

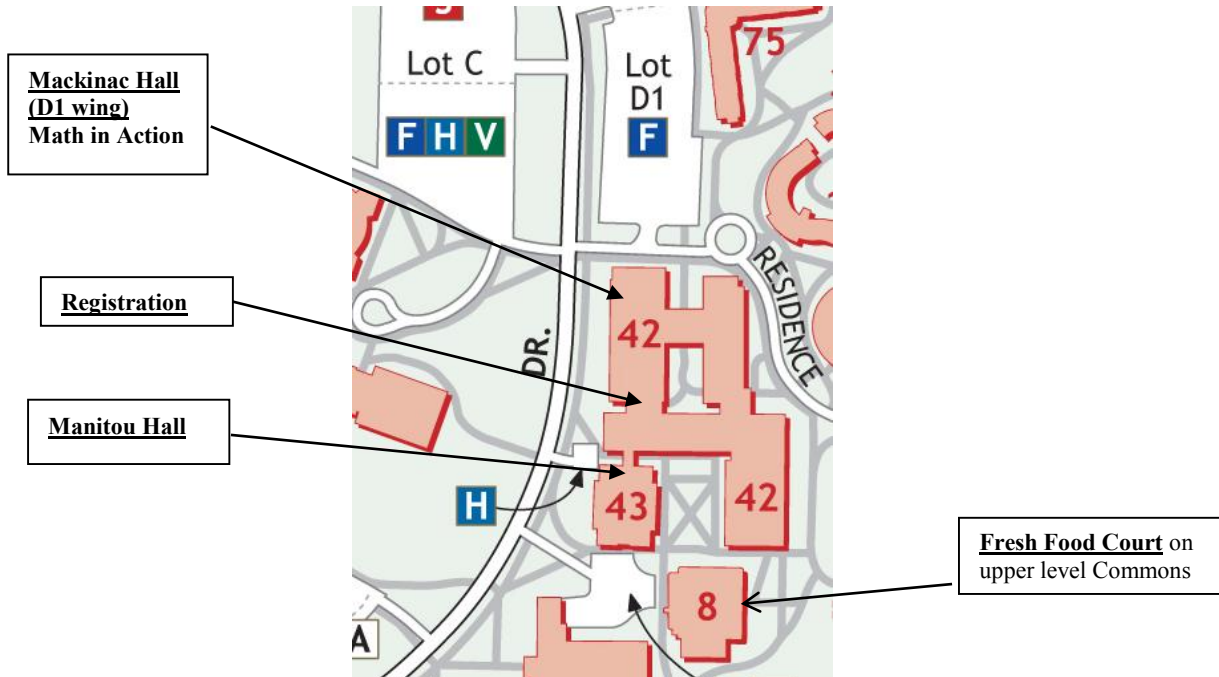
Math in Action

February 21, 2015

PROGRAM

Schedule

Morning			My Schedule	
Session	Start Time	Ending Time	Room	Session Title/Speaker
Registration	8:00 am	8:30 am		
A	8:40 am	9:40 am		
B	9:50 am	10:50 am		
C or Brunch	11:00 am	12:00 pm		
Afternoon				
D or Lunch	12:10 pm	1:10 pm		
E or Lunch	1:20 pm	2:20 pm		
F	2:30 pm	3:30 pm		



