Jersey

ROOM 13 (CONVENTION CENTER)

ew

13.2
Making Every Day Count with Classroom Discussion: See the Mathematical Practices in Action Daily

(K–5) Exhibitor Workshop

Presenter will share how daily math discussion centered around a calendar can help students develop mathematical competence and confidence. Emphasis will be placed on developing math vocabulary and visualizing mathematics and implementing the mathematical practices daily.

Houghton Mifflin Harcourt
Austin, Texas

ROOM 23 (CONVENTION CENTER)

8:30 A.M.–10:00 A.M.

14
Math Fact Fluency: We Can Do It

(Pre-K–2) Gallery Workshop

What does it take to give students access to basic facts of addition and subtraction? I will share strategies and techniques to get students to automaticity of addition and subtraction by second grade. You will experience differentiated instruction through music, games, activities, choral chanting, and math tools.

Barbara Novelli
des@creativemathematics.com
Creative Mathematics, Arcata, California

MEETING ROOM 27 (CONVENTION CENTER)

15
A Coherent Look at Fractions

(Pre-K–5) Gallery Workshop

Come zero in on the how fractions build in the Common Core State Standards from grades 2 to 5, working through the continuum from concrete to abstract to build mastery for the rich applications coming in grades 6–8. For an added bonus, I will share transitional materials developed for NYS.

Heidi Bromley
heidijbromley@gmail.com
Questar III BOCES, Castleton, New York

MEETING ROOM 14 (CONVENTION CENTER)

16
Data: Making Connections and Meeting the Common Core State Standards in K–3

(Pre-K–5) Gallery Workshop

Learn how to implement grades K–3 hands-on data activities that make math come alive across the curriculum. Delve into the Common Core State Standards Content and Practice Standards, analyze a variety of traditional and creative classroom graphs, model class discussions, and develop materials to support data instruction and so much more.

Gina Kilday
gkilday@gmail.com
Exeter–West Greenwich Regional School District, Exeter, Rhode Island

MEETING ROOM 11 (CONVENTION CENTER)

17
Engaging All Children with Number Sense, Fractions, and Problem Solving

(Pre-K–5) Gallery Workshop

I will present strategies to develop number sense, fractions, and problem solving. I will demonstrate use of manipulatives, technology, and mathematical discourse to build concepts, vocabulary, and reasoning. I will engage attendees with activities to develop patterns, place value, fractions, estimation, and problem solving. Handouts included.

Donna Knoell
dknoell@sbcglobal.net
Consultant, Shawnee Mission, Kansas

EXHIBIT HALL A ROOM 2 (CONVENTION CENTER)

8:30 A.M.–10:00 A.M.

18
The Best of Lola May

(Pre-K–5) Gallery Workshop

If you heard Lola May present, you know that her talks were filled with practical and effective activities to enliven your classroom. Come take a fresh look at those wonderful strategies. And if you never heard Lola speak, come share in her legacy, add valuable teaching tools to your repertoire, and leave with activities ready for classroom use.

Martha Hildebrandt
mhildebrandt@chatham.edu
Chatham University, Pittsburgh, Pennsylvania

CAPITAL ROOM 1 (MARRIOTT)

19
Colors, Shapes, and Paints, Oh My! Math Wizards of Art

(3–5) Gallery Workshop

You don't have to be an artist to have fun in this workshop. Engage in hands-on activities integrating children's literature, art, and math for grades 3–5 students. Create fascinating art projects, using inexpensive materials, for use in mathematics instruction.

Sallie Harper
sharper@meridian.msstate.edu
Mississippi State University, Meridian, Mississippi

Tory Shirley
Mississippi State University, Meridian, Mississippi

Kimberly Triplett
Mississippi State University, Meridian, Mississippi

EXHIBIT HALL A ROOM 1 (CONVENTION CENTER)

20
Connecting Math with Our Global Society

(6–8) Gallery Workshop

As global citizens, students need to be mathematically literate. Understanding budget deficits, environmental challenges, changing demographics, and more requires command of basic middle school math skills. Engage in hands-on activities that integrate math with social studies and science to grasp issues shaping our future. A free CD-ROM of activities will be available.

Polly Vanasse
pvanasse@nbsc.org
Nashoba Brooks School, Concord, Massachusetts

EXHIBIT HALL A ROOM 3 (CONVENTION CENTER)

21
STEM for All

(6–8) Gallery Workshop

Participate in activities that integrate mathematics, science, and technology by using graphing calculators, probes, calculator-based laboratories, and motion detectors. See how to implement these activities with students who are English language learners and how these exercises help integrate the Common Core State Standards mathematics standards.

Bob McDonald
mac@todos-math.org
TODOS: Mathematics for ALL, Tempe, Arizona

MEETING ROOM 25 (CONVENTION CENTER)

22
How Do Algebra 1 Students See Patterns?

(9–12) Gallery Workshop

Look at engaging activities that offer multiple access points for students. We will investigate how to use a student's representation of an answer to interpret his or her reasoning skills and determine the type of instruction best suited for that particular type of learner.

Edward Nolan
ed@nolanmath.com
Montgomery County Public Schools, Rockville, Maryland

BALLROOM A (CONVENTION CENTER)

23
Which Cup Material Holds Hot Water the Hottest the Longest?

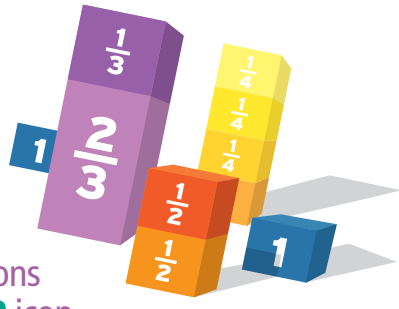
(9–12) Gallery Workshop

Collect data by using the TI-84 or TI-Nspire and a temperature probe and then analyze the data to determine which model best fits the data. Once all the models are presented, everyone will decide which cup material keeps hot water the hottest for the longest time.

Jane Cushman
jcushman@math.buffalostate.edu
Buffalo State College, Buffalo, New York

MEETING ROOM 21 (CONVENTION CENTER)

Participate in today's **Learn↔Reflect** strand. Look for sessions marked with the LOR icon.



9:30 A.M.–10:30 A.M.

LCR

24
Learn↔Reflect Kickoff: Got Something to Prove?

(General Interest) Session

The proof is not in the pudding; it's all around. From addition and subtraction, to fractions and decimals, integers, algebra, geometry, and beyond, opportunities for students to "prove it" abound. See how to use both eventful and subtle (sneaky?) means to help your students develop a habit of using proof as a regular part of mathematics.

Ralph Pantozzi
Kent Place School, Summit, New Jersey

BALLROOM B (CONVENTION CENTER)

25
Using Quality Children's Literature to Promote Mathematical Thinking

(Pre-K–2) Session

This presentation will demonstrate through application the theoretical framework for using quality children's literature in pre-K–grade 2 classrooms. Experience hands-on, Common Core State Standards–aligned activities you can easily apply to your own classrooms.

Delilah Davis
delilahann.davis@gmail.com
National Literacy Professional Development Consortium, Houston, Texas

Ingrid Haynes
National Literacy Professional Development Consortium, Houston, Texas

BALLROOM B (MARRIOTT)

26
How a Mathematician Invented Kindergarten

(Pre-K–5) Session

Gain new perspective on Friedrich Froebel's original "gifts" and methods used in the first kindergarten. Discover how Froebel's choice of geometrical and spatial education offered in the first kindergartens influenced the creative works of 20th century artists and architects.

Aniceta Skowron
Geometro, Ancaster, Canada

MEETING ROOM 17 (CONVENTION CENTER)

27
Mathematical Discourse: Talking Like a Mathematician

(Pre-K–5) Session

We will introduce a variety of communication tools used in our classes. The style of discourse presented will assist in developing a classroom culture where students feel comfortable, empowered to share and defend ideas. Using these tools, teachers can assist students to work collaboratively to develop a deep conceptual understanding of mathematics.

Karen Moylan
moylankg@mansfieldct.org
Mansfield School District, Mansfield, Connecticut

Madelyn Williams
Goodwin School, Mansfield School District, Storrs, Connecticut

BALLROOM E (MARRIOTT)

28
Problem Solving Supports Common Core State Standards

(3–5) Session

Rich problem-solving tasks offer an excellent opportunity to integrate Common Core State Standards content with practice and connect mathematics to the real world. Identify good problems for students to solve and help students learn about problem-solving strategies. See how a problem-centered classroom helps implement the Common Core State Standards math standards.

Sara Moore
smoore@etacuisenaire.com
ETA/Cuisenaire, Vernon Hills, Illinois

MEETING ROOM 24 (CONVENTION CENTER)

29
Making Students' Thinking Visible

(6–8) Session

Research on effective classrooms shows that visible thinking weaves throughout teachers' planning and presentation, giving teachers a variety of teaching strategies to use in the classroom. What are visible thinking's benefits? What classroom activities make students' thinking visible? Creating such activities is crucial to closing the achievement gap.

Don Balka
Saint Mary's College, Notre Dame, Indiana

BALLROOM D (MARRIOTT)

9:30 A.M.–10:30 A.M.

30
Exploring Middle School Mathematics with Nintendo Wii

(6–8, Preservice and In-Service) Session

Engage students in meaningful and fun mathematics by using the Nintendo Wii through interdisciplinary units and differentiated instruction for grades 6–8. Come participate in lessons using the Wii, as well as discussion of managing all class sizes, diverse learners, teachable moments, and preparing students for high-stakes tests.

Christina Gawlik
cgawlik@twu.edu
Texas Woman's University, Denton, Texas

BALLROOM A (MARRIOTT)

31
Mathematics Homework for the Twenty-First Century

(9–12) Session

Envision and create homework assignments that emphasize meaningful mathematics and connections, incorporate technology, promote problem solving and communication, and increase student learning.

Thomas Evitts
taevit@ship.edu
Shippensburg University, Pennsylvania

MEETING ROOM 16 (CONVENTION CENTER)

32
Reclaiming Lost Ground: Research-Based Interventions for Underprepared Algebra Students

(9–12) Session

Today, all students must succeed in algebra, including those underprepared. These students may need more time in algebra, but time alone is not sufficient. Learn about comprehensive, research-guided strategies and resources from mathematics learning, literacy, social psychology, and special education to help underprepared students.

Diane Briars
djbmath@comcast.net
Mathematics Education Consultant, Pittsburgh, Pennsylvania

James Lynn
University of Illinois at Chicago, Learning Sciences Research Institute

BALLROOM C (CONVENTION CENTER)

33
Understanding Preservice Teachers' Development of Mathematics Identity

(Higher Education, Preservice and In-Service) Session

Learn about a study of secondary mathematics preservice teachers and how their experiences influenced their mathematics identity. Come hear details of the study conducted, preliminary findings, and implications.

Jennifer Cribbs
Clemson University, South Carolina

V. Zambak
Clemson University, South Carolina

Traci Carter
Clemson University, South Carolina

MEETING ROOM 26 (CONVENTION CENTER)

34
How Do Prospective Teachers Interpret Student Errors?

(Preservice and In-Service) Session

We will share data from a project that used clinical interview videos to help prospective teachers (PTs) improve their understanding of student thinking. The PTs viewed videos, reflected on the student thinking they observed, and subsequently conducted their own clinical interviews. We will also discuss when and how PTs responded to student errors.

Cecilia Arias
carias@rci.rutgers.edu
Rutgers University, Piscataway, New Jersey

Roberta Schorr
Rutgers University, Newark, New Jersey

Lisa Warner
William Paterson University, Wayne, New Jersey

CAPITAL ROOM 3 (MARRIOTT)

10:00 A.M.–11:00 A.M.

ew 34.1
Cracking the Code of Algebra

(3–9) Exhibitor Workshop

How does Hands-On Equations® enable 80% of inner city 4th graders to succeed with such basic equations as $4x + 3 = 3x + 10$? If algebra is a foreign language to your students, this session is for you!

Henry Borenson
info@borenson.com
Borenson and Associates, Inc., Allentown, Pennsylvania

ROOM 23 (CONVENTION CENTER)

ew 34.2
enVisionMATH Common Core: What Does Teaching through Mathematical Practice Look Like?

(K–6) Exhibitor Workshop

Through activities in this workshop, participants will develop an understanding of each of the Standards for Mathematical Practice and see how various types of learning tasks and questioning strategies can engage students in order to develop understanding and proficiency in mathematics.

Pearson
Upper Saddle River, New Jersey

ROOM 13 (CONVENTION CENTER)

10:30 A.M.–12:00 P.M.

35
Numeracy through Play: When Mathematical Learning Comes Naturally

(Pre-K–2) Gallery Workshop

With the right materials, students can learn how to count by playing with specially designed puzzles and cards. This hands-on session is filled with make-and-take ideas you can implement right away. Developed based on brain research on how children learn to count, these materials will enhance visual representation, which is necessary for numeracy.

Christina Bacallao
cbacallao3@gatech.edu
Georgia Institute of Technology, Atlanta, Georgia

MEETING ROOM 25 (CONVENTION CENTER)

36
Teaching Addition and Subtraction for Meaning

(Pre-K–5) Gallery Workshop

Many children struggle with addition and subtraction because it is taught through rote algorithms without meaning. This workshop will cover a progression of steps to teach addition and subtraction meaningfully. Strategies will include using ten frames, hundreds charts, open number lines, base-ten blocks, partial sums, and differences.

Stacey Daly
dalys@madison.k12.ct.us
Madison Public Schools, Madison, Connecticut

Ruth Rose
Madison Public Schools, Madison, Connecticut

BALLROOM C (MARRIOTT)

10:30 A.M.–12:00 P.M.

37
Effective Models for Fractions, Decimals, and Percents

(3–5) Gallery Workshop

Participants will use a variety of tools and models to develop deep conceptual understanding of fractions, decimals, and percents. Activities will focus on Common Core State Standards Practice Standards 5 and 8. And your students will benefit from multiple opportunities to use appropriate models and then reason about strategies and methods.

Mari Muri
Retired, PIMMS at Wesleyan University, Middletown, Connecticut

Dan Dolan
Retired, PIMMS at Wesleyan University, Middletown, Connecticut

BALLROOM A (CONVENTION CENTER)

38
Game Talk: The Value Is in the Discourse

(3–5) Gallery Workshop

Most children do not learn math concepts by just games. Good math gives us an excellent opportunity for shared experiences and mathematical conversation. A generous handout will be provided.

Mary Altieri
maltieri1212@gmail.com
Putnam/Northern Westchester Board of Cooperative Education Services, Yorktown Heights, New York

MEETING ROOM 27 (CONVENTION CENTER)

38.1
Increasing Mathematical Proficiency: It's Hip to Be Square

(3–5) Gallery Workshop

Learn how to use motivating lesson seeds to help students increase mathematical proficiency while implementing the Common Core State Standards for mathematical content and practice. Let's analyze specific number and geometry concepts, examine common misconceptions, and discuss how to use formative assessments to provide strategic intervention and meaningful challenge.

Jennifer Taylor-Cox
Jennifer@Taylor-CoxInstruction.com
Taylor-Cox Instruction, Severna Park, Maryland

CAPITAL ROOM 1 (MARRIOTT)

39
Conceptual Understanding of Perimeter, Area, and Volume

(3–8) Gallery Workshop

Using geodot paper, isometric dot paper, and dice, you will find new ways to teach the conceptual understanding of perimeter (surrounding), area (covering), and volume (filling). Come prepared to have fun.

Dr. Rachel McAnallen
Zoid and Company, Storrs Mansfield, Connecticut

MEETING ROOM 14 (CONVENTION CENTER)

40
Exploring Geometry with Quadrilateral Pieces: Beyond Pattern Blocks and Tangrams

(3–8) Gallery Workshop

Explore right, acute, and obtuse angles with Quadrilateral Pieces. Designed to enhance spatial thinking, these innovative materials will help students construct geometric meaning and build key vocabulary through trial and error. Your students will learn to communicate about geometric concepts as they work together to solve problems.

Aldo Bacallao
abacallao@bellsouth.net
Henry County Schools, McDonough, Georgia

EXHIBIT HALL A ROOM 3 (CONVENTION CENTER)

41
Activities to Enrich the Middle Grades Math Class

(6–8) Gallery Workshop

When students build models that connect to the mathematical ideas being taught, they absorb the concepts more concretely. I will share classroom-tested successful activities accessible to all ability levels. This is a hands-on workshop during which participants will create some of these exciting and fun-filled projects.

Lynn Rakatansky
lynnrak@msn.com
Lesley University, Cambridge, Massachusetts

EXHIBIT HALL A ROOM 1 (CONVENTION CENTER)

10:30 A.M.–12:00 P.M.

42
Quadratic Equations and Alexander Calder's Mobiles

(6–12) Gallery Workshop

Learn an application of quadratic equations in which the solutions to the quadratic equations are the dimensions needed to create a balanced mobile. Learn how to write quadratic equations to express the relationship between mass and length, and use these solutions to build a simple mobile.

