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5	6	7	8
9	10	11	12
13	14	15	

## About the program

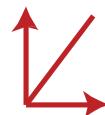
In the late 90's, a small network of extracurricular programs called Math Circles began to spring up in various places around the country. These programs, based partly on a model developed in Eastern Europe, focused on the process of discovery and open-ended exploration, and were designed to introduce students to the deeper kinds of mathematical thinking that are absent in most standard curricula. The University of Utah Math Circle, now in its eighth year, is one of the best established Math Circles in the country.



## Meeting times

The Math Circle meets the third Saturday of each month during the academic year in the LeRoy Cowles Building on the University of Utah campus.

A complete schedule of the time and place for each meeting, including topics for discussion, can be found at our webpage: [math.utah.edu/mathcircle](http://math.utah.edu/mathcircle)



## Who can join

The University of Utah Math Circle is open to high school students (and, in exceptional cases, younger students) who are interested in expanding their mathematical horizons. Interested parents are welcome to attend.



## Topics

Some of the topics covered in previous years include: the theory of the Rubik's cube, construction of magic squares, four-dimensional geometry, knot theory, population genetics, the topology of surfaces, fractals, number theory, and Catalan numbers. Check out the Math Circle website to see what ideas the group will be working with this year.



## Reasons to join

In addition to exposure to exciting material far outside that encountered in a regular classroom, students joining the University of Utah Math Circle have the unique opportunity to interact with professional mathematicians in an

informal setting. The program also features monthly contests with prizes, as well as preparation for other competitions (like the State Math Contest). And thanks to the generous support of the National Science Foundation and the Department of Mathematics, there is no cost to participate in the Math Circle.

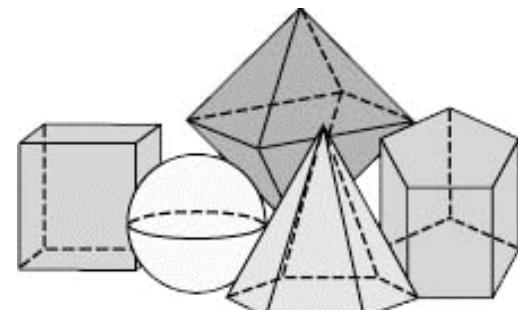


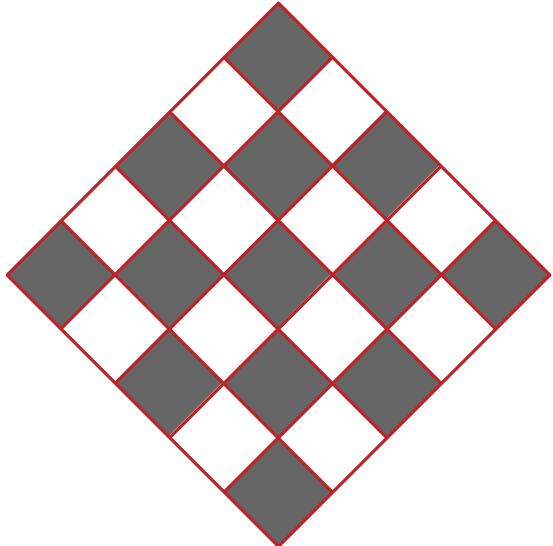
## Application process

You'll need to apply, obtain a recommendation from a math teacher, and a parental consent form, all available at our website:

[www.math.utah.edu/mathcircle](http://www.math.utah.edu/mathcircle)

The application and teacher recommendation are online. Please print the parent consent form and bring the signed form on the first day.





On a 5-by-5 chessboard, place 5 wolves (which can move like queens) and 3 sheep so that all the sheep are safe from the wolves.



## Contact Information

Current year contact information can be found on our website:  
[www.math.utah.edu/mathcircle](http://www.math.utah.edu/mathcircle)

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15  
16 17 18 19 20 21... 98 99 100

Cross two numbers in this list and replace them by the sum of them with their product. For example, if you choose to cross 5 and 13 you will replace them by  $5+13+5*13$ . Continue until there is one number left. What are all possible final numbers?

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Math Circle is made possible by support from:

*EnergySolutions* Foundation

National Science Foundation

Department of Mathematics

Families of Math Circle participants

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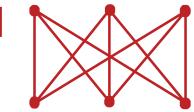
Partnered with **Utah ARML**

**Email:** UtahARML@gmail.com

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# Math Circle

A free program for 9th-12th graders interested in exploring new mathematical topics and challenging problems.