Session A 8:40 – 9:40 am

Session	Room	Grade	Session Description
A1	MAK D-1-129	K – 5	Math Workshop <i>Andrew Smith, Byron Center Public Schools</i> <i>Darcy Oberdorfer & Amanda TenBrink, Cedar Springs Public Schools</i> Building mathematical communities centered around the workshop model while using student data to drive instruction, solve problems, and deepen mathematical thinking.
A2	MAK D-1-221	K – 5	Geometric Adventures with Mathematics <i>Karen Novotny & Charlene Beckmann, Grand Valley State University</i> <i>Lauren Galasso, Andrea Pattison, & Megan Reiley, Grand Valley State University Students</i> Sample a variety of engaging hands-on geometry activities and games. Activities are aligned with the Common Core.
A3	MAK D-1-209	K – 5	Using Manipulatives to Develop Numbers and Operations <i>Kevin Dykema, Mattawan Consolidated School</i> How can I help my students understand the numbers and operations strand? See how using manipulatives can help your students understand concepts including number sense and strategies for operations.
A4	MAK D-1-117	2 – 5	Fraction Multiplication and Division using Virtual Measurement Models <i>Eryn Stehr & Nicholas Gilbertson, Michigan State University</i> Explore applets to support conceptual understanding of fraction multiplication using length, area, and volume models. Discuss how these applets can be used with students. (Please bring a web-capable device.)
A5	MAK D-1-215	4 – 8	Exploring Your Vision for Mathematics Education <i>Ruth Anne Hodges, Michigan Department of Education</i> What have we learned through the implementation of the CCSS in mathematics? What work still remains to be done? Join the discussion around successes and challenges still ahead.
A6	MAK D-2-233	4 – 12	Take Student Assessment Online <i>Tara Maynard, Zeeland Public Schools</i> Learn how to use thatquiz.org to assess students. Learn how to create short answer, multiple choice, and matching questions, and to assign and analyze assessments related to functions.
A7	MAK D-1-227	6 – 12	The Inquiry-Based Flipped Classroom <i>Zach Cresswell, Mount Pleasant Public Schools</i> I'll be sharing how my colleague and I collaborated to create an inquiry-based math classroom (in which students write, question, and collaborate) with flipped lectures. Our site: slmprecalc.weebly.com
A8	MAK D-1-233	6 – 12	NCSM's Great Tasks for Mathematics <i>Jason Gauthier, Allegan Area Educational Service Agency</i> Participants will engage in a mathematical task from NCSM's Great Tasks collection and discuss pedagogical implications of the task, delivery, and connections to other mathematics.
A9	MAK D-1-123	9 – 12	Solving Systems of Linear Equations: It Takes More Than One <i>Frances Harper, Michigan State University</i> We will explore a task from the Interactive Mathematics Program (IMP) that involves solving systems of linear equations by elimination. We will discuss how we adapted the task to promote equitable cooperative learning that supports students' mathematical thinking and problem solving.

Session B 9:50 – 10:50 am

Session	Room	Grade	Session Description
B1	MAN 123	K – 5	Elementary Keynote: Assessing for Understanding <i>Valerie Mills, Oakland Schools, NCSM President</i> The session will focus on using item types that help in assessing for understanding. The items are drawn from Smarter Balanced Assessment Consortium sample tasks. Many connections will be made to the Common Core State Standards and the spring testing.
B2	MAK D-1-215	3 – 12	The Towers Task: Developing Mathematical Arguments <i>Hope Gerson, Grand Valley State University</i> In this active presentation, we will do the towers task, watch young children arguing solutions, and discuss how one might use this task to teach children CCSS:MP3 mathematical argument.

B3	MAK D-1-209	6 – 8	Technology Based Strategies to Support Struggling Math Learners: Expressions and Equations <i>Kate Fanelli, Michigan’s Integrated Mathematics Initiative (MI)²</i> Understand how student difficulties impact mathematics learning. Apply a framework for designing lessons that address learning barriers, specifically technology-based strategies aligned with math content and student needs.
B4	MAK D-1-221	6 – 12	Rich Mathematical Tasks at the Secondary Level <i>Karen Meyers & Chelsea Ridge, Grand Valley State University</i> Interested in enhancing classroom tasks? Discussion will include characteristics of a rich task and cognitive demand. Participate and take home some example algebra tasks and tips for improving existing tasks.
B5	MAK D-1-227	6 – 12	Leveraging Technology to Foster Communication, Writing, and Collaboration in Mathematics <i>Zach Cresswell, Mount Pleasant Public Schools</i> <i>Tara Maynard, Zeeland Public Schools</i> We will share ways in which we leverage technology to foster quality conversations and writing opportunities in math class from both a middle school and a high school perspective.
B6	MAK D-2-233	9 – 12	Build Awareness of Geometric Properties through GeoGebra <i>Sandra Reavi, Culver Academies</i> Participants illustrate a Translation that shows the congruences created when parallel lines are cut by a transversal, a Rotation that shows Alternate Interior Angles are congruent, and they develop the Unit Circle.
B7	MAK D-1-233	9 – 12	NCSM’s Situations Project <i>Jason Gauthier, Allegan Area Educational Service Agency</i> We will examine the mathematics behind a classroom situation, “Why can’t you divide by zero?” We will discuss how to plan instructional moments around these situations as they arise.