Danielle Passno
dpassno@spenceschool.org
The Spence School, New York, New York

EXHIBIT HALL A ROOM 2 (CONVENTION CENTER)

43
Origamics: Problem Solving with Patty Paper

(9–12) Gallery Workshop

Origamics is the exploration of mathematical patterns through paper folding. Come join us as we explore a range of geometry problems created with a few folds on patty paper.

Michael Serra
San Francisco, California

MEETING ROOM 11 (CONVENTION CENTER)

44
New and Preservice Teachers Workshop (Thursday)

(Preservice and In-Service) Gallery Workshop

Find answers to your questions on topics such as classroom management, parents, motivation, and keeping your sanity. Connect with other new teachers, learn from experienced professionals, and find resources to engage you and your students. You might even win a prize.

Sarah DeLeeuw
sdeleeuw@nctm.org
National Council of Teachers of Mathematics, Reston, Virginia

MEETING ROOM 21 (CONVENTION CENTER)

11:00 A.M.–12:00 P.M.

45
In Different Voice: Teaching Mathematics to English Language Learners

(General Interest) Session

This session will describe effective strategies for teaching mathematics to English language learners (ELLs). The session will also identify the specific areas in mathematics that ELL students find challenging and how to present those topics. We will also detail the role of culture/ethnicity in the mathematics classroom.

Art Johnson
Boston University, Boston, Massachusetts

BALLROOM B (CONVENTION CENTER)

46
Mathematics Scan: An Observational Measure for Mathematics Teaching

(General Interest) Session

This session offers an observational measure of mathematics teaching that can be used reliably. We will discuss the dimensions of M-Scan, built on the work of researchers in mathematics education and the vision set forth by NCTM and research findings. Participants will learn ways to incorporate the dimensions into professional development.

Robert Berry
robertberry@virginia.edu
University of Virginia, Charlottesville, Virginia

CAPITAL ROOM 3 (MARRIOTT)

47
PISA: What Can Students Do with the Mathematics They Learn?

(General Interest) Session

In PISA, fifteen-year-old students solve problems that one might encounter outside school. The mathematics tasks used, and the results obtained, in this international assessment are relevant to teachers in grades 6–11, and they are a resource for teacher educators and professional developers. Examples for all these groups will be available.

Edward Silver
University of Michigan–Dearborn

MEETING ROOM 17 (CONVENTION CENTER)

11:00 A.M.–12:00 P.M.

LOR

48
Algebraic Reasoning: Inspire Your Students to Become Great Thinkers

(Pre-K–2) Session

Inspire your students to become great thinkers. Engage them with thought-provoking algebraic reasoning activities that support the Common Core State Standards for Mathematics and develop creative, adventurous learners. Students doing these activities show joyful persistence as they explore key algebraic concepts. Improve student achievement and impress both parents and administrators.

Mary Cavanagh
mcavanagh@asu.edu
Arizona State University, Tempe, Arizona

BALLROOM D (MARRIOTT)

49
Building Links between Addition and Subtraction: Concepts and Number Facts

(Pre-K–5) Session

Addition and subtraction are closely linked. This session will demonstrate strategies you can use to reinforce the connection between these operations and to develop flexible thinking. In particular, the session will show practical ways to develop number facts for both operations through visual materials and games.

Peter Stowasser
p_stowasser@origo.com.au
ORIGO Education, Brisbane, Australia

MEETING ROOM 24 (CONVENTION CENTER)

50
I'm a Math Specialist; Who Said I Was a Leader?

(Pre-K–5) Session

Math specialists are building or district leaders and regularly confront issues related to leadership. These issues include challenges related to working with adult learners, mentoring their colleagues, and establishing professional learning communities—all while navigating the relationships that affect their work. Come help us figure this out.

Jon Wray
Howard County Public Schools, Ellicott City, Maryland

Beth Kobett
Stevenson University, Baltimore, Maryland

BALLROOM C (CONVENTION CENTER)

LOR

51
Interviewing Students to Learn about Their Algebraic Reasoning

(3–8) Session

In this interactive session, we will examine examples of teacher interviews with students to identify what teachers learn by analyzing their own questions. The focus of the interviews is on examining how students engage with mathematical reasoning in questions such as *Is this number sentence true? 19 + 6 = 20 + 5* and *How do you know they are equal? 3 × 16 and 6 × 8*

Virginia Bastable
vbastabl@mtholyoke.edu
Mount Holyoke College, South Hadley, Massachusetts

BALLROOM A (MARRIOTT)

LOR

52
What Does "Proof" Look Like in the Middle School?

(6–8) Session

This session explores what proof looks like in the middle grades. What are students capable of? What does it look like over the year—from their early attempts to the end of the year? What pedagogical strategies help students get better at it? We explore these questions by examining student work and sharing forms of reasoning.

Sherryl Hauser
Sage Park Middle School, Windsor, Connecticut

Megan Staples
University of Connecticut, Storrs, Connecticut

Deborah Ostien
Willington Public Schools, Willington, Connecticut

BALLROOM B (MARRIOTT)

53
Ratios and Proportional Relationships for All

(6–8, Preservice and In-Service) Session

As we implement the Common Core State Standards, we know we have students with gaps. How can we fill those multiplication and division gaps while building proportional reasoning? Come see how to use the versatile ratio table as we tackle the Ratios and Proportional Relationships standards while truly differentiating instruction to meet all students.

Pamela Harris
pharris@byu.net
Pam Harris Consulting, LLC, Kyle, Texas

MEETING ROOM 16 (CONVENTION CENTER)

11:00 A.M.–12:00 P.M.

LOR

54
Rethinking Fractions: Implications for Teaching and Learning Algebra

(6–12) Session

The Common Core State Standards call for an approach to fractions based on a unit fraction and related to a number line. In a coherent curriculum, secondary school teachers should understand and build on this approach for their work with rational expressions in algebra. Supported by interactive dynamic technology, this approach holds promise for addressing many student misconceptions.

Gail Burrill
burrill@msu.edu
Past President, National Council of Teachers of Mathematics; Michigan State University, East Lansing

BALLROOM E (MARRIOTT)

55
Mathematics Instruction Using Decision Science and Engineering Tools

(9–12, Higher Education) Session

This curriculum uses decision-making tools from industrial and systems engineering and operations research. Goals are to improve math students' ability to formulate and solve multi-step problems and interpret results, and to improve students' attitude. Sample activities will be presented, and attendees will receive sample chapters.

David Pugalee
Center for STEM Education at the University of North Carolina at Charlotte

MEETING ROOM 26 (CONVENTION CENTER)

11:30 A.M.–12:30 P.M.

EW

55.1
Math Expressions – Building a New Standard of Success

(K–6) Exhibitor Workshop

Come learn about Math Expressions© 2013 and experience for yourself why this elementary math program is the program of choice for teachers across the country. Math Expressions is a comprehensive Grades K-6 curriculum that offers new ways to teach and learn the rigorous mathematics laid out in the Common Core State Standards.

Houghton Mifflin Harcourt
Austin, Texas

ROOM 23 (CONVENTION CENTER)

EW

55.2
Experience the Common Core State Standards through Investigations and the Common Core State Standards

(K–5) Exhibitor Workshop

Interactive whiteboard, assessment, and differentiated activities that focus on Standards for Mathematical Content and embed Standards for Mathematical Practice will be shared for use in your classroom.

Pearson
Upper Saddle River, New Jersey

ROOM 13 (CONVENTION CENTER)

12:30 P.M.–1:30 P.M.

56
Formative Assessment in a Summative Assessment Common Core State Standards World

(General Interest) Session

This motivational and interactive session will provide a formative assessment research-affirmed feedback model for raising student achievement, creating fidelity to student grades, and understanding how to use assessment as a student motivational tool. Bring your cell phones so you can vote.

Timothy Kanold
tkanold@d125.org
Loyola University, Chicago, Illinois

BALLROOM B (CONVENTION CENTER)

LOR

57
Building Young Mathematicians: Applying the Standards Pre-K–Grade 2

(Pre-K–2) Session

The national standards movement requires early childhood practitioners to develop a new mindset for their role in advancing young children's mathematical learning and school readiness. Examine the relationship of the Common Core State Standards to the early childhood domains of learning, with a special emphasis on how visual learning strategies can be useful in addressing the Common Core State Standards goals.

Stuart Murphy
stuart@stuartjmurphy.com
Author, Boston, Massachusetts

BALLROOM A (MARRIOTT)

12:30 P.M.–1:30 P.M.

58
Great Math Lessons Based on Great Children's Literature

(Pre-K–5) Session

As educators increasingly value interdisciplinary lessons, publishers rush to produce stories based on math concepts. Teachers must ask two questions: "Is the math lesson accurate?" and "Is the book worthy of class time?" Explore great literature used to create relevant lessons based on NCTM Standards with a mathematician, award-winning author, and poet.

MW Penn
mathforpoets@aol.com
Author, Hamden, Connecticut

BALLROOM C (CONVENTION CENTER)

LCR

59
Come to Your Senses

(3–5) Session

The use of multisensory instructional strategies and activities helps students reach a deeper understanding of crucial mathematics concepts. This session will focus on a variety of effective techniques that address the visual, auditory, and tactile/kinesthetic modalities.

Marian Rainwater
marian@mentoringminds.com
Mentoring Minds, Tyler, Texas

Karen White
Mentoring Minds, Tyler, Texas

BALLROOM D (MARRIOTT)

60
RtI: Using Data and Small Groups to Meet Student Needs

(3–5) Session

Learn how to incorporate data collection and analysis, along with small groups, into your math block. See how data can help drive your instruction, and experience the data collection and analysis process. Find out how response to intervention can become part of your daily routine.

Katie Busbey
busbeyk@friscoisd.org
Frisco Independent School District, Frisco, Texas

MEETING ROOM 24 (CONVENTION CENTER)

61
Rational Numbers: Hard to Teach, Harder to Learn

(6–8, Preservice and In-Service) Session

We will explore visual representation of rational numbers that seamlessly develops an understanding of the slope of a line. Graphing ratios on the Cartesian coordinate plane allows participants to connect slope to line equations.

Anne Collins
Lesley University, Cambridge, Massachusetts

MEETING ROOM 17 (CONVENTION CENTER)

62
Informing Instruction by Using Student Response Systems and Interactive Resources

(6–12) Session

Increase student learning by using formative assessments with student response systems in interactive mathematics instruction. I will model topics from prealgebra through AP Calculus with interactive applications. I will also use ActivExpression SRS devices to show how feedback can inform instruction in the classroom.

Gayle Smith
smithg@svsd410.org
Snoqualmie Valley School District, Washington

MEETING ROOM 16 (CONVENTION CENTER)

LCR

63
The Pythagorean Theorem: Not Your Father's (or Mother's) Theorem Anymore

(6–12) Session

The U.S. House of Representatives, spirals, fractals, Marcel Marceau, trapezoids, the third dimension, and more. Come discover the thread that ties them together, in ways that will intrigue you.

Steve Yurek
syurek@lesley.edu
Lesley University, Cambridge, Massachusetts

BALLROOM E (MARRIOTT)

12:30 P.M.–1:30 P.M.

LCR

64
Reasoning and Sense-Making Tasks: More Than Just Interesting Activities

(9–12) Session

Reasoning and sense-making tasks are more than just interesting student activities. We will examine qualities of tasks, as well as specific teacher actions and instructional strategies, that can help students develop mathematical reasoning habits while they are engaged with important mathematical content.

Jason Slowbe
jason.slowbe@smusd.org
San Marcos High School, California

BALLROOM B (MARRIOTT)

65
R You Ready for Elementary Statistics?

(9–12, Higher Education) Session

R is a powerful statistical software package used at many leading research universities and the *New York Times* to analyze data and produce graphics. R is also suitable for use in elementary statistics courses at the high school or college level. The best part is that R is free.

Joseph Manthey
jmanthey@sjc.edu
Saint Joseph College, West Hartford, Connecticut

Kim Ward
Eastern Connecticut State University, Williamantic, Connecticut

CAPITAL ROOM 3 (MARRIOTT)

66
I'm Going to Teach Math; Why Didn't I Know This?

(9–12, Preservice and In-Service) Session

Learn what a secondary methods teacher and his students have discovered are some deficiencies concerning conceptual understanding of several math procedures and formulas. Many preservice and in-service math teachers confess that they "should have known these things a long time ago."

Steven Williams
swillia6@lhup.edu
Lock Haven University, Pennsylvania

MEETING ROOM 26 (CONVENTION CENTER)

12:30 P.M.–2:00 P.M.

67
Building Number Sense: The Importance of Developing a Deep Understanding

(Pre-K–2) Gallery Workshop

Students need facility with numbers to achieve success. Developing number sense in young children, focusing on investigations that support the development of number relationships and ideas, is crucial. We will explore activities to promote understanding of number, enabling students to develop strong number sense and mental computation strategies.

Cynthia Hillman-Forbush
Hillman-Forbush Associates, Houlton, Maine

MEETING ROOM 21 (CONVENTION CENTER)

68
Developing Number Relations as a Foundation for Basic Fact Stategies

(Pre-K–2, Preservice and In-Service) Gallery Workshop

This session demonstrates short (ten minute) daily standards-based lessons that enable children to build number relations by using visual patterns, ten frames, hundreds charts, games, calculators, and children's literature. These activities help children grow in mathematical thinking and confidence and then serve as a foundation for developing basic fact strategies.

William Weber
william.weber@utoledo.edu
University of Toledo, Ohio

MEETING ROOM 14 (CONVENTION CENTER)

69
Geometry for All

(3–5) Gallery Workshop

This session will develop shapes, properties, spatial visualization, and their connections across the curriculum. The speakers will show how a solid foundation in early grades gives a big payoff later. They will focus on addressing adaptations for students with diverse needs. Come see how reasoning and sense making can be part of your classroom.

Karen Karp
University of Louisville, Kentucky

Fred Dillon
Strongsville High School, Ohio

EXHIBIT HALL A ROOM 2 (CONVENTION CENTER)

12:30 P.M.–2:00 P.M.

70
Math Games with a Purpose

(3–5) Gallery Workshop

Teachers should use a variety of assessment methods to meet the needs of all students. Math games create dialogue and offer a tool for informal assessment. Games support critical thinking, problem solving, accuracy, and efficiency. Participants will explore activities that focus on content, basic skills, and problem solving.

Carole Tilley
caroletilley@bellsouth.net
Consultant, McDonough, Georgia

MEETING ROOM 27 (CONVENTION CENTER)

71
Multiplication and Division Fact Fluency

(3–5) Gallery Workshop

What does it take to give students access to basic facts of multiplication and division? The speaker will share strategies and techniques that get students to automaticity by grade 4. Experience differentiated instruction through music, games, activities, choral chanting, and math tools.

Kim Sutton
Creative Mathematics, Arcata, California

EXHIBIT HALL A ROOM 1 (CONVENTION CENTER)

72
Calculation Nation: Game On!

(3–8) Gallery Workshop

Engage students in math in a familiar environment to most: online games. Calculation Nation (http://calculationnation.nctm.org) is a site of free online games from NCTM. Come to this session prepared to challenge yourself, learn math, and have fun. Topics may include patterns, fractions, or variables. Attendees will decide which games to play.

Patrick Vennebush
pvennebush@nctm.org
National Council of Teachers of Mathematics, Reston, Virginia

MEETING ROOM 11 (CONVENTION CENTER)

73
Connecting Spatial, Algebraic, and Data Reasoning for Common Core State Standards

(3–8) Gallery Workshop

Participants will work on an amazing set of problems. Each problem will make use of spatial reasoning, encourage organization of collected data, and lead to solutions, followed by generalization and algebraic reasoning. We'll share student work and discuss how this mathematics supports Common Core State Standards for Mathematical Practice and Content.

James Matthews
matthews@siena.edu
Siena College, Loudonville, New York

BALLROOM A (CONVENTION CENTER)

74
Freeze Frame: Snapshots of the Mathematical Meaning in Everyday Life

(6–12) Gallery Workshop

To truly engage students in learning, we must give them avenues to formulate mathematical questions of the world around them. One way to foster natural curiosity is to allow students to take digital pictures of their own and apply a multitude of mathematical concepts with the aid of graphing calculators and dynamic software.

Lorie McFee
lorie.mcfee@gmail.com
North Buncombe High School, Weaverville, North Carolina

BALLROOM C (MARRIOTT)

75
Hands-On Activities to Develop Students' Geometry and Algebra Reasoning Skills

(6–12) Gallery Workshop

Participate in hands-on activities you can use with your students to develop reasoning and proof skills. You will learn about proofs without words and how to use them in teaching a variety of concepts. We will look at visual representations of some common number patterns, algebraic formulas, and results from trigonometry and geometry.

Carol Bell
cbell@nmu.edu
Northern Michigan University, Marquette

Rachel Pomeroy
Marquette Area Public Schools, Michigan

EXHIBIT HALL A ROOM 3 (CONVENTION CENTER)

12:30 P.M.–2:00 P.M.

76
Hands-On Activities and Investigations That Work for At-Risk Students

(9–12) Gallery Workshop

Explore investigations and activities from algebra 1, geometry, and algebra 2 that have worked with at-risk students. You can bring these activities back to your classroom. The presenter will also share how these activities, professional development, and technology access helped his district earn state and national awards.

