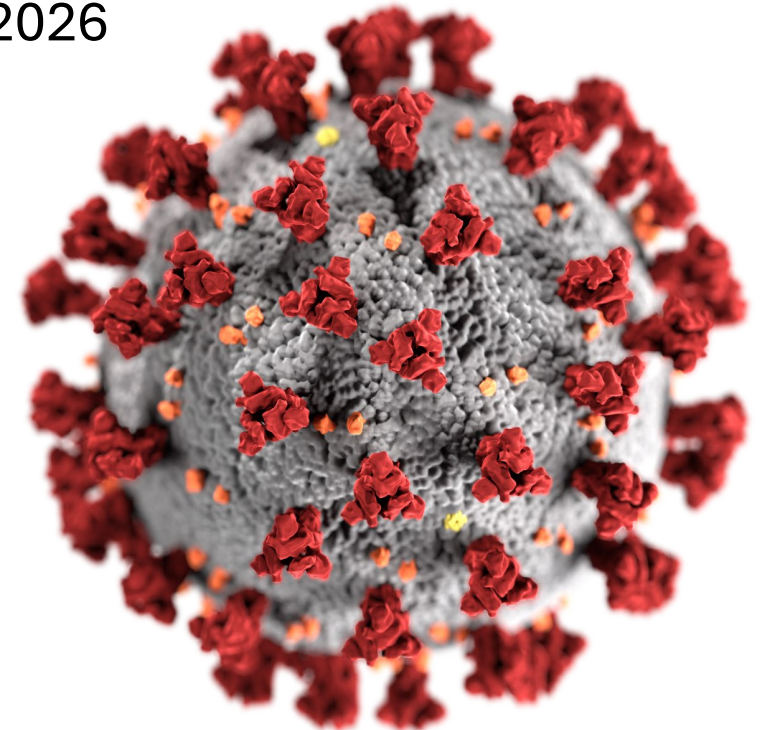
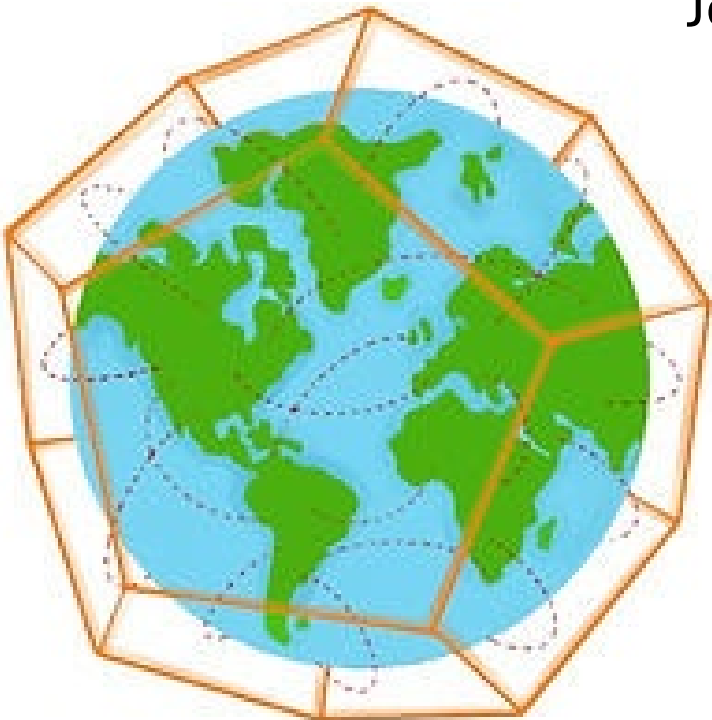


The Polymath Jr Program: The First Six Years

Johanna N. Franklin <Johanna.N.Franklin@hofstra.edu>, Steven J. Miller <sjm1@williams.edu>
and Lauren Rose <rose@bard.edu>