Session C 11:00 am – 12:00 pm OR 6 – 12 Lunch

Session	Room	Grade	Session Description
C1	MAK D-1-209	K – 3	Mathematical Practices at Play <i>Kathy Coffey, Eastern Michigan University</i> <i>David Coffey, Grand Valley State University</i> The Mathematical Practices in the CCSS-M reflect what it means to "do mathematics." In this workshop, participants will explore how to support the development of number sense through play.
C2	MAK D-1-215	K – 3	Exploring Your Vision for Mathematics Education <i>Ruth Anne Hodges, Michigan Department of Education</i> What have we learned through the implementation of the CCSS in mathematics? What work still remains to be done? Join the discussion around successes and challenges still ahead.
C3	MAK D-1-129	K – 5	Building Math Communities through Problem Solving Opportunities <i>Andrew Smith, Byron Center Public Schools</i> <i>Darcy Oberdorfer & Amanda TenBrink, Cedar Springs Public Schools</i> Problem solving is a cornerstone of Math Workshop, building a culture of problem solvers in the classroom using data, CCSS, mathematical practices, and organic experiences from students’ lives.
C4	MAK D-1-117	4 – 8	Developing Understanding of Multiplication of Fractions <i>Nancy Mack, Grand Valley State University</i> We will explore what it means for students to develop a conceptual understanding of multiplication of fractions and examine factors that aid or hinder this development.
C5	MAK D-1-221	6 – 10	Geometric Adventures with Mathematics <i>Karen Novotny & Charlene Beckmann, Grand Valley State University</i> <i>William Brown, Gerald Mabrito, Katie Smith, & Nick Schweitzer, Grand Valley State University Students</i> Sample a variety of engaging hands-on geometry activities and games. Activities are aligned with the Common Core.
C6	MAK D-2-233	6 – 12	Formative Assessment Using the MARS Mathematics Assessment Project <i>Phillip Whitelaw, River Valley School District</i> Learn how to access and use lessons from the MARS Mathematics Assessment Project and other resources to gather formative data and give quality feedback.

C7	MAK D-1-227	6 – 12	Math Workshop Roundtable <i>Rusty Anderson, Kent Intermediate School District</i> <i>Jamie Stuart, Grandville Public Schools</i> Attendees will be involved in round table discussion focused around Math Workshop in grades 6–12. The focused discussion will be scaffolded by text read throughout the session.
C8	MAK D-1-123	6 – 12	Addressing Student Misconceptions of Static Representations with Dynamic Technology <i>Kevin Lawrence, Michigan State University</i> Add dynamic twists to classic static representations used widely in Algebra and Geometry textbooks and courses to help address possible student misconceptions by using GeoGebra, Geometer’s Sketchpad, and Desmos.
C9	MAK D-1-233	6 – 12	Integrating Engineering and Mathematics <i>Tamika McLean, Michigan State University</i> Participants will discuss how mathematics is used within engineering, and will leave with an understanding of how engineering and mathematics can be used in the classroom.