James Kearns
Salem State University, Salem, Massachusetts

CAPITAL ROOM 1 (MARRIOTT)

77
Math Poems, Stat! Mathematical Poetry for Probability and Statistics

(Higher Education, Preservice and In-Service) Gallery Workshop

Explore a variety of math poems about probability, statistics, and related content; compose at least one poem; and discuss how to implement and assess such an instructional strategy.

John Hammett III
jhammett@spc.edu
Saint Peter's College, Jersey City, New Jersey

MEETING ROOM 25 (CONVENTION CENTER)

1:00 P.M.–2:00 P.M.

EW
77.1
Common Core State Standards Math Practices? Trust CPM's 20 Years of Writing Experience!

(6–12) Exhibitor Workshop

Try some lessons, take home samples of CPM's Core Connections series (© 2013). The "third generation" of CPM blends Common Core State Standards content and practice standards in a coherent sequence from 6th grade through Algebra 2. Course elements include problem-solving, mathematical thinking, problem-based lessons and mathematical discourse in a student-centered format.

CPM Educational Program
Sacramento, California

ROOM 23 (CONVENTION CENTER)

EW
77.2
Navigating Your Way through the Fraction Story of the Common Core State Standards

(1–5) Exhibitor Workshop

One approach to the story of fractions is to build upon students' understanding of counting and whole number arithmetic and extend this previous knowledge to the study of fractions. This session will focus on conceptual understanding of the "knotty" topic of fractions including connections to equal partitioning and unitizing. Video clips will be used to examine the conceptions many students have that allow them to complete some tasks successfully but that prove inadequate in other contexts..

Pearson
Upper Saddle River, New Jersey

ROOM 13 (CONVENTION CENTER)

2:00 P.M.–3:00 P.M.

LCR
78
Math Talk

(Pre-K–2) Session

Our students should be critical thinkers, successful problem solvers and mathematicians. The ideas, calculator games, and activities presented will encourage your students to perform at the higher levels of Bloom's Taxonomy.

Mickey Jo Sobierajski
mjsobiera@hotmail.com
Fulton City Schools, New York

BALLROOM E (MARRIOTT)

LCR
79
Tools for Supporting Struggling Math Learners

(Pre-K–5) Session

What can we do to support struggling math learners in our classrooms? This session explores research and practices that offer support for struggling math learners. It will offer a framework for instruction that includes development of models, linking models to invented strategies, and the development of algorithms.

John Tapper
jtapper@hartford.edu
University of Hartford, Connecticut

BALLROOM B (MARRIOTT)

2:00 P.M.–3:00 P.M.

80
Using Open-Ended Questions to Develop Deep Understanding and Higher-Order Thinking

(Pre-K–5) Session

Examine the use of specific open-ended questions designed to develop deep understanding and reasoning and communication skills. The session will also focus on using open-ended questions to gauge the level of students' understanding and thinking skills.

Brian Tickle
mathematickle@tpg.com.au
Consultant, Taree, Australia

BALLROOM C (CONVENTION CENTER)

81
Number Lines: A Foundational Problem-Solving Tool

(3–5) Session

The Common Core State Standards emphasize the number line because it connects components of our number system. The same number line also serves as a valuable problem-solving tool with the additional benefit of making students' thinking visible. Come join us in this interactive session, which will also feature activities to use in your classroom.

Kit Norris
Consultant, Southborough, Massachusetts

MEETING ROOM 17 (CONVENTION CENTER)

82
Math Happens When Children Wonder about What Authors Write

(3–8) Session

Literature can ignite students' minds and lead to deep mathematical understanding. This author will show how books can inspire children to ask great questions and solve problems. He will share impressive student work, including exhaustive (often hilarious) extensions of books and impressive efforts to prove, improve, or disprove the author's math.

David Schwartz
david@davidschwartz.com
Author, Oakland, California

BALLROOM B (CONVENTION CENTER)

83
Hot iPad Apps for the Math Classroom

(6–8) Session

iPads: a cool gadget or an engaging classroom tool? Learn about exciting ways to use iPads in your math classroom. We will demonstrate effective math apps, describe sample lessons, and highlight techniques for using iPads in the classroom. You may access the presenters' blog to further investigate resources after the conference.

Jenny Tsankova
jennymathed@gmail.com
Roger Williams University, Bristol, Rhode Island

Margaret Thombs
Roger Williams University, Bristol, Rhode Island

MEETING ROOM 16 (CONVENTION CENTER)

LCR

84
Scaffolds versus Funnels: Questioning to Help Students Justify

(6–8) Session

This talk will discuss how teacher questioning can help students justify. We will show how some "scaffolds" support student growth, whereas some "funnels" just make a problem easier. We will use the examples from one task implemented in several classrooms to explain what kinds of questions are productive and not productive.

Briana Hennessy
University of Connecticut, Storrs, Connecticut

Jill Newton
Purdue University, West Lafayette, Indiana

Sherryl Hauser
Sage Park Middle School, Windsor, Connecticut

BALLROOM D (MARRIOTT)

85
Student Thinking about Data When Gathering or Analyzing Samples

(6–12, Research) Session

Discover important links between research on students' thinking about samples and sampling, and our teaching of some of the important ideas about analyzing distributions of data—including shape, center, and variability—that are included in the Common Core State Standards for Mathematics.

J. Michael Shaughnessy
mikesh@pdx.edu
Past President, National Council of Teachers of Mathematics, Reston, Virginia

CAPITAL ROOM 3 (MARRIOTT)

2:00 P.M.–3:00 P.M.

LCR

86
Using Group Work with Linguistically Diverse Students

(6–12) Session

Learn principles for using group work in linguistically diverse mathematics classrooms. We will discuss the issues of selecting tasks, assigning students to groups, setting group norms, and assessing student learning. Then we will use video cases and do one sample task together to illustrate these key principles in action.

William Zahner
wzahner@bu.edu
Boston University, Massachusetts

BALLROOM A (MARRIOTT)

87
AP Calculus: My Favorite Class

(9–12) Session

This session's goal is to offer participants motivational techniques and strategies for success in all areas of AP Calculus. Participants will review tips and tricks on building a successful AP Calculus program, explore ways to make their program and class exciting, and learn strategies to help ensure student success on the AP Calculus exam.

Howard Alcosser
Diamond Bar High School, California

MEETING ROOM 24 (CONVENTION CENTER)

88
Insights Gained from Preservice Secondary Teacher Candidates' Mathematics Portfolios

(Higher Education) Session

For six years, we have used portfolios to evaluate preservice teachers' mathematical content knowledge as outlined by the NCATE/NCTM Standards. We will share examples of students' work showing their mathematical understanding and their ability to connect college and secondary mathematics. We also discuss the efficacy of this assessment system.

Pete Johnson
johnsonp@easternct.edu
Eastern Connecticut State University, Willimantic

Hari Koirala
Eastern Connecticut State University, Willimantic

MEETING ROOM 26 (CONVENTION CENTER)

2:30 P.M.–3:30 P.M.

EW

89
ORIGO: Stepping into Common Core State Standards Math

(Pre-K–5) Session

Schools across the USA are dealing with great challenges. Decreased funding and Common Core State Standards require a fundamental change of approach. Join us as we show how ORIGO has built on its reputation of innovation to develop Stepping Stones–a comprehensive online Common Core State Standards math program that has captured the spirit of the Common Core State Standards.

James Burnett
j_burnett@origo.com.au
ORIGO Education, St. Charles, Missouri

MEETING ROOM 23 (CONVENTION CENTER)

EW

89.1
Math Solutions from Pearson

(6–12) Exhibitor Workshop

Learn how the Pearson enVision series incorporates research-based pedagogical goals proven to engage students and improve mathematical proficiency.

Pearson
Upper Saddle River, New Jersey

ROOM 13 (CONVENTION CENTER)

2:30 P.M.–4:00 P.M.

90
Exploring Shape Games: The Math Begins When the Game Ends

(Pre-K–5) Gallery Workshop

Explore how students learn all about shapes through playing and analyzing shape games. These games are part of research-based units developed under a National Science Foundation grant. Students identify, describe, sort, and classify shapes. After each game, questions on the important math behind the games provoke rich discussion.

Kathy Gavin
kathy.gavin@uconn.edu
University of Connecticut, Storrs

Tutita Casa
University of Connecticut, Storrs

MEETING ROOM 11 (CONVENTION CENTER)

2:30 P.M.–4:00 P.M.

91
Engaging Activities and Successful Strategies for Differentiating Instruction

(3–5) Gallery Workshop

We will give ideas to reinforce and build new strategies for differentiating instruction in the elementary grades. Participants will leave with examples of lessons and engaging activities from algebra, geometry, measurement, and problem solving.

Beverly Ferrucci
Keene State College, Keene, New Hampshire

Eileen Phillips
Keene State College, Keene, New Hampshire

Stephen Bismarck
Keene State College, Keene, New Hampshire

BALLROOM A (CONVENTION CENTER)

92
Activities That Integrate Mathematics, Technology, and Other Disciplines

(3–5, Preservice and In-Service) Gallery Workshop

Participants will take part in hands-on activities that integrate mathematics and technology. The activities will also allow participants to experience integration to other disciplines, such as science, social studies, language arts, and art.

Maria Diamantis
diamantism1@southernct.edu
Southern Connecticut State University, New Haven, Connecticut

Adam Goldberg
Southern Connecticut State University, New Haven, Connecticut

MEETING ROOM 25 (CONVENTION CENTER)

93
Three Rare Materials in Mathematics Class: Cockroach, Donut, Post-It Notes

(3–5, Preservice and In-Service) Gallery Workshop

The speaker will share her use of a plastic c\ockroach (for rotations), a donut (for area), and Post-It notes (for reflections and rotations) in her mathematics classes for preservice teachers.

Carolyn Pinchback
carolinp@uca.edu
University of Central Arkansas, Conway, Arkansas

MEETING ROOM 27 (CONVENTION CENTER)

94
Decontextualizing and Contextualizing: The Keys to Problem Solving

(3–8) Gallery Workshop

All too often, students have trouble finding the math under the surface of word problems. The surface structure influences them much more than it should. This workshop will focus on techniques teachers can use to help their students uncover the deep structure and embedded math of word problems.

Patti Jean Dieck
pdieck@amityville.k12.ny.us
Amityville Schools, New York

Keryn Naso
Amityville Schools, New York

EXHIBIT HALL A ROOM 3 (CONVENTION CENTER)

95
Successful Strategies to Master Multiplication

(3–8) Gallery Workshop

Most people use multiplication daily. This workshop will demonstrate strategies to introduce and extend the basic multiplication facts. We will use the array model to explore multiplication strategies that involve doubling, partitioning, and building up and down from a known fact.

Peter Stowasser
p_stowasser@origo.com.au
ORIGO Education, Brisbane, Australia

BALLROOM C (MARRIOTT)

342.

WSDFSDFSDFSDFSDF

2:30 P.M.–4:00 P.M.

96
Unpacking Geometry Problems from Boxes You Make

(3–8) Gallery Workshop

You will transform used greeting cards into useful boxes—useful for small-item storage—but more important, you will discover real-life and challenging geometry concepts, make conjectures, and answer probing questions about parallelograms, rectangles, squares, and other quadrilaterals. We will also cover ratio, proportion, area, and volume.

Nicholas Restivo
nicholas.restivo@gmail.com
Mathematical Olympiads for Elementary and Middle Schools, Bellmore, New York

EXHIBIT HALL A ROOM 2 (CONVENTION CENTER)

97
Engaging Students through Engaging Mathematics

(6–8) Gallery Workshop

Are your students actively involved in doing new, meaningful mathematics? Mathematical meaning plays a vital role in students' solutions of problems in everyday activities when compared with in-school, algorithmic, problem-solving activities. Learn how mathematics can be embedded in real-life applications and activities of interest to middle school students.

Rick Billstein
rickb@mso.umt.edu
University of Montana, Missoula, Montana

EXHIBIT HALL A ROOM 1 (CONVENTION CENTER)

98
Moving with Algebra: Using Motion Sensors and Graphing Calculators

(6–8) Gallery Workshop

Come and try Moving with Algebra, where we will use motion sensors and graphing calculators to make sense of concepts such as independent and dependent variables, slope, and graphing. Participants will use the technology to experience how their students will be able to truly develop an understanding of some foundational algebraic concepts. Handouts of activities will be provided.

Kimberly Arp
Cabrini College, Radnor, Pennsylvania

Ellen Panofsky
Cabrini College, Radnor, Pennsylvania

CAPITAL ROOM 1 (MARRIOTT)

99
Making Functions in Algebra Fun, Active, and Interesting

(6–12) Gallery Workshop

Experience several activities concerning functions, including using a human graph to explore functions, domain and range, and asymptotes. The session will include a function carousel, a silent board game, and some work on parent graphs and what it means to investigate functions. We will end with a function treasure hunt.

Christine Mikles
College Preparatory Mathematics Educational Program, Sacramento, California

Karen Wootton
College Preparatory Mathematics Educational Program, Sacramento, California

MEETING ROOM 14 (CONVENTION CENTER)

100
Superheroes, Murder Mysteries, and Minigolf: Challenging High School Geometry Projects

(6–12) Gallery Workshop

Challenge your high school geometry students with these eight rigorous, engaging projects. Come try the Right Triangle Murder Mystery, Angles Minigolf, and Superhero Transformations. Learn how to integrate engaging projects into your units, and leave with instructions, exemplars, and rubrics for a whole year's worth of projects.

William Stafford
wkstafford@gmail.com
EL Haynes Public Charter School, Washington, DC

MEETING ROOM 21 (CONVENTION CENTER)

3:30 P.M.–4:30 P.M.

LCR

101
Learn↔Reflect Reflection Session

(General Interest) Session

This culmination session of the Learn↔Reflect strand will facilitate a discussion of four reflection questions. Those who attend the Kickoff, at least one Learn↔Reflect session, and the Reflection session will earn a personalized certificate.

Christine Newman
West Hartford Public Schools, Connecticut

Nancy Zarach
Syracuse City School District (Retired), New York

Christine Downing
Newport School District, New Hampshire

Jason Slowbe
San Marcos High School, California

BALLROOM C (CONVENTION CENTER)

3:30 P.M.–4:30 P.M.

102
Richard Balomenos Memorial Lecture

(General Interest) Session

The speaker selected for the session will exemplify Richard Balomenos's approach to mathematics education. That is, she will offer a strong and possibly controversial point of view that will spark us to think carefully about the improvement of mathematics education. Immediately following the Balomenos Memorial Lecture, session attendees are invited to a reception hosted by the Association of Teachers of Mathematics in New England (ATMNE) featuring classic tunes at their best by ATMNE's own Bil Bowdish.

Charlene Tate Nichols
Connecticut State Department of Education, Hartford

BALLROOM B (MARRIOTT)

103
Games to Develop Number Sense: Creating Student Success

(Pre-K–2) Session

Be more efficient and selective about time devoted to number. A ready-to-use handout of highly engaging, repeatable activities and instructional strategies will help you enhance number sense and build confidence in your students.

Laura Choate
lchoate@roadrunner.com
Fallbrook Union Elementary School District, California

BALLROOM B (CONVENTION CENTER)

104
Mathematics Coaching in the Grades K–2 Setting

(Pre-K–2) Session

Being a math coach is a complex and rewarding role. This session offers an opportunity to share how one person manages, sets goals, provides regular professional development, and assists with data analysis in a grades K–2 setting. Technology tools assist in communications and celebrations. Participants will receive handouts and have the opportunity for Q&A.

Sara Kaminski
skaminski@milforded.org
Milford School District, Connecticut

MEETING ROOM 26 (CONVENTION CENTER)

105
Math + Literature = One Fun Way to Learn Math

(Pre-K–5) Session

Discover how and why you should use children's books to teach mathematics, including adding, multiplying, fractions, measurement, and graphing. Participants will receive a list of children's books and classroom activities based on children's literature.

Jadwiga Domino
jdomino@medaille.edu
Medaille College, Buffalo, New York

BALLROOM A (MARRIOTT)

106
Developing Measurement Fluency through International Classroom Collaborations

(3–5, Preservice and In-Service) Session

In today's global society, fluency with the metric system and familiarity with how other countries measure temperature and money are essential. We will present a variety of constructivist classroom math projects completed as part of an international collaboration between fourth and fifth graders in the United States and Sweden.

Margaret Thombs
Roger Williams University, Bristol, Rhode Island

Jenny Tsankova
Roger Williams University, Bristol, Rhode Island

Kristin Scala
Auburn Public Schools, Massachusetts

MEETING ROOM 16 (CONVENTION CENTER)

107
Data-Driven Differentiated Instruction Affords Algebra Readiness Success in Middle School

(6–8) Session

Assessment and hands-on activities with true manipulatives connected to virtual manipulatives on the interactive whiteboard will prepare the lowest 20 percent of middle school students for algebra success. Includes differentiated instruction with fractions and integers for response to intervention, English language learners, and special education students.

Amy Johnson
ajohnson@movingwithmath.com
Math Teachers Press, Inc., Minneapolis, Minnesota

Caryl Pierson
Math Teachers Press, Inc., Minneapolis, Minnesota

MEETING ROOM 17 (CONVENTION CENTER)

3:30 P.M.–4:30 P.M.

