

# MathPath 2013

A Residential Summer Camp  
for Middle-school Age Students (11-14 years)  
Showing High Promise in Mathematics

This year at  
**Macalester College, St. Paul, MN**  
Sunday, June 30 - Sunday, July 28, 2013

[www.mathpath.org](http://www.mathpath.org)



“MathPath is one of a few mathematics camps in North America that explore mathematics in depth and make it fun. It is the only such program for the middle school age range. In every respect, it is a great summer camp, complete with games and field trips, where children inevitably make new friends with similar interests.”

*Greg Kuperberg, Professor of Mathematics,  
University of California at Davis*

“Far and away the best middle-school math program in the country for budding mathematicians. Most other camps either offer acceleration (taking some standard high school math classes over the summer) or preparation for Mathcounts and similar competitions. MathPath offers genuine enrichment, allowing kids to learn interesting high-level math (from interesting high-level mathematicians) that they would not be exposed to otherwise.”

*Lorenzo Sadun, Professor of Mathematics,  
University of Texas at Austin*



Macalester College  
Saint Paul, Minnesota

## MathPath® - "Bright & Early"®



# MathPath 2013 Qualifying Test: Problem #1

1. a) Prove: if every angle of a polygon is acute, then the polygon is a triangle. That is, it can't be a quadrilateral, or a pentagon, or any  $n$ -gon with  $n > 3$ .
- b) If a polygon has one right angle and otherwise acute angles, how many sides can it have? Prove your answer.

- c) If a polygon has at most one non-acute angle, how many sides can it have?

In your proofs, you may use standard facts about angles in polygons.

For the rest of the questions, and for the detailed instructions, see [www.mathpath.org/Test/MP13test.pdf](http://www.mathpath.org/Test/MP13test.pdf). If you can make good progress on at least 3 problems, you should definitely apply.

## Contact Information:

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## Comments of Students from Earlier Years

"No place is as awesome as MathPath, but I will have to start figuring out what to do with my summers now."

From a 3-year attendee now too old

"MathPath [sic] should be longer, maybe infinitely long."

"If you make it through the challenging entry test, you are in the best place."

"At first I wasn't sure I wanted to come, but now I wish I never had to leave."

"MathPath was great. I almost forgot about my family."

"I love the comradeship I felt here."

"This was my first sleepaway camp and I had a really awesome time."

## Comments of Parents of Students from Earlier Years

"MathPath has been a life-changing experience for both my son (2009 and 2010) and my daughter (2007 and 2008). They finally found a community where they fit in and are valued...."

"For students who are ready mathematically, MathPath pays them great respect by giving them math that is broad and deep. Socially, what a joy to see them find each other... For us parents, not having our kids with us for 4 weeks was way too long. For our kids, 4 weeks away at camp was way too short."

## MathPath 2012 Student Comments

"An awesome camp where math nerds go to do crazy random stuff with other math nerds. And do math, of course."

"Before you go to MathPath you think you have a vast knowledge of math, then you learn the definition of vast.."

"MathPath is an opportunity to discover that there is life outside of trig identities and derivatives. It broadens your understanding of math and shows you the true beauty of mathematics. As I learned in this camp, math is an art, not a competition."

"MathPath is the best time you haven't had yet."

"It's like being part of a giant, fun, smart family for a month."

"MathPath was the best camp I have ever gone to! I wish I could stay here forever, but I miss home too. ... I wish that it was school."

"I've never been away before, and MathPath was, I think, a perfect camp for me and for other people who have never been away from home."

## MathPath 2012 Parent Comments

"He found his tribe at MathPath!"

"If you have the type of child that needs math in their life, and you know exactly what I'm talking about, then you need to send them to MathPath. My son was 'with his people' there. He was 'campsick' when he got home--never homesick."

"My daughter loved being with 100 other math nerds. She came home convinced that it is not only OK, but cool to be a girl who likes math."

"Dorm life is wonderful, having single occupancy room provided children a calm environment for good rests. The kids attending the camp all share great passion for math, this make my child feel at home right at the start of the camp."

"My daughter attended this camp in 7th and 8th grades. She was in tears on the way back from the camp in her last year, because she would be no longer eligible to attend the camp."

"MathPath is surprisingly girl friendly--pink day, hair day, nail painting etc were all part of the fun, in addition to fun math."

Teachers:  
Want to participate  
at MathPath?

Please visit  
[www.mathpath.org/  
FacultyandStaff.htm](http://www.mathpath.org/FacultyandStaff.htm)



## Why MathPath?

MathPath is the international mathematics summer program for very gifted middle-school age students. It differs in five important ways from the gifted summer programs run by Johns Hopkins, Duke, Stanford, and other universities:

- I. The MathPath program is designed for "math persons"; everybody here is studying just math.
- II. Unlike programs that are essentially courses in a subject, a MathPath student will engage in several strands of interactive sessions in mathematics during a four-week period and emerge from the program with a broader and deeper understanding.
- III. While many programs emphasize acceleration, MathPath emphasizes enrichment – topics and methods of thinking that often don't appear in the school mathematics curriculum at all.
- IV. Sessions at MathPath are led by distinguished professors who are experts in instructing mathematically very gifted middle-school age students.
- V. MathPath is a welcoming environment for kids who are really good at math, whether or not they are good at sports, or social skills, or other things that many kids do easily.

MathPath is also a place for students to improve their competitive problem solving. Courses on MATHCOUNTS and AMC exams are a regular feature. Depending on student and faculty interest, there are sessions on AIME, USAMO, Mandelbrot, etc.

Above all, MathPath is a summer gathering place for middle-school age students showing high promise in mathematics, including home-schooled students. Their greatest social need is to meet peers, and their greatest intellectual need is to receive the right challenge and reinforcement of their love of math. If you have a child or a student like this, please encourage him or her to apply!

## How to apply

Go to [www.mathpath.org/apply.htm](http://www.mathpath.org/apply.htm) for all instructions. You need to submit an online application form, two recommendations, and the Qualifying Test. We do rolling admissions and in 2012 MathPath filled up by late April.

For much more information, including typical course topics, the daily schedule, information on faculty and guest speakers, and many more quotes and photos, go to [www.mathpath.org](http://www.mathpath.org).

For full consideration we encourage you to apply early. Early admission also allows you to plan your summer in advance and obtain better airfare. In addition, there is a 1% fee reduction for every month that your fee is paid early.

## Student Care

At MathPath, the safety and wellbeing of our students, at camp and getting to camp, is a top priority. Here's what one parent said on our anonymous post-camp survey.

"This is my child's first boarding summer camp ever and we didn't have any concern about the safety and wellbeing of my child during the entire camp. MathPath is a well organized and established camp, and we were well informed since the very beginning of what was going on in camp."

For details about our student care, see <http://www.mathpath.org/care.htm>

## Camp Fees

The comprehensive fee is \$4500. Financial aid and merit scholarships are available. See [www.mathpath.org/fees.htm](http://www.mathpath.org/fees.htm).

## Travel to Camp

Many of our students fly as Unaccompanied Minors. See [www.mathpath.org/gettingthere.htm](http://www.mathpath.org/gettingthere.htm) for details and tips about safe travel for youngsters. The camp airport is Minneapolis/St. Paul International (international flight code MSP).