

<https://www.mathcircles.org/content/mathfest-2015>

Visit the NAMC/ SIGMAA-MCST MathFest Booth to try out different Math Circle activities and talk to Math Circle leaders about their Math Circle experiences.

Wednesday, August 5th, 2015

5:00 – 7:00 pm	Impossible Braids – prepared by James Tanton of the MAA Come see a six-foot version of the impossible! Let's make impossible braids together.
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Thursday August 6th, 2015

9:00 -11:00 am	Frogs and Toads – presented by Brandy Wieggers of Kittitas Valley Math Circle. A simple problem with lots of great questions that allow you to dig deeper and explore more.
1:00 - 3:00 pm	Recursive Mountain Climbing (counting) – presented by Sommer Gentry of United States Naval Academy This is a great activity from Tom Davis on discovering the recursive formula for Catalan numbers by counting mountain-shape formations. It's a tricky activity but with some nice conundrums and a fun payoff.
3:00 - 5:00 pm	Mathematical Balloons Balloons can be a great way to visualize different topological shapes and find properties in three dimensions. Come get your hands on some fun and squeaky tools.

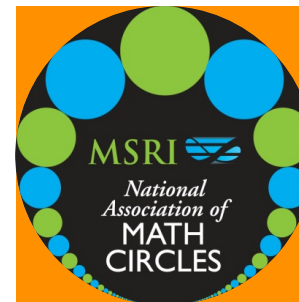
Friday August 7th, 2015

9:00 -11:00 am	*No Booth Activities - Visit the SIGMAA-MCST Special Session Math Circle Problems in Honor of the MAA's 100 th Anniversary 8:30 -11:05 am, Marriott Wardman Park, Washington 6
11:15 am -1:00 pm	Two Person Games – presented and prepared by Phil Yasskin of Texas A&M Learn, play and analyze two person games including the Subtraction Game, Nim and Tip the Die.
1:00 - 3:00 pm	Wolves and Sheep – activity by Joshua Zucker of Julia Robinson Math Festival A great problem to teach our students the importance of patience.
3:00 - 5:00 pm	Criss Cross – activity by Sam Vandervelde of Proof School This quick game provides students an introduction to the Euler Characteristic while they explore invariants.

6:00 – 8:00 pm. **NAMC Appetizer Reception** – Location TBA. Learn more at NAMC Booth.

Saturday August 8th, 2015

9:00 -11:00 am	Mathematical Tilings Consider the problem of covering a chessboard with dominoes, is this possible if I remove the two black corner squares of the chessboard?
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Discover
Math
Circles!

Math Students' Circles and Math Teachers' Circles bring K-12 students or K-12 mathematics teachers together with mathematically sophisticated leaders in an informal setting, after school, on weekends or during summers, to work on interesting problems or topics in mathematics. Math Circles combine significant content with an interactive setting that encourages a sense of discovery and excitement about mathematics through problem solving and exploration. Ideal problems are low-threshold, high-ceiling; they offer a variety of entry points and can be approached with minimal mathematical background, but lead to deep mathematical concepts and can be connected to advanced mathematics.



Programs of the National Association of Math Circles

AMS/MSRI Math Circles Library

A collection of great books for Math Circle organizers including wonderful problem collections, discussions of experiences in math teaching, and practical books

<https://www.ams.org/bookstore/>



Math Circle Funding

We fund novice, continuing, and exchange grants to sustain and grow Math Circle programs.

<https://www.mathcircles.org/content/math-circle-grants>



Workshops/ Training Programs

We partner novice Math Circle leaders with experienced mentors to develop and sustain Math Circle programs.

<https://www.mathcircles.org/content/mc-map>



For additional Math Circle Resources... Visit [mathcircles.org](https://www.mathcircles.org) and connect to the other members of the Math Circle Community

- * NAMC on Facebook: <http://www.facebook.com/MathCircles>
- * SIGMAA-MCST: <http://sigmaa.maa.org/mcst>
- * Math Teachers' Circle (MTC) Network: <http://mathteacherscircle.org>

MathFest Activities of interest to Math Circles

See online for more details, <https://www.mathcircles.org/content/mathfest-2015>

Wednesday August 5th

1:00 – 1:50 pm. Invited Lecture: *75 years of Math competitions*, Marriott Salon 2/3
 4:40 - 4:55pm. *Student Beliefs on Math Ability and Sense of belonging to a Math community*, Washington 1
 6:00 – 8:00 pm. NAMC/SIGMAA-MCST Activities begin in the MathFest Exhibit Hall.
 7:00 - 9:00 pm. *Cirque de Mathematiques*, Salon 2/3