AMS Contributed Paper Session on Mathematics Teaching, Learning, and Education
Joint Math Meetings, January 6, 2026



Outline

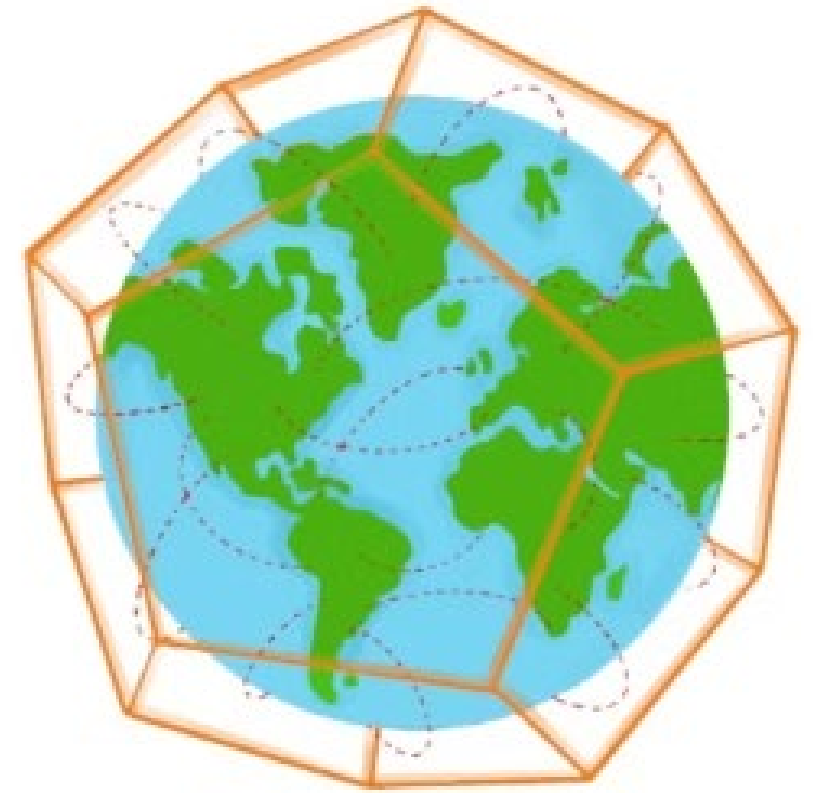
- **History.**
- **Program mechanics.**
- **Open discussion and opportunities:**
 - **Professors / postdocs to run groups.**
 - **Graduate students to assist and mentor.**
 - **Undergraduates to research.**

HISTORY:

Polymath Jr.

