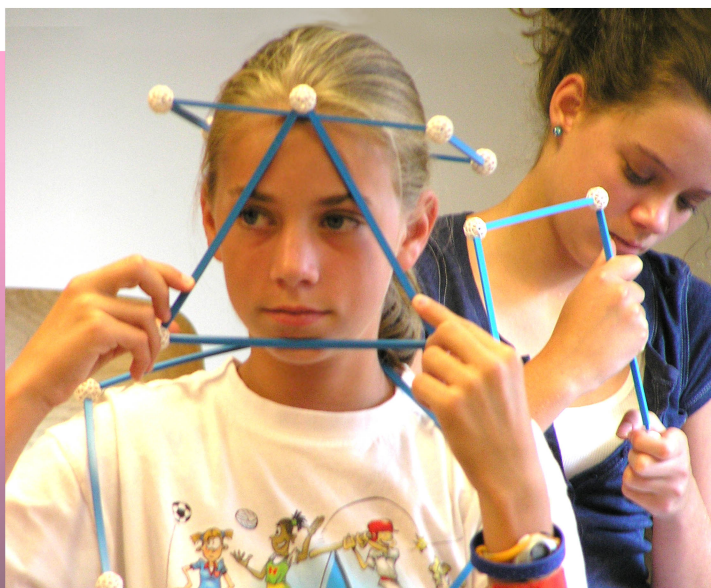


Girls and Mathematics

Summer Day Program



Sponsored by:
National Science Foundation
University of Virginia

A special thanks to the Department of
Mathematics, the College of Arts and Sciences,
and the Women's Center for their assistance.

Girls and Mathematics
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University of Virginia
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Charlottesville, VA 29904-4137

Photographs: Fay Miller-Ferneyhough; Irina Mitrea
Brochure: Julie Riddleberger



The Girls and Mathematics Day Program is designed to provide participants with a variety of mathematical experiences to extend their understanding and knowledge in mathematics. Emphasis will be placed on problem solving. The covered topics are: **USING INTEGERS** and **LEARNING TO COUNT**.

The program is for girl students who were enrolled in the 6th or 7th grade during the previous academic year and who have the recommendation of their mathematics teacher.



Sara Margaret Bebel (Jack Jouett Middle School)
"I am interested in mathematics because it is fun and will help me in the future. [I enjoyed most] when we built the polyhedrons because I like working with my hands."



Jessica Boling (Walton Middle School)
"I am interested in mathematics because numbers just come easily to me. ...I liked most the mathematical puzzles and mind benders because I like working in a group together and trying to figure out problems."



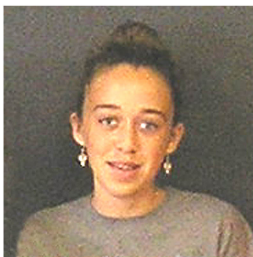
Angela Fernandez Pineros (Walton Middle School)
"I enjoyed most the tangrams because they were fun but hard...it felt good when you figured it out..."



Ashton Ferneyhough (Walker Upper Middle School)
Ashton's mom: "Ashton came home every day talking about new things she has learned and the fun ways in which she learned them. The very first day she googled math terms she hadn't learned before."



Libby Firer (Walton Middle School)
"I liked most the probability problem sessions because word problems were involved."
Libby's mom: "Libby enjoyed all the tangrams, competitions, and challenges of the week. Excellent communication and teaching instruction from all."



Amanda Herring (Buford Middle School)
"I want to be a math teacher--math is what I am good at."



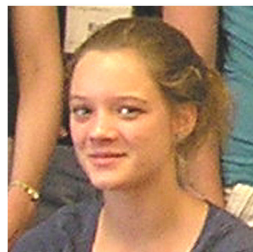
Sarah Hooper (Village School)
"I am interested in mathematics because it is fun, and I like problem solving."
Sarah's mom: "I think the content and variety of topics discussed were great. The environment in class was very open and not intimidating."



Christine Houff (Henley Middle School)
Christine and Katharine's dad: The program gave them a different view of mathematics...They felt it was special and treated as such. The teachers went out of their way to be accommodating.



Katharine Houff (Henley Middle School)
"I thought this week was a lot of fun. I liked most the Jeopardy games because of the scores and the fun bells."



Jackie Mallon (Burley Middle School)
Jackie's mom: "The program let her see other girls are involved in mathematics in a positive way."