108
Trends in the Treatment of Variables in Middle Grades Textbooks

(6–8) Session

This study investigated how the concept of variables in middle grades mathematics textbooks developed during four eras of U.S. mathematics education. It also examined the nature of support that the curricula provide for teachers to enact variables ideas in the classroom. Findings, limitations, and recommendations are provided.

James Dogbey
Clemson University, South Carolina

BALLROOM E (MARRIOTT)

109
An iPad-Based Dynamic and Visual Introduction to Function Concepts

(6–12) Session

Students experience functions through a geometric approach made vivid with the iPad. They drag variables, observe function behavior, learn function notation, and explore domain and range. They identify function families, compose functions, create inverse functions, and more. Receive classroom-ready activities. (Sketchpad Explorer is a free app.)

Scott Steketee
ssteketee@kcptech.com
Key Curriculum Press Technologies, Emeryville, California

Daniel Scher
Key Curriculum Press Technologies, Emeryville, California

BALLROOM D (MARRIOTT)

110
Save Money: Simulate the Lottery

(9–12) Session

The Powerball lottery offers a context for some rich mathematical problem solving. We'll simulate the game by using the Random Numbers feature of the Probability Simulation app on TI-83/84 calculators. We'll make predictions, gather data, and analyze results by using high school–level combinatorics, arriving at the surprising expected value of a $1 ticket.

Dave Kennedy
dikenn@ship.edu
Shippensburg University, Pennsylvania

MEETING ROOM 24 (CONVENTION CENTER)

111
Customized Web Homework: Why? How? To What Effect? Advantages? Disadvantages?

(Higher Education) Session

In this project, we created and used our own multiversion Web homework sets in five courses over five years, independent of commercial publishers, independent of texts, using a free system at the University of Kentucky. We found that it enhances communication between students and faculty and clearly benefits student mathematical performance.

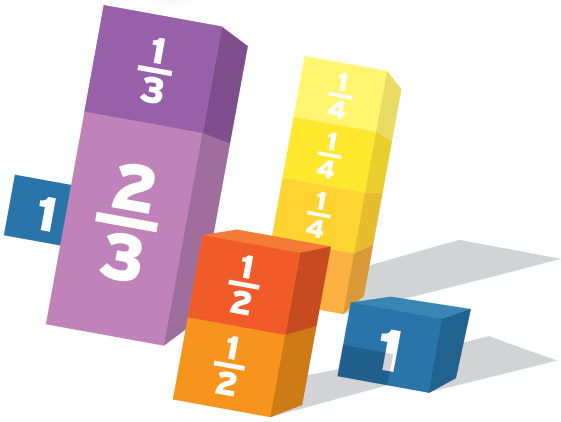
Stephen Kuhn
stephen-kuhn@utc.edu
University of Tennessee at Chattanooga

Terry Walters
University of Tennessee at Chattanooga

Sandy Watson
University of Tennessee at Chattanooga

CAPITAL ROOM 3 (MARRIOTT)

GET SPEAKER HANDOUTS!
Visit **www.nctm.org/plan** to access available presentation handouts.



Friday **Planner**

8:00	
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3:30	
4:00	
4:30	
5:00	

ew Exhibitor Workshop

HIGHLIGHTS

New Members and First Timers' Orientation (Presentation 112)

Board Hot Topics Session (Presentation 135)

New and Preservice Teachers Workshop (Presentation 155)

REGISTRATION HOURS

7:00 a.m.–3:00 p.m.

EXHIBIT HOURS

8:00 a.m.–4:00 p.m.

BOOKSTORE AND MEMBER SHOWCASE HOURS

8:00 a.m.–4:00 p.m.

FIRE CODES

We have made every attempt to provide adequate seating for participants at the conference, but for your safety and because of fire regulations, only those with seats will be allowed in meeting rooms. To comply with fire codes, we will have to ask persons sitting on the floor or standing to leave the room.

7:15 A.M.–7:45 A.M.

112
New Members and First Timers' Orientation

(General Interest) Session

New to NCTM? Join us to learn how to maximize your membership experience. From journals and online lessons, tools, and activities, to networking and career-advancement opportunities, you'll discover all that NCTM has to offer you. Also, learn how to make the most of your time at the conference.

Lynn Columba
hlc0@lehigh.edu
Lehigh University, Bethlehem, Pennsylvania

BALLROOM A (MARRIOTT)

8:00 A.M.–9:00 A.M.

113
Number Talks: A Path to Numerical Reasoning

(General Interest) Session

This session introduces number talks and shows how this classroom routine can support students in developing accurate, efficient, and flexible computation strategies. Classroom video clips will highlight the goals of number talks and how they address the Common Core State Standards and Mathematical Practices.

Sherry Parrish
sherrydparrish@att.net
University of Alabama at Birmingham

BALLROOM B (CONVENTION CENTER)

114
Preparing Students for Common Core State Standards Assessments: College/Career Readiness

(General Interest) Session

This session offers an update on the evolving state assessment programs and likely impact. Proficient students will explain and apply mathematical concepts, perform procedures, frame and solve complex problems, construct viable arguments to support their reasoning, and analyze complex real-world scenarios by using mathematical models to interpret and solve problems.

Henry Kepner
kepner@uwm.edu
Past President, National Council of Teachers of Mathematics;
University of Wisconsin–Milwaukee

BALLROOM C (CONVENTION CENTER)

115
Why Unit Fractions? Understand How Asians Compare and Compute Fractions

(General Interest) Session

In Asia, fraction computation is based on the Egyptian approach to fractions. Come see how Asian countries use the unit fraction concept to compare fractions and compute division. Through unit fraction concepts, grades 3–8 students can jump beyond visualization needs. Come to discuss how North American educators can redesign the curriculum in light of Asian approaches to rational numbers.

Hsuehi (Martin) Lo
hlo@stcloudstate.edu
Saint Cloud State University, Minnesota

MEETING ROOM 26 (CONVENTION CENTER)

116
Get Your Students to Construct Arguments and Critique Others' Reasoning

(Pre-K–5) Session

The Common Core State Standards emphasize that students should "construct viable arguments and critique the reasoning of others." This sounds great, but how can you actually do this? Come learn practical strategies that can get you started and support your efforts in helping all students participate in such discussions throughout the year.

Tutita Casa
tutita.casa@uconn.edu
University of Connecticut, Storrs

Madelyn Williams
Goodwin School, Mansfield School District, Storrs, Connecticut

Jennifer Dorl
West Hartford Public Schools, Connecticut

BALLROOM A (MARRIOTT)

117
Can Students Get the Right Answers for the Wrong Reasons?

(3–8) Session

Are your current assessments revealing what your students truly understand? Take a mathematical journey with several students, and their teachers, to identify why students are getting the right answers for the wrong reasons. Use informative diagnostic tasks designed to elicit students' understandings, partial concepts, and misconceptions.

Debi DePaul
debi_depaul@stepspd.com
STEPS Professional Development, Norwell, Massachusetts

Diane Reynolds
Rockwall Independent School District, Texas

BALLROOM B (MARRIOTT)

8:00 A.M.–9:00 A.M.

118
Activities with Paper That Develop Individual Thinking in Mathematics

(6–8) Session

This session offers some ideas and examples of hands-on classroom activities with cut paper polygons that use existing knowledge to connect and foster creative and diverse geometric, numerical, and algebraic thinking in mathematics.

Evan Maletsky
emaletsky@optonline.net
Montclair State University (Professor Emeritus), Upper Montclair, New Jersey

MEETING ROOM 16 (CONVENTION CENTER)

119
Combining Movie Making and Math with Reel Math Challenge

(6–8) Session

Through the free Reel Math Challenge, MATHCOUNTS offers students a way to produce creative videos demonstrating solutions to challenging math problems, share them online, and see how their videos measure up to others submitted. Receive an overview of this new program, as well as of the MATHCOUNTS Competition Program and free Club Program.

Kristen Chandler
MATHCOUNTS Foundation, Alexandria, Virginia

BALLROOM E (MARRIOTT)

120
Math Models with Many Spokes

(6–12) Session

The heavy presence of math modeling in the Common Core State Standards has many asking just what it is. Come explore Common Core State Standards–aligned, classroom-ready math models that connect multiple NCTM Content Standards while integrating the Process Standards, and see why models, such as patterns in tetrahedrons and others, answer the question.

Mike Long
malong@ship.edu
Shippensburg University, Pennsylvania

Brett Foor
Shippensburg University, Pennsylvania

Brock Foor
Shippensburg University, Pennsylvania

BALLROOM D (MARRIOTT)

121
Thales' Shadow and the Squared Circles of Egypt

(9–12, Higher Education) Session

We tell the tale of Thales measuring the height of the pyramids, but he could not have done it in the way we say. We'll consider ways by which he could have measured their height. The Egyptians had a formula for the area of a circle. We'll look at the history of attempts to explain how the Egyptians developed their method.

Don Barry
dbarry@andover.edu
Phillips Academy, Andover, Massachusetts

CAPITAL ROOM 3 (MARRIOTT)

122
Explore the Calculator's Lesser-Known Modes: Sequence and Parametric

(9–12, Preservice and In-Service) Session

Ever wonder how a daily dose or megadose of medicine affects your metabolism? How about modeling forestry management? We will model medical and environmental applications of convergence involving explicit and recursive form. We will also explore parametric representations of functions, conics, and modeling motion. Extensive handouts included.

David Kapolka
dkapolka@iserv.net
Forest Hills Public Schools (Retired), Grand Rapids, Michigan

MEETING ROOM 17 (CONVENTION CENTER)

8:30 A.M.–9:30 A.M.

ew

122.1
Pearson

Exhibitor Workshop

See **Program Updates**, available in the Registration Area onsite.

Pearson
Upper Saddle River, New Jersey

ROOM 13 (CONVENTION CENTER)

FRIDAY

8:30 A.M.–9:30 A.M.

ew

122.2
Meeting the Practice Standards Using Models from Math in Context®

Exhibitor Workshop

The Common Core State Standards Practice Standards ask students to "model with mathematics." Students are expected to identify quantities and map relationships using math tools including diagrams, two-way tables, and formulas. Participants will explore models from MiC that can be used to analyze situations and draw conclusions, and receive a free Number Tools® workbook.

Britannica Digital Learning
Chicago, Illinois

ROOM 23 (CONVENTION CENTER)

8:30 A.M.–10:00 A.M.

123
Here's the Story: Teaching Math Concepts with Picture Books

(Pre-K–2) Gallery Workshop

Dynamic and exciting children's books invite and motivate children to learn mathematics: children respond to stories, characters, and their experiences in literature. Through active thinking, children learn mathematics by forming relationships, making connections, and integrating concepts.

Lynn Columba
hlc0@lehigh.edu
Lehigh University, Bethlehem, Pennsylvania

BALLROOM A (CONVENTION CENTER)

124
Taking the Stairs or Elevator: Promoting Computational Flexibility and Efficiency

(Pre-K–2) Gallery Workshop

Explore how part–part–whole and comparison bar models can represent story problem information. We will use ten frames, hundreds charts, bead strings, and cubes to model split, jump, and compensatory computation strategies. We will examine the roles that classroom practice and culture play in fostering strategy flexibility.

Timothy Baldwin
tim_baldwin@wellesley.k12.ma.us
Wellesley Public Schools, Massachusetts

MEETING ROOM 21 (CONVENTION CENTER)

125
Differentiating for Your Top Elementary Mathematicians: A Practical How-To Session

(3–5) Gallery Workshop

Come learn teacher-tested, practical ways to challenge your talented math students, both in and out of school. Engage in hands-on activities from the award-winning Project M3: Mentoring Mathematical Minds elementary curriculum designed to nurture mathematical talent with a focus on the Common Core State Standards Mathematical Practices.

Alison Foley
alison_foley@whps.org
Smith School, West Hartford, Connecticut

Kathy Gavin
University of Connecticut, Storrs, Connecticut

EXHIBIT HALL A ROOM 3 (CONVENTION CENTER)

126
Hands-On Approach to Teaching Decimal and Fraction Concepts

(3–5) Gallery Workshop

Are your students having a hard time understanding rational numbers? Come learn some hands-on activities to increase their understanding. We will use number lines, cards, and dice to explore ways to build an understanding of decimals and fractions.

Wendy West
wwest@fcps1.org
Fauquier County Public Schools, Warrenton, Virginia

EXHIBIT HALL A ROOM 1 (CONVENTION CENTER)

127
Momentum: Building Capacity for Change through Connections to Children's Literature

(3–5, Preservice and In-Service) Gallery Workshop

Through problem solving and connections to literature, Momentum—a grades K–6 STEM professional development project funded through Tennessee's Race to the Top award—addresses teacher numeracy as well as knowledge of the Common Core State Standards. Receive problems and other resources developed and used in the Momentum Project.

Dorothy Assad
assadd@apsu.edu
Austin Peay State University, Clarksville, Tennessee

Lauren Wells
Austin Peay State University, Clarksville, Tennessee

MEETING ROOM 25 (CONVENTION CENTER)

8:30 A.M.–10:00 A.M.

128
Building Meaning for Fraction Multiplication and Division

(3–8) Gallery Workshop

Learn how the Rational Number Project (RNP) group used paper folding, number lines, and story problems to teach fraction multiplication and division. Links to the RNP lessons will be shared with attendees.

Kathleen Cramer
crame013@umn.edu
University of Minnesota–Twin Cities, Minneapolis, Minnesota

BALLROOM C (MARRIOTT)

129
Moving Forward with Metric

(3–8) Gallery Workshop

Whether it's 5K races, 2-liter soft drinks, or milligrams of medicine: metric is here. Learn methods to teach and "see" the metric system. Hands-on. Meet Standards. Have fun. Handouts/materials provided.

Donna Monck
dmonck@themasterruler.com
Rock Christian Academy, Easton, Pennsylvania

CAPITAL ROOM 1 (MARRIOTT)

130
Strategic Games to Promote Reasoning, Discourse, and Motivation

(3–8) Gallery Workshop

Learn about the value of incorporating strategic play into mathematics classes, using games with fraction strips, number cubes, and sets of number cards. We will discuss students' mathematical discourse, opportunities for computational practice, and game extensions. Participants may keep all materials.

Jacob Klerlein
jklerlein@scholastic.com
Scholastic, Inc., New York, New York

Lea Ozeri
Scholastic, Inc., New York, New York

MEETING ROOM 27 (CONVENTION CENTER)

131
Teaching Volume of Right Rectangular Prism and Cylinder with Understanding

(6–8) Gallery Workshop

Participants will engage in two hands-on activities to aid in their understanding of volume and surface area. The activities will integrate the mathematical practices of mathematical reasoning and modeling with the geometry content domain. Teachers will be able to immediately take these activities, as presented, back to their mathematics classrooms.

Benjamin (Ben) Lindeman
bhlind@aol.com
NYS Education Dept. (Retired); Mathematics Consultant, Albany, New York

EXHIBIT HALL A ROOM 2 (CONVENTION CENTER)

132
Engaging High School Students through Reasoning and Sense Making

(9–12) Gallery Workshop

Take a moment to explore how reasoning and sense-making strategies promote classroom environments that are challenging as well as supportive—especially in the process of teaching your existing curricula for high school mathematics.

Christine Thomas
cthomas11@gsu.edu
Georgia State University, Atlanta, Georgia

Fred Dillon
Strongsville High School, Ohio

MEETING ROOM 11 (CONVENTION CENTER)

133
Incorporate Interactive, Colorful Activities into Your Mathematics Classroom for Free

(9–12, Preservice and In-Service) Gallery Workshop

Get creative activities for all math courses from algebra 1 through AP Calculus. These colorful, student-paced activities help learners develop conceptual understanding, discover the math, investigate, and more. Teachers and students can interact with these activities by using the free Web-based TI-Nspire Document Player or a TI-Nspire handheld. Obtain more than 200 activities and PEZ.

Tom Reardon
tom@tomreardon.com
Youngstown State University, Ohio

MEETING ROOM 14 (CONVENTION CENTER)

9:30 A.M.–10:30 A.M.

134
Don't Be Tardy to the Math Tailgate Party

(General Interest) Session

Having problems coming up with ideas for a parent math night? Invite the parents of your math students to a fun evening of math games and food prior to a football game. Activities include games of chance and comparing your stats with those of a professional. Participate in a model tailgate party and leave the session with plans to throw your own party.

Anna Burns
aburns@eunice.org
Eunice Public Schools, New Mexico

Alice Hahn
Eunice Public Schools, New Mexico

MEETING ROOM 16 (CONVENTION CENTER)

135
Looking at the Common Core State Standards through an NCTM Lens: It's Still about the (Principles and) Standards

(General Interest) Session

The vision espoused in *Principles and Standards for School Mathematics* is as current today as in 2000. How has your teaching evolved as a result of this document? Let's reexamine the Principles and Process Standards in light of how they should influence effective mathematics instruction today.