<https://geometrynyc.wixsite.com/polymathreu>

Collaborative mathematical
research for undergraduate
students

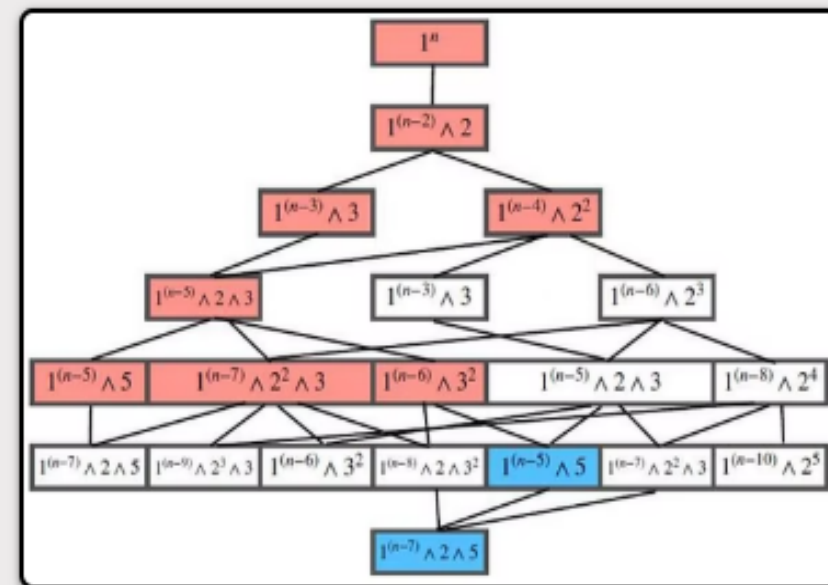
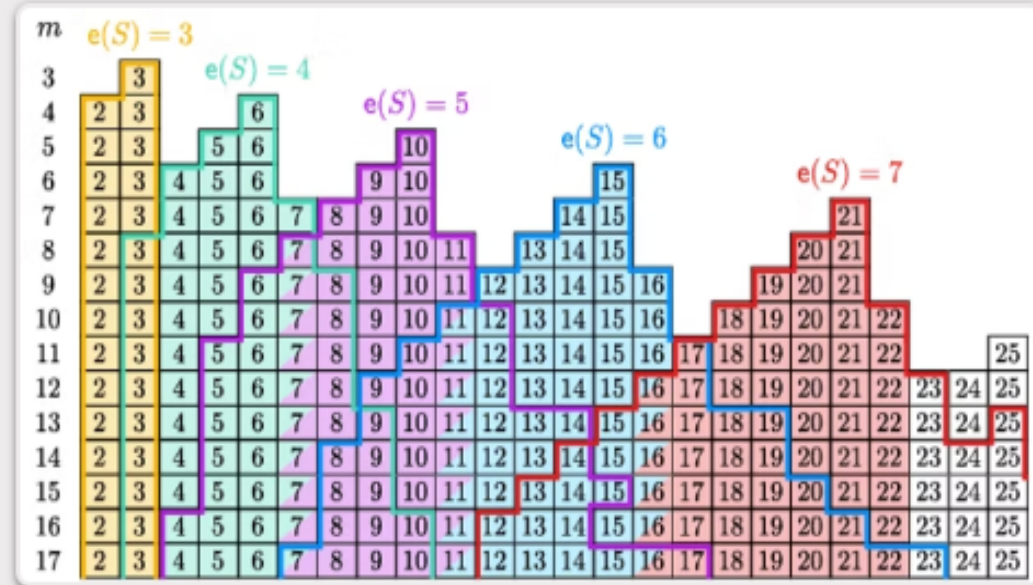


Applications open for summer of 2026; deadline
is **April 1**. Apply through mathprograms.org
(check for programs under Williams College.)

Our goal is to provide research opportunities to every undergraduate who wishes to explore advanced mathematics. This online program consists of research projects in a variety of mathematical topics and runs in the spirit of the Polymath Project. Each project is mentored by an active researcher with experience in undergraduate mentoring.

Each project consists of 15-25 undergraduates, a main mentor, and graduate students and postdocs as additional mentors. The group works towards solving a research problem and writing a paper. Each participant decides what they wish to obtain from the program, and participates accordingly.

The program is partially supported by NSF award DMS-2218374.



MECHANICS: The perfect is the enemy of the good.

- **Most groups:**
 - **1-3 Professors / Postdocs.**
 - **1-3 graduate student mentor.**
 - **15-25 undergraduates / high school students.**
- **Summer structure:**
 - **Group run independently.**
 - **Virtual, no student stipends, some \$\$ for mentors.**
 - **Background lectures as needed.**
 - **Frequently sub-problems so big groups subdivide.**
 - **Several professors give general advice talks to mentors.**
 - **End of summer virtual conference, special session at JMM.**

DISCUSSION:

- Johanna N. Franklin: Johanna.N.Franklin@hofstra.edu
- Steven J. Miller: sjm1@williams.edu
- Lauren Rose: rose@bard.edu

<https://geometrynyc.wixsite.com/polymathreu>

Applications for the summer of 2026 are open.

Deadline is **April 1**, submit through mathprograms.org
(check for programs under Williams College).