Chelsea Payne Brooke (Walton Middle School)

Chelsea's mom: "I think the program was a great warm-up for the upcoming year. She talked about it often and did not want to be late. The instructors were very friendly, intelligent women."



Olivia Robertson (Village School)

Olivia's mom: "Olivia is delighted with your program. She did not want to do this [it was my idea] but has been enjoying each day. Thanks for the great program and congratulations on your success in engaging these girls."

3rd place winner



Carlissa Smith (Walton Middle School)

"I enjoyed most the math puzzles because working out things with other people helps me figure out things faster."

Carlissa's mom: "The program was well structured and well organized."



Melanie Taylor (Walton Middle School)

Melanie's dad: "...how wonderful of an experience your program has been. She has learned a lot and loves to share it with us... Please continue this outreach to the community."

2nd place winner



Morgan Tyler (Walton Middle School)

"I am interested in mathematics because it comes easily to me... The program enriched my thinking."
Morgan's grandmother: "Morgan looked forward every day to the classroom instruction and working with the other students."

2006 Summer Program Awards

Individual Competition

1st place: Jessica Boling
2nd place: Melanie Taylor
3rd place: Olivia Robertson

Team Competition

1st place: Angela Fernandez Pineros, Jessica Boling, Katharine Houff,
Carlissa Smith, Morgan Tyler

Jeopardy (Numbers)

1st place: Olivia Robertson, Jackie Mallon, Sarah Hooper, Amanda Herring,
Christine Houff

Jeopardy (Divisibility and Probability)

1st place: Angela Fernandez Pineros, Jessica Boling, Katharine Houff,
Carlissa Smith, Morgan Tyler

Beginner Sudoku

1st place: Morgan Tyler, Katharine Houff, Carlissa Smith
2nd place: Libby Firer, Sarah Hooper, Christine Houff

Expert Sudoku

1st place: Melanie Taylor
2nd place: Jackie Mallon, Olivia Robertson

Building Regular Polygons

1st place: Angela Fernandez Pineros, Carlissa Smith, Olivia Robertson

Building the Dodecahedron

1st place: Libby Firer, Melanie Taylor, Ashton Ferneyhough, Chelsea Payne
Brooke, Margaret Sara Bebel

Building the Icosahedron

1st place: Angela Fernandez Pineros, Jessica Boling, Katharine Houff,
Carlissa Smith, Morgan Tyler

Nim Competition

1st place: Jackie Mallon

Puzzle Competition

1st place: Angela Fernandez Pineros, Jessica Boling, Katharine Houff,
Carlissa Smith, Morgan Tyler

Summer 2006 Program Schedule

Monday

Welcome

Problem Session 1 (warm up)

Problem Session 2 (numbers)

Jeopardy Team Game

Tangrams

Tuesday

Problem Session 3 (counting techniques)

Playing Su Doku

Problem Session 4 (probability)

Probability Games

Math Beyond the Classroom

Wednesday

Problem Session 5 (divisibility)

Jeopardy Team Game

Problem Session 4 (probability)

Build Your Own Regular Polyhedron

Math Relay Team Game

Thursday

Problem Session 6 (counting techniques)

Mathematical Puzzles and Mind Benders

Problem Session 7 (divisibility)

Individual Competition

Tangrams

Friday

Problem Session 8 (counting techniques)

Introduction to Fractals

Create Your Own Fractal

Nim

Picture Slideshow and Awards Ceremony

Program Organizer:

Irina Mitrea

Assistant Professor of Mathematics

University of Virginia

Summer 2006 Program Assistants:

Lorena Bociu

Inger Daniels

Katherine Heller

Uliana Popova

Erin Wolff



Morgan $\times + \pi$ octagon
1/3
Tyler $\times \frac{1}{2} \times \frac{1}{2}$
kites
Future Math Teacher
Herring

Angie $\times + - \div =$
Fernandez



Amanda Herring
I love + Chelsea "Potato"
 \times Pearne =

Future Math Teacher
Herring
I had meeting with my problems
I had meeting with my problems
I had meeting with my problems

Lizzy Frier
"Tomato"

I liked meeting
new people and
making new friends.
I also really liked
transgrants & Sudoku!
Sarah H

Jacques M.
0.01 $\times - \pi$
 $+ \frac{1}{4}$

Jessica
Math
Maggie
 $\times + 0.1e9\%$
Arbelle
 $\times + \frac{1}{2}$

Melanie Taylor
(Lake P =
(it's yummy)
 $+ - \frac{1}{2}$

Kristine Hoff

