

## RESOURCES

**Math Circles** \_\_\_\_\_ ([MathCircles.org – Connecting Mathematicians of All Ages](http://MathCircles.org))

A Math Circle is a group of students, teachers, mathematicians, and anyone who is interested in exploring and playing with mathematics in a collaborative, supportive environment. The National Association of Math Circles at [MathCircles.org – Connecting Mathematicians of All Ages](http://MathCircles.org) publishes resources, schedules, and other information about the more than 200 Math Circles across the nation. Each Math Circle often publishes activities that they've enjoyed, so there is quite a wealth of information on games, puzzles, explorations.

Here are some specific Math Circle sites that we've found particularly useful:

- Math games from University of Kentucky Math Circle [circle2017withnotes.pdf \(uky.edu\)](#)
- NIM [https://wiki.math.wisc.edu/images/Nim\\_sol.pdf](https://wiki.math.wisc.edu/images/Nim_sol.pdf)
- Navajo math circle puzzles [Puzzles – Navajo Math Circles](#)
- Alliance of Indigenous Math Circles [Issue 51—Magic Squares Redux—full color PDF – Alliance of Indigenous Math Circles \(aimathcircles.org\)](#)
- Math puzzles for grade 6 from University of Waterloo [Junior6\\_Oct10\\_Soln.pdf \(uwaterloo.ca\)](#)
- Math puzzles for grades 7/8 from University of Waterloo [Junior78\\_Oct4.pdf \(uwaterloo.ca\)](#)
- Games and puzzles for grades 9 and 10 from University of Waterloo
  - [Intermediate\\_Feb26.pdf \(uwaterloo.ca\)](#)
  - [Intermediate\\_Mar04.pdf \(uwaterloo.ca\)](#)
  - [Intermediate\\_Mar11.pdf \(uwaterloo.ca\)](#)
- Games and puzzles for grades 11 and 12 from University of Waterloo
  - [Senior\\_Nov11.pdf \(uwaterloo.ca\)](#)
  - [Senior\\_Oct10.pdf \(uwaterloo.ca\)](#)
  - [Senior\\_Oct17.pdf \(uwaterloo.ca\)](#)
  - [Senior\\_Oct24.pdf \(uwaterloo.ca\)](#)
  - [Senior\\_Nov18.pdf \(uwaterloo.ca\)](#)
- Emmy Noether Circles University of Waterloo [CEMC - Web Resources - Emmy Noether Circles - Mathematics Contests - University of Waterloo \(uwaterloo.ca\)](#)
- AIM Math Teachers' Circle Archives [AIM Math Teachers' Circle \(aimath.org\)](#)

The Julia Robinson Math Festivals were started in 2007 by Joshua Zucker ([Joshua Zucker – MathCircles.org](#)), formerly a middle and high school math teacher, and Nancy Blachman ([Nancy Blachman's Biography \(variablesymbols.com\)](#)), computer scientist and entrepreneur, to provide a non-competitive atmosphere in which students can play games, solve puzzles, and explore interesting mathematics. On the JRMF site, they provide a wealth of games and puzzles with teach and student instructions in both English and Spanish, as well as interactive apps to play games online ([Home | JRMF](#)). Some old games can be found at [Master Library 2020 - Google Sheets](#).

**James Tanton**[Think Cool Math! : Thinking Mathematics! \(jamestanton.com\)](#)

James Tanton is a mathematician and former high school teacher with a very engaging and charismatic teaching style and a contagious passion for exploring mathematics. He is the Mathematical Association of America's Mathematician-At-Large, co-founder of the Global Math Project ([Home - Global Math Project](#)) and author of many books and videos ([Think Cool Math! : Thinking Mathematics! \(jamestanton.com\)](#)) featuring interesting mathematical recreations. He also created a series of short videos entitled Curriculum Inspirations (<https://maa.org/math-competitions/teachers/curriculum-inspirations>) published by the Mathematical Association of America.

**CryptoClub**[CryptoClub Project \(uchicago.edu\)](#)

CryptoClub is a site created by the University of Chicago for middle school teachers and their students who want to explore the mathematical techniques of encrypting and decrypting secret messages. It includes an interactive website with games and other activities (<https://cryptoclub.org/>).

**MoMath**[National Museum of Mathematics- \(momath.org\)](#)

The National Museum of Mathematics has online events and recordings of past events. You may have to become a member to participate.

- MoMath Events <https://momath.org/upcoming-events/>
- MoMath Videos with Joshua Zucker [Videos – Events with Joshua Zucker – National Museum of Mathematics- \(momath.org\)](#)
- MoMath Videos with James Tanton [Videos – Events with James Tanton – National Museum of Mathematics- \(momath.org\)](#)
- All MoMath videos [All Videos – National Museum of Mathematics- \(momath.org\)](#)

## Other Game and Puzzle Sites

- Krazy Dad <https://krazydad.com/>
- Brainteaser <https://braineaser.com/>
- Math Pickle <https://mathpickle.com/wp-content/uploads/2023/04/The-Infinite-Pickle-web-May-2023.pdf>
- Penney's game [Penney's game - Wikipedia](#)
- [Maths Puzzles \(transum.org\)](#)
- Magic squares
  - [Magic Square Worksheets \(math-salamanders.com\)](#)
  - [Magic Square Worksheets \(puzzles-to-print.com\)](#)
- Math games <https://www.mathsisfun.com/games/>
- Math Fun Facts by Francis Su [Math Fun Facts \(hmc.edu\)](#)
- [Interactive Mathematics Miscellany & Puzzles \(cut-the-knot.org\)](#)
- Online hex: <https://lazymuttgames.com/games/Hex/>
- Online SET: [Set – Play Online \(playset.netlify.app\)](#)
- Online Every Buddy: [tsnyder701.github.io](https://tsnyder701.github.io)
- Online Zoni: [slowpokegames.github.io](https://slowpokegames.github.io)
- Games on a Torus: [Torus Games \(geometrygames.org\)](#)
- [The Shape of Space: Surfaces - Torus Tic-Tac-Toe \(uiuc.edu\)](#)
- Card Flip Magic Trick: [https://classic.csunplugged.org/documents/activities/error-detection/unplugged-04-error\\_detection.pdf](https://classic.csunplugged.org/documents/activities/error-detection/unplugged-04-error_detection.pdf)