Thursday August 6th

8:15 - 11:10 am. Session: Mentoring and Outreach Special Maryland B
 9:00 am – 5:00 pm. NAMC/SIGMAA-MCST Activities at MathFest Exhibit Hall.
 10:30 - 10:45 am. *Wonders of 11 Stars: Mathematical Cultivations through Paper Folding*, Washington 1
 10:50 - 11:05 am. *Teaching Validity and Soundness of Arguments using the Board game "The Resistance"*, Washington 1
 11:10 - 11:25 am. *Puzzles + Games=Mathematical Thinking*, Washington 1
 1:00 - 1:10 pm. *Exploring Mathematical Ideas through Origami*, Salon 1 Balcony B
 1:15 - 1:25 pm. *The Right Pascal's Triangle*, Salon 1 Balcony B
 2:00 - 2:10 pm. *How to Add Guards to an Art Gallery*, Salon 1 Balcony B

Friday August 7th

8:00 - 8:25 am. *A Partial History of Math Circles*, Washington 4
 8:30 -11:05 am. Session: Math Circle Problems in Honor of the MAA's 100th Anniversary, (See details on next page) Washington 6
 8:30 - 9:20 am. *A Multiplicity all at Once: Mathematics for Everyone Everywhere*, Salon 2/3
 9:00 am – 5:00 pm. NAMC/SIGMAA-MCST Activities at MathFest Exhibit Hall.
 1:00 - 4:55 pm. Session: Recreational Math, Washington
 1:20 - 3:35 pm. Session: Democratizing Access to Authentic Mathematical Activity, Maryland A
 2:00 - 2:15 pm. *Seeding Mathematical Interest in Inner-City Latino Students*, Maryland A
 3:30 - 5:00 pm. *Estimathon*, Maryland C
 6:00 – 9:00 pm. NAMC Appetizer Reception. For details visit Math Circle Booth.

Saturday August 8th

9:00 am – Noon. NAMC/SIGMAA-MCST Activities at MathFest Exhibit Hall.
 1:00pm-1:50pm. *Special Presentation for High School Students, Parents, and Teachers: A Dozen Proofs that 1=2: An Accessible and Quirky Overview of Mathematics for K12 Teachers and Their Students*, Salon 2
 1:00 - 3:15 pm Session: Recreational Math, Washington
 2:00pm - 3:30 pm. SIGMAA-MCST Math Circle Demonstration, Maryland A
 4:00pm - 5:30 pm. Math Wrangle, Maryland A

FRIDAY AUGUST 7th SIGMAA-MCST Sponsored Special Session <http://sigmaa.maa.org/mcst/>

Math Circle Problems in Honor of the MAA's 100th Anniversary

8:30 -11:05 am, Marriott Wardman Park, Washington 6

- 8:30 AM - 8:45 AM
Coordinating a State-Wide Math Contest
 Abraham S. Mantell, Nassau Community College
- 8:50 AM - 9:05 AM.
Abbot and Costello Numbers
 Mary Garner, Gateway Community Math Center
 Virginia Watson, Gateway Community Math Center
- 9:10 AM - 9:25 AM
Exploring the 100 (and 1) Spaces of Prime Climb in a Math Teachers' Circle
 Jialing Dai, University of the Pacific
 Christopher Goff, University of the Pacific
 Sara Malec, Hood College
 Dennis Parker, University of the Pacific
- 9:30 AM - 9:45 AM.
Growing Math Circles for the Next 100 Years
 Brandy Wiegars, Central Washington University/National Association of Math Circles
 Diana White, University of Colorado, Denver/National Association of Math Circles
- 9:50 AM - 10:05 AM
100 Problems Involving the Number 100
 James Tanton, MAA
- 10:10 AM - 10:25 AM.
The Cell Phone Dropping Problem
 Japheth Wood, Bard College
 Philip B. Yasskin, Texas A&M University
- 10:30 AM - 10:45 AM
From 100s in a Number to 100 Squares on a 10x10 Checker Board (Or Are There More?)
 Victoria Kofman, Quality Engineering Education, Inc.
- 10:50 AM - 11:05 AM
Spinout, The Brain, Gray Code, and 100
 George McNulty, University of South Carolina
 Nieves McNulty, Columbia College
 Douglas B. Meade, University of South Carolina