Session D 12:10 – 1:10 pm OR PreK – 5 Lunch

Session	Room	Grade	Session Description
D1	MAN 123	6 – 12	Secondary Keynote: Assessing for Understanding <i>Valerie Mills, Oakland Schools, NCSM President</i> The session will focus on using item types that help in assessing for understanding. The items are drawn from Smarter Balanced Assessment Consortium sample tasks. Many connections will be made to the Common Core State Standards and the spring testing.
D2	MAK D-1-215	K – 5	Elementary Math Games <i>John Golden, Grand Valley State University</i> Some fun and engaging games that provide experience with number sense and computation, with an eye towards your students developing their own games.
D3	MAK D-1-123	K – 5	Using Applets to Enrich Measurement Teaching <i>John Jack Smith, Eryn Stehr, & Nicholas Gilbertson, Michigan State University</i> Participants will first explore why understanding measurement is difficult for many students and then work with some applets designed specifically to address conceptual challenges. Bring your laptop or tablet.
D4	MAK D-1-117	K – 12	Understanding the Significance of Stereotype Threat in Mathematics <i>Kathy Coffey, Eastern Michigan University</i> This interactive session focuses on strategies for engaging all learners for optimal learning with special consideration given to stereotype threat and fixed mindset as potential barriers to engagement in mathematics.
D5	MAK D-1-209	2 – 5	Fractions Don’t Have to be Frustrating! <i>Kevin Dykema, Mattawan Consolidated School</i> Discover how manipulatives are a great tool to help your students understand fraction concepts, including equivalence, ordering, and operations, as well as utilizing fraction number lines.
D6	MAK D-1-227	6 – 12	The “F” Word and Other Words that Should Not Be Used in Math Class <i>Matthew Boland, Culver Academies</i> Accurate communication about mathematics is critical. The use of inaccurate vocabulary causes students to build inaccurate mental models. Come discuss these key words and alternatives.
D7	MAK D-1-233	6 – 12	Integrating Math, Science, and Literature with the TI-Nspire <i>Marian Prince, Andrews University</i> Use the CBR2 and TI-Nspire to explore middle school mathematics through Algebra 1 with Next Generation Science skills. Can be done with TI-84.

Session E 1:20 – 2:20 pm

Session	Room	Grade	Session Description
E1	MAK D-1-129	K – 4	Focusing on Common Core Process Standards through Inquiry Based Learning <i>Bethany Singer & Andy Ley, Byron Center Public Schools</i> An in-depth look at using inquiry based learning to incorporate the process standards into workshop style instruction including math worksites and math buddies.

E2	MAK D-1-215	K – 5	Math Exchanges and Math Workshop <i>Aimee Schwartz, Holly Areas Schools</i> How to integrate the mindset of “Math Exchanges” into your Math Workshop by guiding young mathematicians in small group meetings.
E3	MAK D-1-117	2 – 5	Fraction Multiplication and Division Using a Measurement Perspective <i>Nicholas Gilbertson & Eryn Stehr, Michigan State University</i> We will explore hands-on activities that use spatial measurement to support conceptual understanding of multiplication and division of fractions.
E4	MAK D-1-209	6 – 8	Developing Proportional Reasoning through Manipulatives <i>Kevin Dykema, Mattawan Consolidated School</i> Do your students need hands-on activities to develop their understanding of unit rates, proportional reasoning, and slope? See examples of how to use manipulatives to help develop these topics.
E5	MAK D-1-221	6 – 10	Functions in Adventures with Mathematics <i>Charlene Beckmann & Karen Novotny, Grand Valley State University</i> <i>William Brown, Gerald Mabrito, Katie Smith, & Nick Schweitzer, Grand Valley State University Students</i> Sample a variety of engaging hands-on function activities and games. Activities are aligned with the Common Core.
E6	MAK D-1-227	6 – 12	How Can the Use of Standards Based Grading Support a Growth Mindset in Students? <i>Jon Hasenbank & Pamela Wells, Grand Valley State University</i> What do students learn from assessments? From your feedback? What should they learn? Explore SBG and how it supports productive struggle, growth mindset, and students’ use of the CCSSM-SMPs.
E7	Cancelled		The Use of Mobile Technology for Assessment <i>Memet Bulut, Grand Valley State University</i> Implementing the WISE application to assess and give immediate feedback to students. WISE is the easiest way to accurately feedback to students. WISE is the easiest way to accurately grade and manage multiple choice quizzes and exams from your iPhone.
E8	MAK D-1-123	9 – 12	Bullseye! Planning and Conducting Experiments <i>Diann Reischman & Mary Richardson, Grand Valley State University</i> Two interactive activities will be discussed. One involves throwing darts at a dart board and one revolves around constructing a working crossbow out of office supplies.
E9	MAK D-1-233	9 – 12	Algebra 1 Essentials – A Tier 2 Support Initiative <i>Phillip Whitelaw, River Valley School District</i> Learn from the goods and not so goods of an Algebra 1 intervention class. Discuss identification of students, intervention practices, and transition from no tech to incorporating technology. Bring your own device.