Robert Berry III
robertberry@virginia.edu
University of Virginia, Charlottesville

Linda Gojak
NCTM President, National Council of Teachers of Mathematics; John Carroll University, University Heights, Ohio

BALLROOM A (MARRIOTT)

137
Common Core State Standards, NCTM, and GAISE Statistics Recommendations for Elementary School

(Pre-K–5) Session

We will compare the Common Core State Standards, NCTM, and *Guidelines for Assessment and Instruction in Statistics Education Report* recommendations at the elementary school level. We will also offer guidance for implementing statistics in the elementary grades.

Anna Bargagliotti
University of Memphis, Tennessee

BALLROOM D (MARRIOTT)

138
Fear Not the Fraction

(Pre-K–5) Session

Elementary school students need experiences with multiple models of fractions to gain both a deep understanding of the concept and proficiency with skills, such as finding equivalence and operating. This session will explore which model is most appropriate for each purpose and will relate and classify all fraction types.

James Burnett
Consultant, Brisbane, Australia

BALLROOM B (CONVENTION CENTER)

139
Virtual Manipulatives: An iPad App for Elementary School Math Teachers

(Pre-K–5) Session

Explore pre-K–grade 6 activities facilitated by an iPad app that we designed and implemented. The app augments lessons by using Unifix cubes, manipulatives to develop problem-solving skills and critical thinking. Discuss ways to integrate iPad apps into pre-K–grade 6 curricula.

Kevin Merges
merges@rutgersprep.org
Rutgers Preparatory School, Somerset, New Jersey

Anoop Ahluwalia
Brookdale Community College, Lincroft, New Jersey

BALLROOM B (MARRIOTT)

9:30 A.M.–10:30 A.M.

140
Singin' and Signin' Teacher: Complex Concepts through Songs and Signs

(3–8) Session

This fun, interactive session will show how to teach complex math concepts by using songs, signs, and gestures. Receive masters to create your own Flip and Fold. Learn proven strategies that ensure 100 percent student engagement. See why this program won the Classroom of the Future Innovations in Education Award for the ability to inspire, innovate, and achieve.

Siegrid Stillman
sig@nickynote.com
Fallbrook Union Elementary School District, California

BALLROOM E (MARRIOTT)

141
Teaching Number Sense to the iGeneration

(6–8) Session

Examine how to engage, motivate, and teach the iGeneration (the Internet generation). Participants will have access to videos, websites, virtual worlds, and motivational strategies for students in grades 3–8 that can lead to building better number sense and facility with rational numbers.

Eric Milou
milou@rowan.edu
Rowan University, Glassboro, New Jersey

BALLROOM C (CONVENTION CENTER)

142
Websites, Wikis, and Webcasts, Oh My: Web 2.0 Tools

(6–8) Session

This presentation will introduce a few free interactive Web 2.0 tools that will enhance your lessons and assessments. Learn how to turn vocabulary words into an illustrated story, create a geometry project out of a home decorating website, let the computer review decimals through a webcast, and share the tools you find through a wiki.

Jennifer McDougall
Captain Nathan Hale Middle School, Coventry, Connecticut

MEETING ROOM 26 (CONVENTION CENTER)

143
Visual Representations of Quadratics for Students with Learning Disabilities

(6–12) Session

This session summarizes the results of research that incorporated blended instruction and visual representations to teach concepts and skills associated with quadratic expressions to high school students with mathematics difficulties. Blended instruction merges instructional practices from special education research with the NCTM Process Standards.

Tricia Strickland
strickland@hood.edu
Hood College, Frederick, Maryland

MEETING ROOM 24 (CONVENTION CENTER)

144
Experienced and Novice Elementary Teachers' Talk Moves as Formative Assessment

(Preservice and In-Service) Session

This session highlights understanding math talk as a tool for formative assessment in interactions with students of novice or experienced teachers. The teachers participated in induction or professional development coursework in math content and pedagogy led by mathematics educators working in collaboration with mathematicians.

Ruth Heaton
rheaton1@unl.edu
University of Nebraska–Lincoln

Elizabeth Cunningham
University of Nebraska–Lincoln

CAPITAL ROOM 3 (MARRIOTT)

10:00 A.M.–11:00 A.M.

ew

144.1
Pearson

Exhibitor Workshop

See **Program Updates**, available in the Registration Area onsite.

Pearson
Upper Saddle River, New Jersey

ROOM 13 (CONVENTION CENTER)

10:00 A.M.–11:00 A.M.

ew **144.2**

Do Word Problems Scare the Daylights Out of Your Student?

(3-9) Exhibitor Workshop

Find out how Hands-On Equations® enables students to represent and solve word problems, visually using game pieces, including age and consecutive number problems.

Henry Borenson
info@borenson.com
Borenson and Associates Inc., Allentown, Pennsylvania

ROOM 23 (CONVENTION CENTER)

10:30 A.M.–12:00 P.M.

145

ABC's and 123's: Using Literature to Teach Mathematics

(Pre-K–2) Gallery Workshop

Educators will work together to analyze text, connect mathematical reasoning and problem-solving activities with books, and discover the process students take to comprehend the math–literature connection.

Megan Stotz
med710@lehigh.edu
Lehigh University, Bethlehem, Pennsylvania

CAPITAL ROOM 1 (MARRIOTT)

146

Back to Square One (Number Sense on a Floor Grid)

(Pre-K–2) Gallery Workshop

In this highly interactive session, pre-K–grade 2 teachers will explore many ways to develop a strong sense of number on a large 100-square floor grid. I will demonstrate calendar, addition, subtraction, greater than/less than, and number patterns, and we will share ideas for making your own large grid. Bring a camera to capture all the action.

Wendy E. Hill
whilltlc@vianet.ca
Retired, Huntsville, Canada

MEETING ROOM 27 (CONVENTION CENTER)

147

Domino Games: Connecting the Dots for Primary School Students

(Pre-K–2) Gallery Workshop

Dominoes are a staple found in most primary classrooms. Come prepared to play games that teach number sense, patterning, operations, place value, and problem solving. Great game boards will be available, and you will leave with ideas to use Monday morning. These ideas are excellent for centers, backpacks, and after-school programs and for regular, ESL, and Title I programs.

Allison Riddle
Box Cars and One-Eyed Jacks; Davis Unified School District, Salt Lake City, Utah

EXHIBIT HALL A ROOM 1 (CONVENTION CENTER)

FRIDAY

148
Patterns in Nature and Number

(3–8) Gallery Workshop

What do trees, bees, and piano keys have in common? Nature's patterns are all around us. Investigate and re-create some of these patterns and their surprising mathematical connections.

Janice Kowalczyk
Rutgers University (Retired), New Brunswick, New Jersey

MEETING ROOM 11 (CONVENTION CENTER)

149
Willie, Charlie, and the Math Factory

(3–8) Gallery Workshop

Join us at the Math Factory for a delicious mathematical treat that blends imagination with all Content and Process Standards into whimsical, hands-on activities. Characters and themes are from R. Dahl's *Charlie and the Chocolate Factory.*

Donna Christy
dchristy@ric.edu
Rhode Island College, Providence, Rhode Island

Christine Payson
North Cumberland Middle School, Rhode Island

BALLROOM A (CONVENTION CENTER)

150
Playing with Blocks While Developing Algebraic Thinking

(6–8, Preservice and In-Service) Gallery Workshop

Develop mathematical understanding by making connections among arithmetic, geometry, and algebra through practical classroom activities. Participants will explore base-ten blocks, pattern blocks, plain blocks, and VisuAlgebra Blocks to create and discover algebraic relations. Explore thought-provoking activities you can use in your classroom.

John McAdam
john.mcadam@marist.edu
Marist College, Poughkeepsie, New York

Leah Clark
Newtown Public Schools, Connecticut

Brittany Redmond
Our Lady of Lourdes High School, Poughkeepsie, New York

EXHIBIT HALL A ROOM 3 (CONVENTION CENTER)

151
Similarity: Developing the Big Ideas about Perimeter–Area–Volume Ratios

(6–12) Gallery Workshop

We'll work through several well-designed activities that help students discover the patterns related to the ratios of perimeters, areas, and volumes of similar figures. We will then apply these big ideas to a collection of real-life problems.

Laurie Boswell
laboswell@gmail.com
Riverside School, Lyndonville, Vermont

MEETING ROOM 14 (CONVENTION CENTER)

152
Apportionment: Seven Roads to Fairness

(9–12) Gallery Workshop

Learn how the U.S. Constitution dictates how U.S. House seats are apportioned. We will discuss seven apportionment methods and include the geometric and harmonic mean. We will incorporate graphing calculator technology. Math mixes with history.

William Bowdish
Sharon Public Schools, Massachusetts

MEETING ROOM 25 (CONVENTION CENTER)

153
Formative Assessment for Learning Lessons

(9–12) Gallery Workshop

Experience a formative assessment lesson for learning that aligns with the Common Core State Standards content and practice standards. I will share a website of teacher guides and additional lessons, developed by the Mathematical Assessment Project at UC Berkeley, that reflect current research findings.

Mary Bouck
University of California Berkeley

EXHIBIT HALL A ROOM 2 (CONVENTION CENTER)

10:30 A.M.–12:00 P.M.

154
"Green" Geometric Modeling: Capture Interest and Address Common Core State Standards

(9–12) Gallery Workshop

This workshop offers hands-on experiences to engage high school students in geometric modeling, as described in the Common Core State Standards, by means of "green" packaging problems. Participants will model efficient packaging of energy drinks, bike helmets, and more while investigating relationships between 2-D and 3-D objects and their measurements.

Sharon McCrone
University of New Hampshire, Durham, New Hampshire

May Chaar
University of New Hampshire, Durham, New Hampshire

BALLROOM C (MARRIOTT)

155
New and Preservice Teachers Workshop

(Preservice and In-Service) Gallery Workshop

Find answers to your questions on topics such as classroom management, parents, motivation, and keeping your sanity. Connect with other new teachers, learn from experienced professionals, and find resources to engage you and your students. You might even win a prize.

Sarah DeLeeuw
sdeleeuw@nctm.org
National Council of Teachers of Mathematics, Reston, Virginia

MEETING ROOM 21 (CONVENTION CENTER)

11:00 A.M.–12:00 P.M.

156
Cutting to the Core with the Standards for Mathematical Practice

(General Interest) Session

"For *all* students to become proficient in mathematics, they must internalize the eight Standards for Mathematical Practice as the means to learn, understand, and retain the content standards." Let's examine rich mathematical tasks that encourage the development of the practices in your students and the implications for your instructional practice.

Linda Gojak
lgojak@nctm.org
NCTM President, National Council of Teachers of Mathematics; John Carroll University, University Heights, Ohio

MEETING ROOM 17 (CONVENTION CENTER)

157
Fact Fluency: What, Why, When, How

(General Interest) Session

Join *New York Times* best-selling *The Grapes of Math* and Kakooma author Greg Tang as we explore what true fluency means, why it's crucial, when kids need it, and most important, how we can help them achieve it. This session will introduce new criteria for evaluating fluency, together with data on student performance that will astound you. It just may be time to rethink what it means to be fluent and "good in math."

Greg Tang
gregtang@gregtang.com
Scholastic, New York, New York

BALLROOM C (CONVENTION CENTER)

158
Making Math Much More Accessible to Our Students

(General Interest) Session

This fast-paced, upbeat presentation will identify and model a set of practical, easy-to-adapt instructional strategies that significantly enhance mathematical learning and retention at all grades. We'll look at how adapting a few daily routines can pay rich dividends in student mastery.

Steven Leinwand
American Institutes for Research, Washington, D.C.

BALLROOM B (CONVENTION CENTER)

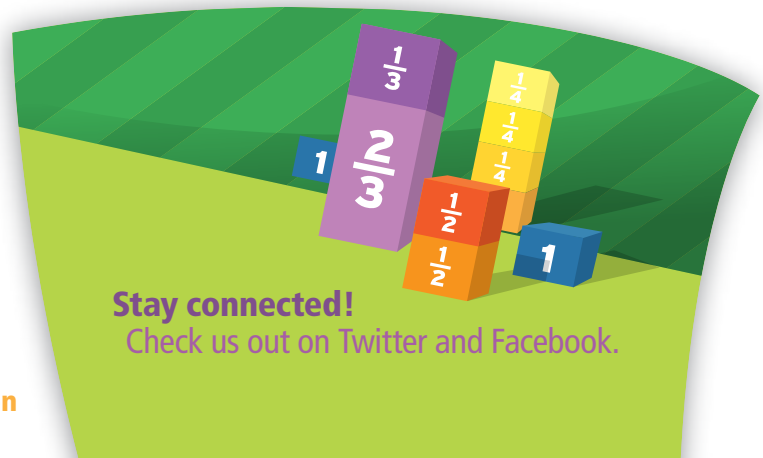
159
Number Sense and Operations: The Value of 5 and 10

(Pre-K–2) Session

Learn the value of 5 and 10 in developing number sense and operations among young learners. Engage in a variety of strategies to build flexibility with numbers and part–whole thinking, including word problems and classroom discourse, advanced counting exercises, and hands-on activities.

Jody Guarino
jguarino@uci.edu
University of California, Irvine

MEETING ROOM 24 (CONVENTION CENTER)



11:00 A.M.–12:00 P.M.

160
Games and Activities for Early Mathematics Based on Whole-Brain Learning

(Pre-K–2, Preservice and In-Service) Session

Experience critical brain research on perception, language, concepts, procedures, and attitudes via activities that can be integrated into lesson plans for both short- and long-term optimal learning experiences. We will consider how to apply learning science research to early mathematics program definition, pedagogy, curriculum, and assessment.

Daniel Franklin
d.franklin@sixredmarbles.com
Six Red Marbles, Charlestown, Massachusetts

BALLROOM D (MARRIOTT)

161
It Starts with a Cube

(3–8) Session

A cube is the starting point for many rich problems involving even more math concepts. Work your way through factors, combinatorics, volume, surface area, networks, and more by solving Math Olympiad problems. A dozen of these cube problems offer a fresh approach to these topics. I will distribute more than fifty additional Math Olympiad problems.

Dennis Mulhearn
Math Olympiads for Elementary and Middle Schools, Bellmore, New York

BALLROOM B (MARRIOTT)

162
Singapore's Visual Models Enable All Students to Develop Algebraic Thinking

(3–8) Session

This session will focus on visual models used in the highly successful Singapore curriculum that enable students to tackle complex problems and develop deep understanding of topics such as ratio, operations with fractions, and algebraic manipulation. These models help all students make the difficult transition from arithmetic to algebra.

Andy Clark
andyclark@qwest.net
Portland Public Schools (Retired), Oregon

MEETING ROOM 16 (CONVENTION CENTER)

163
Crosswalks and the Hairs on Your Head: Developing Logical Reasoning

(6–8) Session

Projects and activities focus on developing students' love for mathematics while enhancing their expertise with key math concepts, skills, and logical reasoning methods. Emphasis is on proportions, proportional reasoning, measurement, and data collection in art, history, science, sports, and the solution of societal problems.

Carole Greenes
cgreenes@asu.edu
Arizona State University, Tempe

BALLROOM A (MARRIOTT)

164
Mathematical Curves in the Real World: Fun(ctional) Learning

(6–12) Session

I will present conic sections, spirals, catenaries, cycloids, fractals, and more, in many different ways (humorous and real). We will see hands-on activities, computer/calculator applications, and free online videos. I will focus on connections within mathematics and science. (Come learn why there really aren't any parabolic trajectories on Earth.)

Scott Oliver
soliver@d125.org
Adlai E. Stevenson High School, Lincolnshire, Illinois

BALLROOM E (MARRIOTT)

165
Teaching Statistics by Using Applets for Conceptual Development

(9–12, Higher Education) Session

Examine applet-based activities in statistics designed to promote concept development, particularly concepts that traditionally are difficult for students. Activities will be based on applets from NCTM's Illuminations, applets from other websites, and several applets developed as part of a National Science Foundation–funded project with COMAP.

Marsha Davis
davisma@easternct.edu
Eastern Connecticut State University, Willimantic

Pete Johnson
Eastern Connecticut State University, Willimantic

Hari Koirala
Eastern Connecticut State University, Willimantic

CAPITAL ROOM 3 (MARRIOTT)

11:00 A.M.–12:00 P.M.

166
Take Action: Encouraging Female Students to Excel in Math

(9–12, Preservice and In-Service) Session

Research indicates that girls are less likely than their male peers to consider themselves capable in math and can—without contradictory encouragement—often sell themselves short mathematically.

Christy Gillespie
gillespiec@kentplace.org
Kent Place School, Summit, New Jersey

MEETING ROOM 26 (CONVENTION CENTER)

12:30 P.M.–1:30 P.M.

167
A Practical Approach to Response to Intervention

(General Interest) Session

Tired of school improvements that seem like the "flavor of the month"? Response to intervention is a common-sense way of approaching change and improvement. Where do you start? What does it look like? How do you get parents and teachers involved without kicking and screaming? This session offers practical strategies for implementing RTI in grades K–12.

Margaret Searle
searle@buckeye-express.com
Searle Enterprises Inc., Perrysburg, Ohio

BALLROOM A (MARRIOTT)

168
Teaching with Technology: Geometry Freebies from the World Wide Web

(General Interest) Session

Use material from the World Wide Web to teach geometry. I will present selected websites, used in the preparation of preservice teachers, and discuss strategies on how to use them at different grade levels. I will share a list of these websites with the audience.

