Spring 2022 Outreach Team

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Mason Experimental Geometry Lab

GEORGE MASON UNIVERSITY

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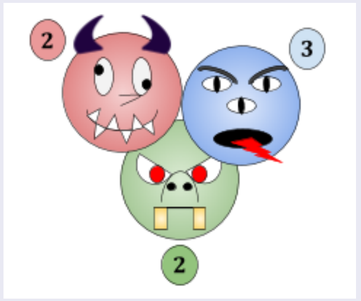
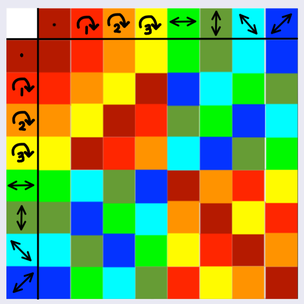
Introduction

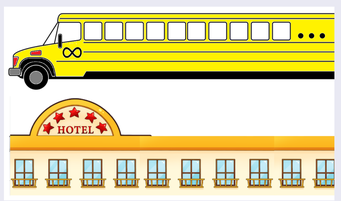
This semester, we continued to our transition to in-person activities. We are projected to surpass our goal of reaching 10,000 students since the start of the outreach program. We also expanded on existing activities and have created an outreach certification program.

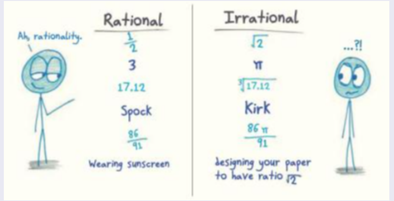
Activities

- You Can Count on Monsters
  - Prime factorization
- Really BIG Numbers
  - Linear, polynomial, exponential, and factorial growth
- Your Teachers are Lying to You
  - Context matters in mathematics
- Playground of the Infinite
  - Hilbert's infinite hotel
- Snowflake Symmetry
  - Group theory
- Hyperbolic Crochet
  - Hyperbolic geometry
- Irrational Thinking
  - Irrational numbers









Accomplishments

Expanded Our Community

- Number of students reached so far:
  - 1021 Students!
  - Reached all 2nd - 5th grade classrooms at Greenbriar East

We are projected to reach an additional 1000 students at a TWIST event.

Certification Training

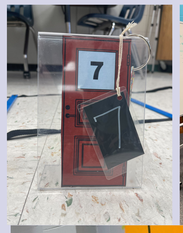
- Five Step program which aims to provide foundational mathematics communication skills.
- Receive constructive feedback on ways you can improve K-12 classroom management.
- Gain experience connecting with a diverse group of students who are just beginning their mathematics studies.

Updates to Activites

Playground of the Infinite
- Hotel Infinity keys

Irrational Thinking:
- Constructing a square of area 2
- Buffon's needle toss
- Drawing Fibonacci Spiral

Photos



Future Goals

- Reach more students and target more secondary school students
- Conduct activities for teachers
- Create more follow-up lessons
- Find ways to make the booking process more efficient
- Improve user experience and functionality of the website
- Encourage more students to take part in MEGL Outreach

Potential New Activity Themes

- Mathematical Puzzles
- Topology Magic
- Game Theory

More Pictures