Session F 2:30 – 3:30 pm

Session	Room	Grade	Session Description
F1	MAK D-1-209	K – 3	Developing Number Sense – Place Value <i>Kristin Frang, MAISD Regional Mathematics & Science Center</i> This session will explore teaching place value to promote students’ conceptual understanding of quantity and the use of flexible strategies that move towards double-digit addition and subtraction.
F2	MAK D-1-233	2 – 5	Transforming an “Ordinary” Activity into a STEM Project <i>Marian Prince, Andrews University</i> In a 3rd–4th grade classroom, simple (i.e., boring) directions on making a kite were transformed into a STEM project that integrated math, science, literature, and social studies.
F3	MAK D-1-221	3 – 5	Fractions in Adventures with Mathematics <i>Charlene Beckmann & Karen Novotny, Grand Valley State University</i> <i>Lauren Galasso, Andrea Pattison, & Megan Reiley, Grand Valley State University Students</i> Sample a variety of engaging hands-on fraction activities and games. Activities are aligned with the Common Core.
F4	MAK D-2-233	6 – 12	Taking the Linear Function to New Places <i>James L. Kratky, Western Michigan University</i> Participants will engage in rich tasks focusing on linear functions with the use of Core Math Tools. We will discuss pedagogical opportunities to use the Mathematical Practices with these tasks.

F5	MAK D-1-117	6 – 12	Graphing Calculator Apps: Viable Handheld Graphing Calculator Alternatives? <i>Kevin Lawrence, Michigan State University</i> Discuss results from a small study on teacher beliefs of using various graphing technologies for teaching and learning. Look at various graphing calculator software and apps on laptops and iPads.
F6	Cancelled		Algebraic Word Problems: What are Students Thinking? <i>Joanne Philhower, Michigan State University</i> This presentation will include results from a research study on how high school students approached and solved algebraic word problems. Participants can expect to solve the four word problems used in the study and discuss their own strategies.
F7	MAK D-1-129	9 – 12	Giving Accurate Formative Feedback <i>Matthew Boland, Culver Academies</i> Feedback to students must go beyond correcting technical errors. Formative feedback must also direct students to appropriate learning strategies. How can we provide more targeted feedback? Find out.
F8	MAK D-1-123	9 – 12	Exploring Categorical Data <i>Mary Richardson & Diann Reischman, Grand Valley State University</i> Two interactive activities will be discussed. One compares fortunes in different brands of fortune cookies and one tests for ESP.
F9	MAK D-1-215	9 – 12	Exploring Your Vision for Mathematics Education <i>Ruth Anne Hodges, Michigan Department of Education</i> What have we learned through the implementation of the CCSS in mathematics? What work still remains to be done? Join the discussion around successes and challenges still ahead.

THANK YOU!

- ❖ **PRESENTERS:** We appreciate your preparation, expertise, time, and consideration. Thank you for your high level of engagement in mathematics education and for sharing that expertise in enlightening us!
- ❖ **PARTICIPANTS:** Thank you for your curiosity, dedication, interest in your own learning and that of your students. Your participation today says a lot about you and is most appreciated!
- ❖ **JAN KUZEE** (GVSU Department of Mathematics): Thank you for taking care of all the details no matter how big or small; the program, registration, facilities, arrangements for refreshments, meals, tables, coat racks, and a million others. Without you behind the scenes, there would be no conferences!
- ❖ **STEERING COMMITTEE:** Your work in determining the experts to address major issues and mathematical concepts, contacting speakers, organizing the program, advertising, and volunteering during the day of the conference provide an enriching experience for all of us. Thank you for your many hours of thoughtful dedication.
- ❖ **VOLUNTEERS:** Making certain that everything goes smoothly on the day of the conferences in every session, helping speakers carry and distribute materials, orienting participants to the environment, and all the other things you do to support the conference is greatly appreciated!

Sincerely,

Charlene Beckmann and Jiras Hindeleh
Math in Action Co-Chairs

MATH IN ACTION STEERING COMMITTEE MEMBERS

Rusty Anderson, Kent Intermediate School District
Kristen Clemans, Grand Valley State University Alumna
Kristen Frang, Muskegon Intermediate School District
John Golden, Grand Valley State University
Lynn Helene, Ionia Intermediate School District
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