Martha Tapia
mtapia@berry.edu
Berry College, Mount Berry, Georgia

MEETING ROOM 24 (CONVENTION CENTER)

169
Shared Classroom Experiences: Teachers, Math Coaches, Principals Learning in Classrooms

(Pre-K–2) Session

How do teachers, principals, and math coaches learn together in the classroom to support student learning of early number sense, as identified in the Common Core State Standards for Mathematics? Learn about the Shared Classroom Experience, a professional learning structure allowing professionals to listen to student strategies and identify student supports.

Dana Cargill
dana.cargill@pampaisd.net
Pampa Independent School District, Pampa, Texas

Janice Bradley
New Mexico State University, Las Cruces, New Mexico

MEETING ROOM 26 (CONVENTION CENTER)

170
A Real Hands-On Approach to Teaching Place Value

(Pre-K–5) Session

Observe and engage in activities designed to develop deep understanding of the concept of place value. Using manipulatives based on the most powerful representation of ten, we will develop strong number sense and efficient mental computation strategies.

Brian Tickle
mathematickle@tpg.com.au
Consultant, Taree, Australia

BALLROOM C (CONVENTION CENTER)

171
The Standards for Mathematical Practice in Action

(Pre-K–5) Session

According to the Common Core State Standards, students should be engaged in the Standards for Mathematical Practice. However, what that actually looks like in the classroom is elusive. Explore classroom videos that capture students engaged in the Standards for Mathematical Practice in action and discuss teacher moves and meaningful tasks that support this engagement.

Juli Dixon
juli.dixon@ucf.edu
University of Central Florida, Orlando, Florida

BALLROOM B (CONVENTION CENTER)

12:30 P.M.–1:30 P.M.

172
If You Give a Moose a Map

(3–8) Session

Come take a mathematical journey with Maddie Moose down the Appalachian Trail. This culminating unit incorporates computation skills (buying supplies, keeping a checkbook), fractions, geometry, measurement, probability, and graphing. The unit is geared for grade 4 but adapts easily to any level. Handouts will be available.

Lisa Carlson
Saint Charles School, Kettering, Ohio

BALLROOM D (MARRIOTT)

174
Process or Practice?

(3–8) Session

This session offers a look at the NCTM Process Standards and the Common Core's State Standards for Mathematical Practice. How similar or different are they? Will our classroom practices be altered? How?

Susan Osberg
sosberg1@verizon.net
University of Rhode Island Mathematics Department and School of Education, Kingston, Rhode Island

MEETING ROOM 16 (CONVENTION CENTER)

175
Connect Geometry, Algebra, and Number by Using Dissections and Decompositions

(6–12) Session

Explore the benefits of focusing on the themes of dissections and decompositions. Investigating and creating dissections of shapes and decomposing or recomposing numbers are pathways for students to use in strengthening their reasoning ability. I will share examples and activities that emphasize these themes and promote problem solving.

Margaret Kenney
kenney@bc.edu
Boston College, Chestnut Hill, Massachusetts

MEETING ROOM 17 (CONVENTION CENTER)

176
Teaching Algebra with the Concrete–Representational–Abstract Technique to Students with Disabilities

(6–12) Session

Participants will learn how to teach introductory algebraic concepts to students with exceptional learning needs by implementing the concrete–representational–abstract technique. Specifically, individuals will examine how manipulatives are used to teach basic algebra at the concrete level before using pictorials at the representational level.

Joseph Sencibaugh
jsencibaugh77@webster.edu
Webster University, Saint Louis, Missouri

BALLROOM E (MARRIOTT)

12:30 P.M.–1:30 P.M.

177
Quantitative Financial Literacy: A Real-World Advanced Algebra Course

(9–12) Session

Quantitative Financial Literacy is a substantive math applications and modeling course that teaches and uses advanced mathematics in the content areas of investments, creating a business, banking, credit, automobiles, employment, taxes, home ownership, retirement, and budgeting. It is a perfect real-world, real-math, third- or fourth-year course option.

Richard Sgroi
dr.rsgroi@gmail.com
Bedford Central School District (Retired), New York

BALLROOM B (MARRIOTT)

178
Mentoring, Induction, and Rounds, Oh My!

(Preservice and In-Service) Session

Professional development is not one size fits all. From the novice to the veteran teacher, you can transform school culture from teaching in isolation to public and collaborative work. We'll explore current best practices that raise the discourse about teaching and learning, including educative mentoring, new-teacher induction, and faculty rounds.

Reena Freedman
rfreedman@gannacademy.org
Gann Academy, Waltham, Massachusetts

CAPITAL ROOM 3 (MARRIOTT)

12:30 P.M.–2:00 P.M.

179
Making It Real: Sensational Centers in the Primary School Classroom

(Pre-K–2) Gallery Workshop

Why use learning centers? "Because they're fun" might be the first thing that comes to mind, but research supports the benefit of using learning centers to actively engage and motivate students. Participate in and experience a wide variety of learning center ideas that can be adapted for different skill levels.

Kristyn Warren
kristyn.warren@hmhpub.com
Saxon Publishers, Austin, Texas

BALLROOM A (CONVENTION CENTER)

180
"Going Deep" without "Going to the Next Grade"

(Pre-K–2, Preservice and In-Service) Gallery Workshop

The new Common Core State Standards ask us to teach for depth rather than breadth. If my goal is counting from 1 to 10, how do I "go deep" without "going to 11"? We might return to the practice of drills on math facts. Or we can think more deeply about number sense itself. In this workshop we will examine strategies for "going deep" without "going to the next grade."

Julianne DesOrmeaux
julie_desormeaux@me.com
Consultant, Rochester, New York

MEETING ROOM 11 (CONVENTION CENTER)

180.1
Math in Motion: Origami across the Grades K–8 Curriculum

(3–8) Gallery Workshop

Discover a fun-filled way to teach the big ideas of basic math skills, geometry, and more. Learn proven, practical techniques to build a deeper understanding of math concepts to support the Common Core State Standards. Unfold teacher-friendly strategies. Boost retention skills with best practices. Bring out the joy of mathematics.

Barbara Pearl
pearlb@bucks.edu
La Salle University, Philadelphia, Pennsylvania

Francis Collins
La Salle University, Philadelphia, Pennsylvania

MEETING ROOM 21 (CONVENTION CENTER)

181
Engaging and Free Online Resources for Teaching Operations and Fractions

(3–5) Gallery Workshop

Experience classroom-ready lessons using free online apps from NCTM. All resources will be selected from 600+ lessons and 100+ apps that appear on Illuminations (http://illuminations.nctm.org). Lessons will involve the four operations, fractions, and the order of operations, and attendees will discuss possible modifications for their classrooms.

Patrick Vennebush
pvennebush@nctm.org
National Council of Teachers of Mathematics, Reston, Virginia

MEETING ROOM 14 (CONVENTION CENTER)

12:30 P.M.–2:00 P.M.

182
NASA Smart Skies: Distance–Rate–Time Mathematics in Air Traffic Control

(6–8) Gallery Workshop

Bring excitement to distance–rate–time math by having students apply the proportional reasoning and problem-solving skills that air traffic controllers use. Predict and resolve conflicts by using a Web-based simulator or mobile app, an online graphing tool, and a physical experiment at the prealgebra and algebra levels. All materials are free online.

Rebecca Green
NASA, Moffett Field, California

Gregory Condon
NASA, Moffett Field, California

CAPITAL ROOM 1 (MARRIOTT)

183
Thinking Proportionally with Origami Cubes

(6–8) Gallery Workshop

A key component to the algebra readiness of a middle school student is the ability to think and reason proportionally. Participants will construct origami cubes of various sizes and explore the proportional relationships among the models. Participants will also complete activities and discuss rubrics based on these models.

Diane Devine
Cambridge Public Schools, Massachusetts

EXHIBIT HALL A ROOM 2 (CONVENTION CENTER)

184
Transitioning Students from Arithmetic to Algebraic Thinking

(6–8) Gallery Workshop

Through the use of dice and color tiles, you will experience how to transition students from arithmetic to algebraic thinking as they generate equalities by using a random set of numbers; solve for *n*; write rules for patterns, sequences, and functions; and solve simultaneous equations.

Chet Delani
chetdelani@gmail.com
Independent Educational Consultant, S. Yarmouth, Massachusetts

BALLROOM C (MARRIOTT)

185
Making Sense of Radians: A New Kind of Protractor

(6–12) Gallery Workshop

Work with a pair of protractors scaled in radian measure. Explore classroom-ready lessons designed to develop the concept of radians. Participants will leave the workshop with a set of protractors and blackline masters for lessons in geometry, precalculus, and calculus.

Jennifer Silverman
The Center for 21st Century Skills at Education Connection, Litchfield, Connecticut

MEETING ROOM 27 (CONVENTION CENTER)

186
Integrating Statistics into the High School Curriculum

(9–12) Gallery Workshop

The Common Core State Standards in Mathematics call for an increased emphasis on statistics. High school teachers can address these standards with engaging activities without adding a separate course. Participants will collect data, use TI-Nspire technology to analyze it, and identify how similar activities can fit in their own curriculum.

Pamela Rawson
pamela.rawson@gmail.com
Poland Regional High School, Maine

EXHIBIT HALL A ROOM 3 (CONVENTION CENTER)

187
Teaching Statistics: Analyzing Voting Data from *Dancing with the Stars*

(9–12) Gallery Workshop

The popular TV show *Dancing with the Stars* uses a scoring system with some intriguing statistical aspects. Participants will engage in an interactive session and see the mathematical structure behind the voting and how they can use it to demonstrate descriptive statistics, the binomial, the multinomial, and nonparametrics in their classes.

Jason Gershman
jgershma@nsu.nova.edu
Nova Southeastern University, Fort Lauderdale, Florida

EXHIBIT HALL A ROOM 1 (CONVENTION CENTER)

12:30 P.M.–2:00 P.M.

188
Practice-Based Professional Development for Practicing Elementary School Mathematics Teachers

(Preservice and In-Service) Gallery Workshop

Presenters share a distinctive form of professional development materials for elementary school teachers that integrates attention to mathematics, student thinking, teaching practices, and ways of learning from practice. Participants explore these materials and discuss the benefits and challenges of this form of practice-based professional development.

Meghan Shaughnessy
University of Michigan, Ann Arbor

Timothy Boerst
University of Michigan, Ann Arbor

Kara Suzuka
University of Michigan, Ann Arbor

MEETING ROOM 25 (CONVENTION CENTER)

2:00 P.M.–3:00 P.M.

189
Access to Math for Students with Moderate and Severe Disabilities

(General Interest) Session

Students with moderate to severe disabilities are required to have access to state-adopted math standards. What does this look like for students with significant communication, motor, and cognitive challenges? An experienced educator shows how differentiated math instruction, materials, and assistive technology pave the way for these learners.

Karen Ross-Brown
kbrown@ablenetinc.com
AbleNet, Inc., Roseville, Minnesota

BALLROOM A (MARRIOTT)

190
I Tweet, Therefore I Learn

(General Interest) Session

Heard all the hype about Twitter? Wondering how it helps math teachers improve their practice? Thinking about developing your own learning network? Skeptical that anything can be communicated in 140 characters? The speaker will share stories and tips on using Twitter to build a community to support your professional development.

Max Ray
max@mathforum.org
The Math Forum @ Drexel University, Philadelphia, Pennsylvania

BALLROOM B (MARRIOTT)

191
The Elements of Styles: Effective Math Teaching in the U.S.

(General Interest) Session

Together with the filmmaker, participants will watch a documentary of award-winning U.S. math teachers; afterward, all will discuss how to incorporate more effective techniques into their own classes. At a Chicago Metropolitan Mathematics Club conference, comments on the presentation included "Thought provoking and a challenge" and "Every teacher should view this documentary."

William Hammond
bill.hammond@dresden.us
Hanover High School, New Hampshire

MEETING ROOM 16 (CONVENTION CENTER)

192
Student-Centered Measurement Lessons

(Pre-K–2) Session

Engage in hands-on examples of how to incorporate student-centered mathematics into the classroom. The speaker will draw upon examples from the Measurement Strand from both the NCTM Curriculum Focal Points and the Common Core State Standards, with a focus on measurement concepts that students struggle to comprehend.

Amber Simpson
amsimps@clemson.edu
Clemson University, South Carolina

BALLROOM E (MARRIOTT)

193
Visual Models: Early Number Work to Develop Strong Number Sense

(Pre-K–2) Session

How do young mathematicians develop strong understandings about number? We will explore how visual models such as the ten frame, rekenrek, hundreds chart, and number line develop number sense and foster effective, efficient, and accurate problem-solving strategies for early computational fluency.

Eliza Chung
echung@theschool.columbia.edu
The School at Columbia University, New York, New York

MEETING ROOM 24 (CONVENTION CENTER)

2:00 P.M.–3:00 P.M.

194
Oh, Now I Get It!

(3–8) Session

You'll be amazed at what your students can remember. Discover brain-compatible methods for learning and remembering mathematical concepts through songs, graphic organizers, and daily interactive starters. Learn methods of teaching problem solving, vocabulary, and various concepts such as fractions, decimals, and more through active learning.

Toni Woody
Independent Education Consultant, Lubbock, Texas

MEETING ROOM 17 (CONVENTION CENTER)

195
Computational Estimation's Importance in the Middle School

(6–8) Session

Estimation is a complex but necessary process in math. Computational estimation is more than a guess or rounding, yet it does not look for an exact answer. How do you facilitate student construction of estimation concepts? What are some student misconceptions about estimation? We will share results from middle school student interviews.

Jill Cochran
jcochran@berry.edu
Berry College, Mount Berry, Georgia

Megan Hartmann
Berry College, Mount Berry, Georgia

BALLROOM D (MARRIOTT)

BALLROOM B (CONVENTION CENTER)

197
When (Teacher) Silence Is Not Golden

(6–12, Research) Session

Deciding when to initiate a whole-class redirection versus letting students struggle is tricky. We will present case studies and lessons learned from classroom observations in a research project investigating the implementation of dynamic geometry activities in high school geometry courses. Some times call for a direct teaching approach, but when?

Sharon Strickland
ss67@txstate.edu
Texas State University, San Marcos, Texas

CAPITAL ROOM 3 (MARRIOTT)

198
Applying the Common Core State Standards

(9–12) Session

Take part in engaging activities that not only highlight different content areas of the Common Core State Standards for Mathematics but also focus on the Mathematical Practices. Activities will include functions, geometry, data analysis, and probability and will focus on modeling, reasoning, and sense making. We will also use ideas about formative assessment.

Fred Dillon
Strongsville High School, Ohio

BALLROOM C (CONVENTION CENTER)

199
Not a Universal Language: Coaching the Language of Math

(Preservice and In-Service) Session

Language is often the problem that English language learners and native speakers have not only in understanding the concepts and relationships in math but also in expressing their math reasoning. A project in six schools trains teachers in math concepts and in how to teach language to access content. Coaches offer ongoing assistance and feedback to support teachers' growth.

Nadina Robinson
nadina.robinson@slps.org
St. Louis Public Schools, Missouri

Robert Jackson
St. Louis Public Schools, Missouri

Susan Hanan
St. Louis Public Schools, Missouri

MEETING ROOM 26 (CONVENTION CENTER)

2:30 P.M.–4:00 P.M.

200
Shuffling into Math: Primary School Math Games

(Pre-K–5) Gallery Workshop

Come prepared to play card, dice, and domino games that help your primary school students succeed in numeration, operations, place value, patterning, and graphing. We will share excellent take-home ideas, game boards, student samples, and more. Great for regular, ESL, and after-school programs.

Jane Felling
boxcars@telus.net
Box Cars and One-Eyed Jacks, Edmonton, Canada

MEETING ROOM 14 (CONVENTION CENTER)

201
Fractions: Unfolding the Mystery

(3–5) Gallery Workshop

Learn fun, hands-on techniques for conceptual understanding of fractions that use manipulatives to meet the Common Core State Standards math modeling requirement. Use paper folding to illustrate equivalent fractions; adding, subtracting, multiplying, and dividing fractions with like and unlike denominators; and other practices.

Tricia Salerno
tsalerno@singaporemathtraining.com
SMARTTraining, LLC, Phoenix, Arizona

MEETING ROOM 11 (CONVENTION CENTER)

202
Learning Mathematics with Pattern Blocks

(3–5) Gallery Workshop

Participants will use pattern blocks to investigate number concepts, problem-solving strategies, fraction representations, equivalent fractions, angle measurement, symmetry, perimeter, and area.

Celine Przydzial
przydzia@kutztown.edu
Kutztown University, Pennsylvania

BALLROOM A (CONVENTION CENTER)

203
"We Do Care": What Parents Say about Helping with Math

(3–5, Preservice and In-Service) Gallery Workshop

Come hear investigative findings concerning how and why parents and children work together in mathematics the way they do. Acquire methods for inquiring about parent–child collaborations to inform your instructional practices. Engage in tasks conducive to enhancing the emotional quality of parent–child interactions.

Regina Mistretta
mistretr@stjohns.edu
St. John's University, Staten Island, New York

CAPITAL ROOM 1 (MARRIOTT)

204
Picking Away at Area

(6–8) Gallery Workshop

Explore the spatial concept of area through origami and dot paper activities, finally arriving at a formula for the area of any polygon. The session examines the conceptual knowledge of area while including and challenging all students regardless of prior knowledge. Problem solving beyond the chugging of formulas is guaranteed. Materials provided.

Kathleen Fick
kfick@methodist.edu
Methodist University, Fayetteville, North Carolina

EXHIBIT HALL A ROOM 1 (CONVENTION CENTER)

205
Using Nonroutine Problems to Better Understand Students' Reasoning

(6–8) Gallery Workshop

Engaging students in writing about their reasoning to solve nonroutine problems can give teachers deep insights into what students understand. Work through a set of nonroutine problems and then discuss how (with rubrics provided) to use these to gain insight into student reasoning and sense making.

Garold Furse
gfurse@lps.org
Lincoln Public School District, Nebraska

EXHIBIT HALL A ROOM 3 (CONVENTION CENTER)

2:30 P.M.–4:00 P.M.

206
Using Multiple Representations to Make Connections in Algebra

(6–12) Gallery Workshop

Participate in activities that help find the connections among a rule, graph, table, and context. Learn ways to help students move from each representation to the others, developing deep understanding of multiple ways to solve problems.

Barb West
Long Trail School, Dorset, Vermont

BALLROOM C (MARRIOTT)

207
Capture the Geometry with the TI-Nspire Learning Handheld

(9–12, Preservice and In-Service) Gallery Workshop

Take dynamic geometry constructions to the next level by learning to use the data capture feature of the TI-Nspire learning handheld. Gather data sets modeled by linear, quadratic, and other common functions. Make connections between geometry and algebra for your students. Take home ready-made lessons and new, powerful tools for your geometry class.

Karen Campe
Yale University, New Haven, Connecticut

MEETING ROOM 25 (CONVENTION CENTER)

3:30 P.M.–4:30 P.M.

208
Adaptive Thinking: Using Tiered Tasks to Assess All Students

(General Interest) Session

The SMARTER Balanced Assessment Consortium's system includes computerized adaptive testing and performance tasks. This session explores how the use of tiered math tasks and adaptive thinking can yield valuable information for assessing student growth. Concrete examples demonstrate how new assessments support the goals of classroom differentiation.

Shelbi Cole
shelbi.cole@ct.gov
Connecticut State Department of Education, Hartford, Connecticut

Gail Pagano
Connecticut State Department of Education, Hartford, Connecticut

BALLROOM C (CONVENTION CENTER)

209
A Mathematical Carnival

(General Interest) Session

Step right up! Enter the wonderful world of recreational mathematics. The presenter will model enthusiastic teaching and present mathematics in a spirit of play. You will learn activities that enhance NCTM Standards and motivate students to become active learners. Come prepared to experience the beauty and fun of mathematics.

Charles Sonenshein
csunshine@fuse.net
Wright State University, Dayton, Ohio

BALLROOM B (CONVENTION CENTER)

210
Opportunizing Mathematics Learning in the Early-Years Learning Environment

(Pre-K–2) Session

Early-years learning environments can be a rich source of contextual and authentic math learning opportunities—we just have to know what we are looking for. What are the cornerstones of math development for early learners, and how can we effectively develop them in all learners? Come and explore strategies for achieving this goal at your learning place.

Lisa-Jane O'Connor
Primary Mathematics Association, Adelaide, Australia

Rod Nancarrow
Department of Education and Child Development, Adelaide, Australia

BALLROOM B (MARRIOTT)

211
Discover Mathlanding: Resources and Tools for Elementary-School Specialists and Teachers

(Pre-K–5) Session

Elementary school math leaders and teachers will learn about a new project called Mathlanding that focuses on improving the knowledge and instruction of elementary-level math. Developed as a resource to support professional development, Mathlanding harnesses the best of the Web for use as an effective, technology-driven tool.

Betsy Peisach
Maryland Public Television, Baltimore, Maryland

BALLROOM A (MARRIOTT)

3:30 P.M.–4:30 P.M.

212
Methods for Teaching Subtraction from Around the World

(Pre-K–5) Session

Difficulties with multidigit subtraction are pervasive. The U.S. subtraction algorithm is different from those taught in France, China, and elsewhere. Teaching an alternative method can address recurrent errors. Struggling students may more easily learn a different subtraction algorithm; seeing how these work can challenge your most able students.

Frances Stern
info@talkaboutmath.org
Mathematics Education Consultant, New York, New York

MEETING ROOM 26 (CONVENTION CENTER)

213
Visuals for Supporting Common Core State Standards Understanding

(Pre-K–5) Session

What can I do for my fourth and fifth graders who are still stumbling over second- and third-grade concepts? How can I use familiar tools more effectively for long-term understanding? This session will share techniques and strategies that have worked for the presenters with their struggling students.

Marianne Strayton
marianne.v.strayton@gmail.com
Clarkstown Central School District, New City, New York

Kristin Hanley
Clarkstown Central School District, New City, New York

MEETING ROOM 16 (CONVENTION CENTER)

214
Lights, Camera, Action: Choosing and Creating Videos That Teach

(3–8) Session

Do you ever hear, "Why do I have to learn this?" or "When am I ever going to use this?" The Internet is full of free videos to help students see math used every day in our world. This session will help you find the best of the best in video demos and real-world applications of math. You will also learn to create your own instructional videos.

Jeffrey Lay
Osage County Interlocal Cooperative, Hominy, Oklahoma

MEETING ROOM 17 (CONVENTION CENTER)

215
Got Linear Equations? Now, Let's See What They Mean

(6–12) Session

So you've taught slope, intercepts, slope–intercept form, and everything else, but do your students really understand how to apply it? This session demonstrates modeling required by the Common Core State Standards. I will show six modeling projects, along with project examples and rubrics.

Stacy Remphrey
sremphrey@ucfsd.org
Unionville-Chadds Ford School District, Kennett Square, Pennsylvania

BALLROOM E (MARRIOTT)

216
Technology and Mathematics: The Right Angle

(6–12) Session

Seven pieces of software + 113 digital images + 5 grade levels + 29 ideas + 37 videos = 61 minutes of prime technology fun. Computer technology can do much more than answer math questions. It can pose them, thereby enticing students to investigate and play with mathematical ideas. Aha moments and ideas abound.

Frank Sobierajski
The Math Place, Cato, New York

MEETING ROOM 24 (CONVENTION CENTER)

217
Making Sense of Similarity

(9–12) Session

Here are some classroom-tested activities and investigations that can deepen student understanding of similarity, a much-misunderstood concept at the core of geometry and of advanced mathematics. We will make important connections to arithmetic, fractions, proportions, algebra, and trigonometry.

Loring Coes
lcoes@aol.com
Rocky Hill School, East Greenwich, Connecticut

BALLROOM D (MARRIOTT)

3:30 P.M.–4:30 P.M.

218
Analyzing Developmental Algebra Responses: What Can It Teach You?

(9–12, Higher Education) Session

Join us for a session on algebraic errors. We have analyzed student responses to discover similar and distinct error patterns to developmental algebra problems. This presentation is semi-interactive and will offer insight into error analysis and how to overcome errors with your teaching. We will also discuss best practices for analysis.

Nathan Alexander
nna2106@tc.columbia.edu
Teachers College, Columbia University, New York, New York

(Ronny) Kwan Eu Leong
Teachers College, Columbia University, New York, New York

CAPITAL ROOM 3 (MARRIOTT)

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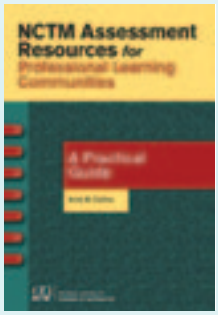

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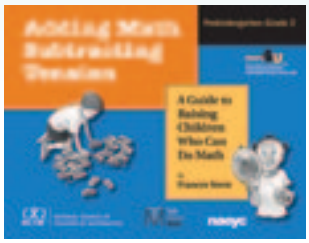

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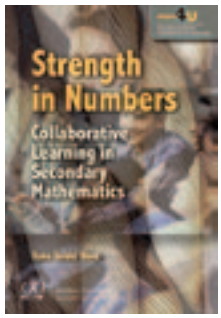

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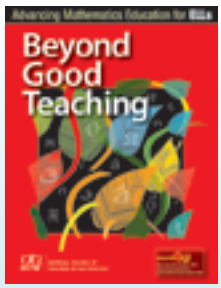

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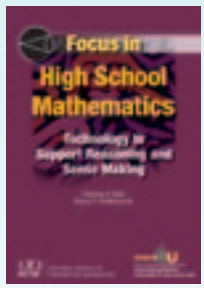

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Kichoon Yang
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RPM12

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Once you have joined NCTM, membership in an NCTM Affiliate is a terrific way to round out your professional involvement. Affiliates offer you an opportunity to link with teachers in your state, region, or city for support, professional development opportunities, community outreach, political advocacy, and information sharing.

A list of Partner Affiliates in the conference's region and the Affiliates-at-Large appears below. To join one of these groups, e-mail the Affiliate contact for membership information. NCTM has more than 230 Affiliates throughout the United States and Canada. For a list of all organizations affiliated with NCTM and information on how to join, please see the Affiliate Directory on the NCTM website.

About the Host Organizations

ATMNE: The Association of Teachers of Mathematics in New England (www.atmne.net)

ATMNE is a consortium of regional sections from the six New England states. Members of ATMIM (Massachusetts), ATOMIC (Connecticut), ATOMIM (Maine), NHTM (New Hampshire), RIMTA (Rhode Island), or VCTM (Vermont) are automatically granted membership to ATMNE. The purpose of ATMNE is to coordinate efforts of the regional sections in order to facilitate increased interest in mathematics, to secure improvements in the teaching of mathematics, to establish close relations among teachers and users of mathematics, and to link organizations of mathematics teachers in New England into one cohesive association.

ATOMIC: Associated Teachers of Mathematics in Connecticut (http://atomicmath.wildapricot.org)

The ATOMIC Mission is to ensure that every Connecticut student receives world-class education in mathematics by providing vision, leadership and support to the K–16 mathematics community and by providing every teacher of mathematics the opportunity to grow professionally.

Affiliate Information

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Connecticut Council of Leaders of Mathematics
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Delaware Council of Teachers of Mathematics, Inc.
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New York State Association of Mathematics Supervisors
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United Federation of Teachers Math Teachers Committee
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Pennsylvania Council of Teachers of Mathematics
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Pennsylvania State Mathematics Association of Two-Year Colleges
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Northern Virginia Council of Teachers of Mathematics
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Harvie Porter, hporter@mail.ruhs.k12.vt.us

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Murrel Hoover, murrel.hoover@teachersdg.org

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Sandra Cooper, sandra_cooper@baylor.edu

Association of State Supervisors of Mathematics
Charles Watson, chaswatson@sbcglobal.net

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Council for Technology in Mathematics Education
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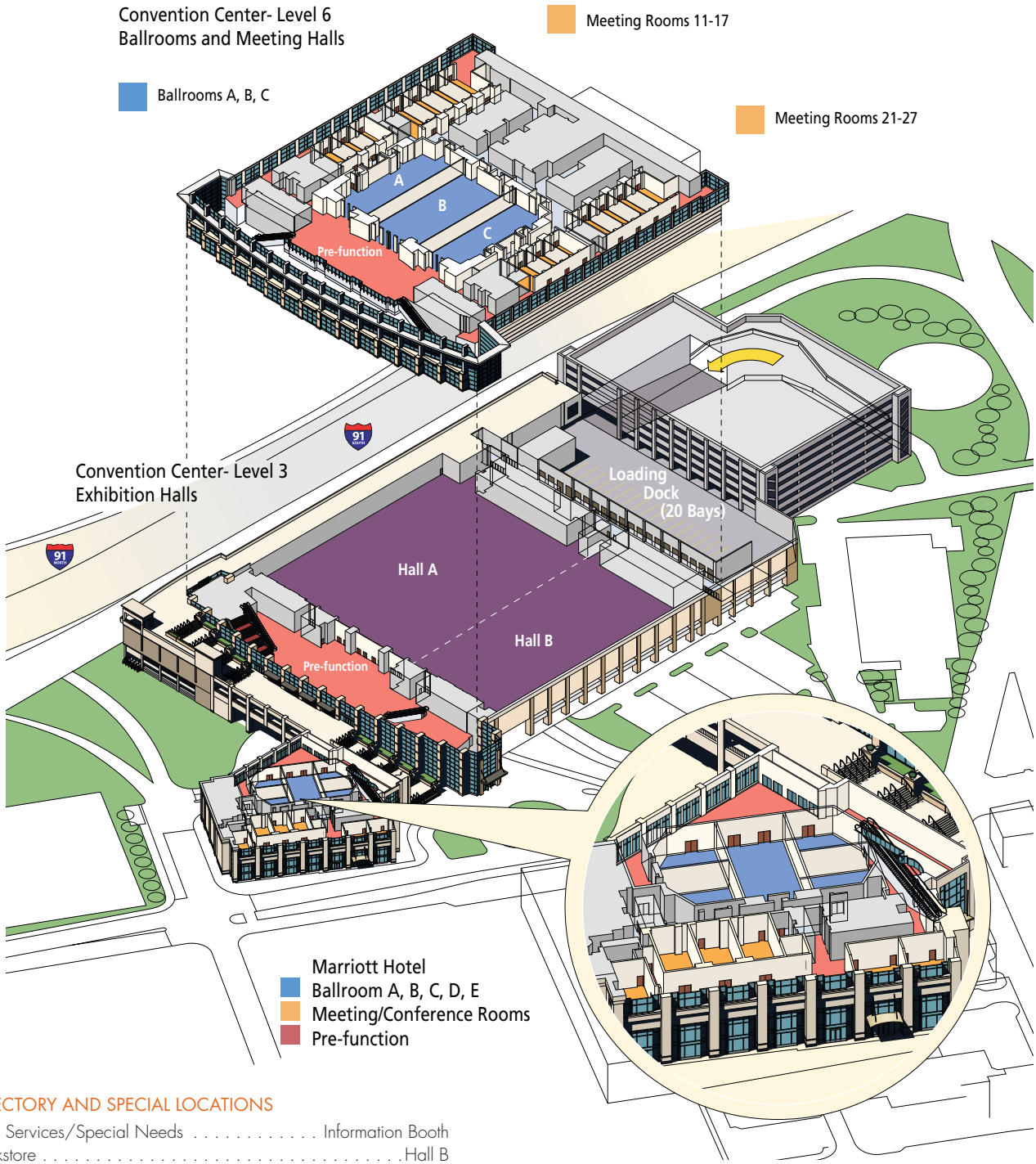

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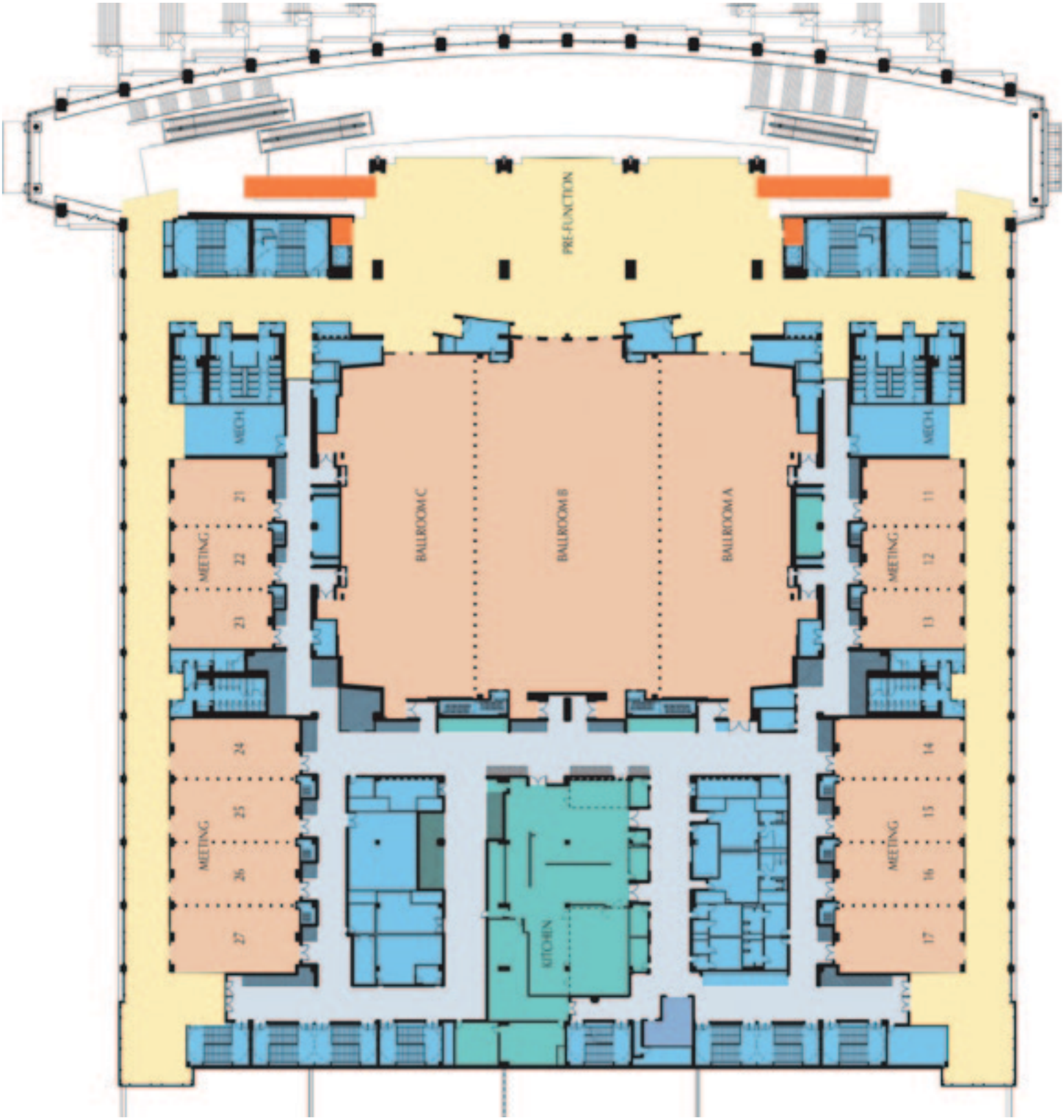

Floor Plans

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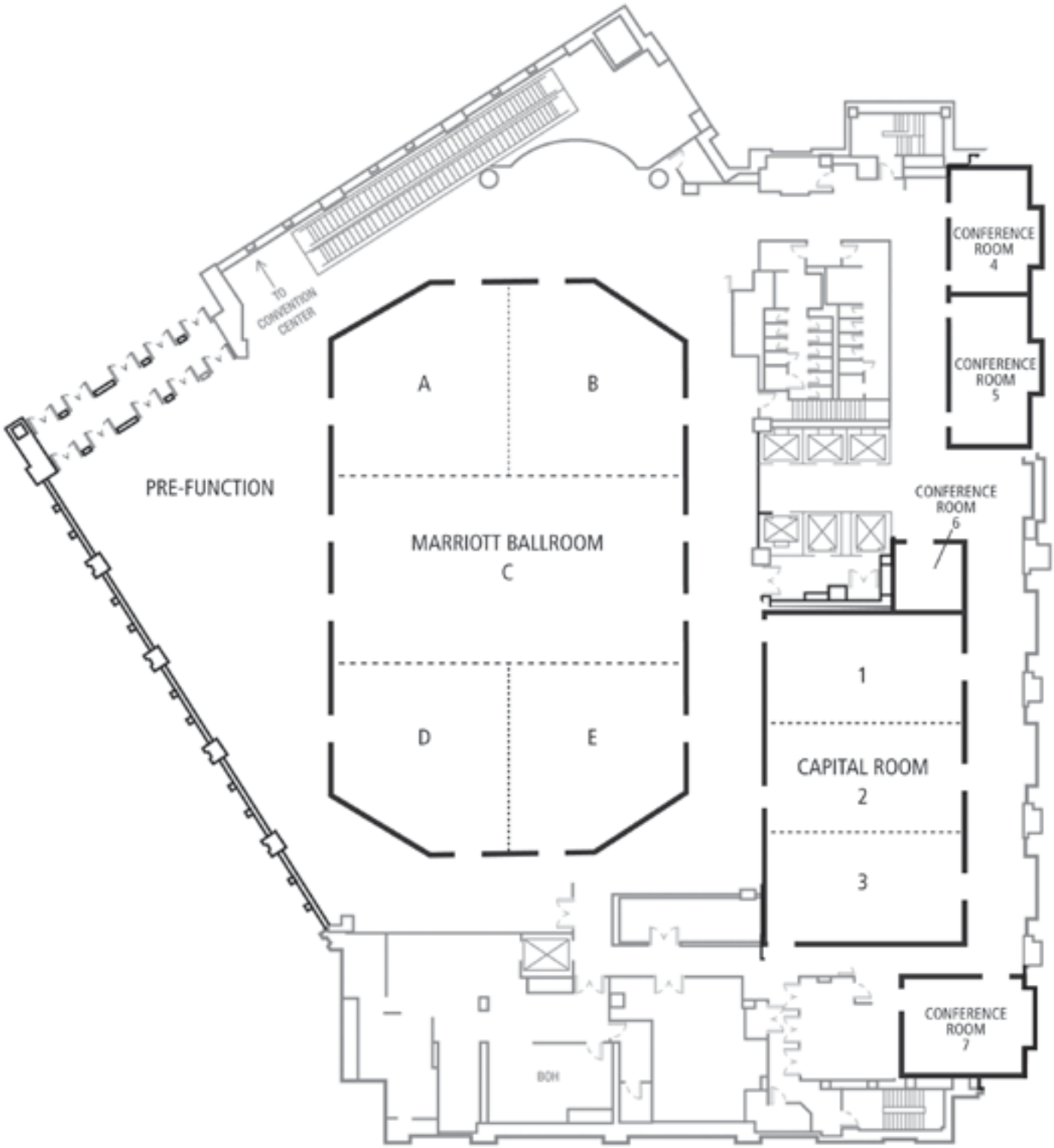

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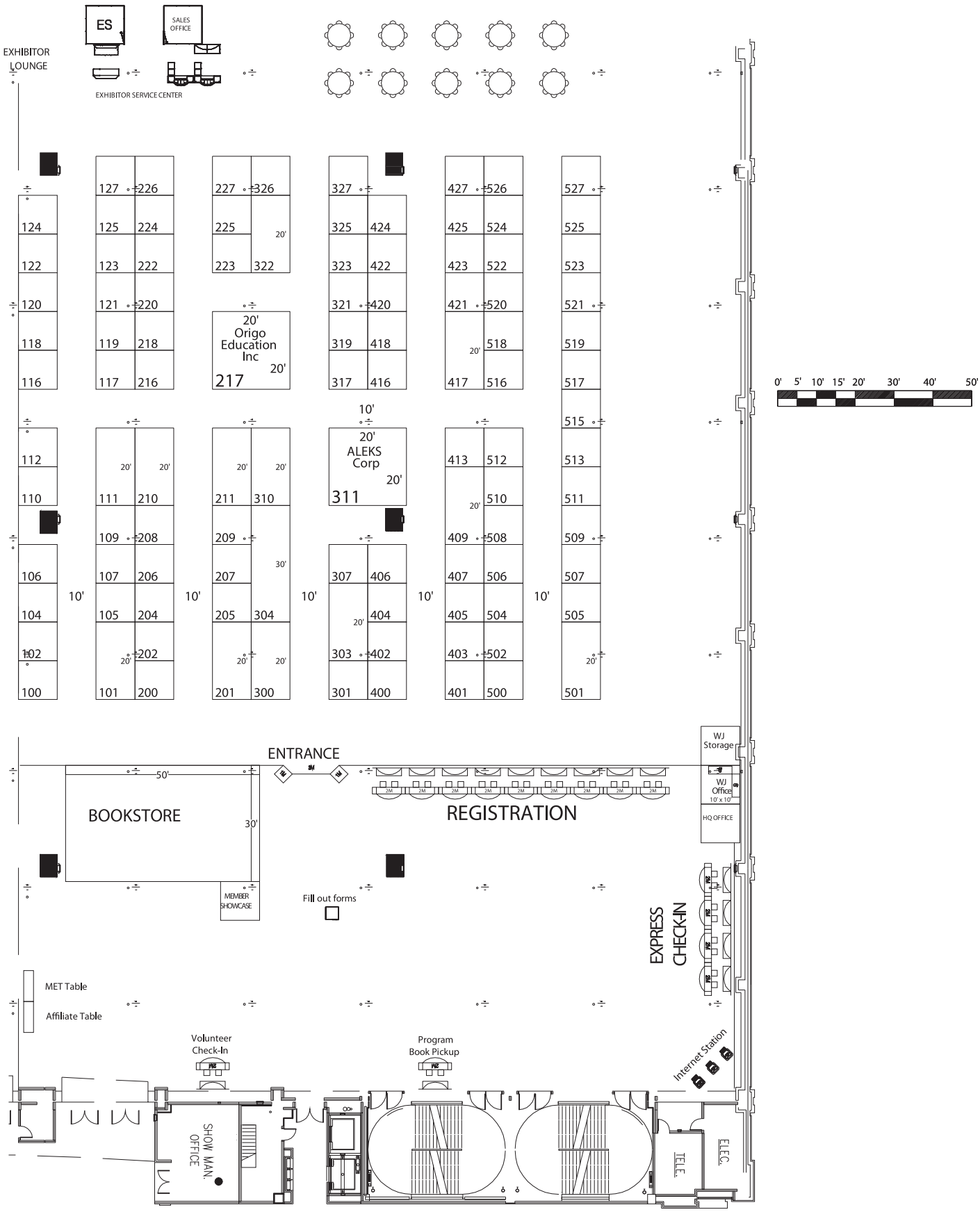

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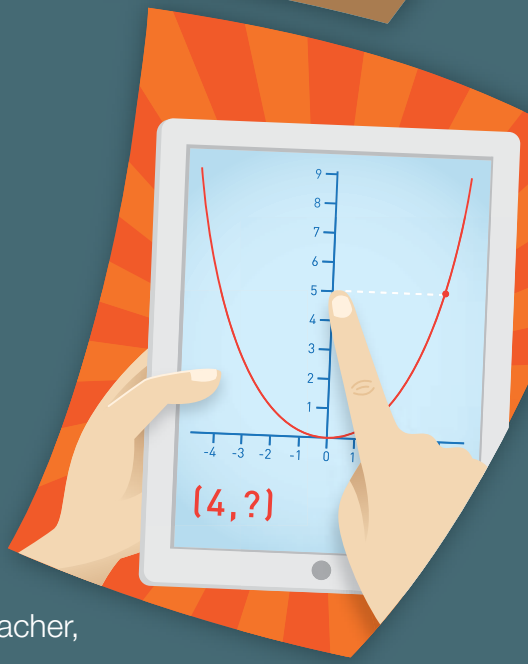

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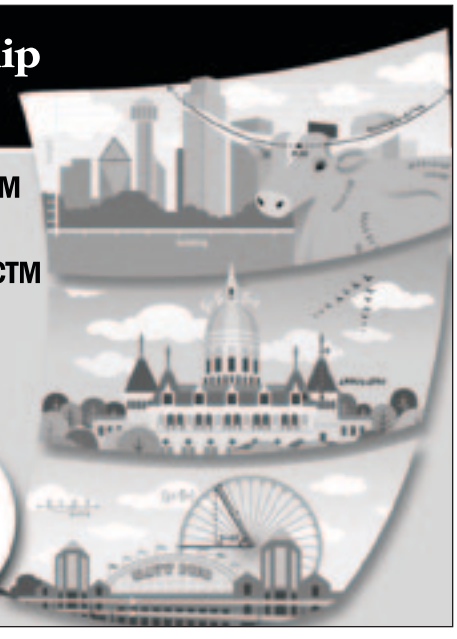

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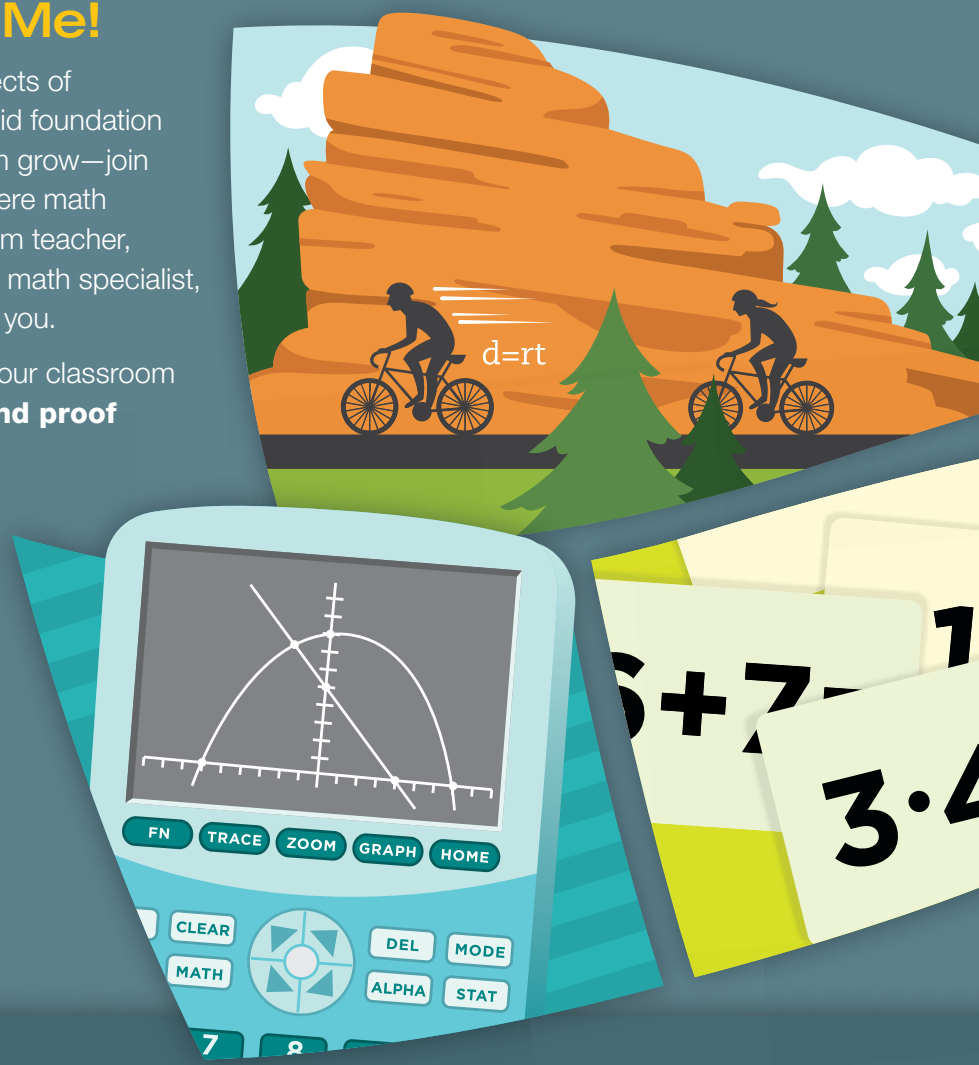

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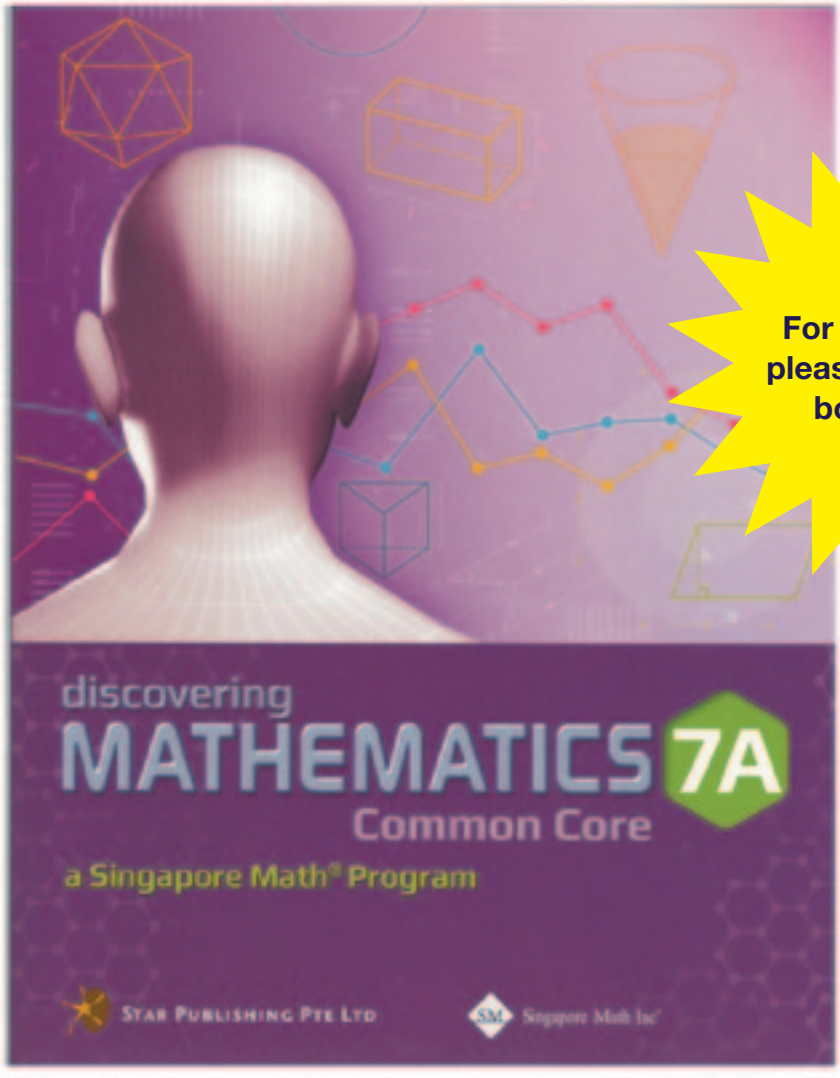

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