

## UNDERGRADUATE MATH SEMINAR

This week, there will be **two** late-afternoon math seminars, with refreshments begin served beforehand in Bailey 204, the Math Common Room. We hope to see you there!

- **Tuesday, January 16, 4:45 – 5:45pm in Bailey 207**

- **Friday, January 19, 4:45 – 5:45pm in Bailey 207**

## Summer Research Experiences for Undergraduates (REUs) in Math

Are you interested in learning new mathematics and trying your hand at mathematical research, and getting paid for it? Then consider applying for one of the many National Science Foundation sponsored Research Experiences for Undergraduates (REUs). These are small summer programs that last 6-8 weeks, hosted by several universities and colleges around the United States. This summer, some will be held remotely, and others might be held at the host university. The range of research fields covered by different REUs is wide, including algebra, computational mathematics, differential geometry, data science, discrete math, knot theory, mathematical biology, and more. There is something for everyone!

**Who should apply?** Math majors, typically in their junior or sophomore year, though some programs accept applications from current seniors. Most applicants to REUs are considering going to graduate school in math and would like to see what math research is about. Most REUs require participants to be US citizens or permanent residents. In terms of coursework, most programs require participants to have at least had multivariable calculus through Math 117, a course similar to Math 199, and/or a course beyond Math 199 that requires proof-writing.

**What are the options and how does one apply?** The primary site listing REUs, their descriptions, the application requirements, etc., is hosted by the American Mathematical Society (AMS). The Mathematical Association of America (MAA) lists several other summer programs in mathematics to consider. The links to these resources are

<http://www.ams.org/programs/students/emp-reu>

<https://www.maa.org/member-communities/students/semester-and-summer-programs>

**Act soon!** Most of the application deadlines to REUs are in February or early March.

**What now?** Go to the AMS website, filter for REUs, browse through the programs, and get excited by the opportunities. Feel free to contact **Professors Jeff Hatley** ([hatleyj@union.edu](mailto:hatleyj@union.edu)) or **Rylan Gajek-Leonard** ([gajekler@union.edu](mailto:gajekler@union.edu)) to discuss the different programs and your options.

## Problem of the Newsletter – January 15, 2024

**Last week's problem:** Congratulations to **Hunter Gould** and **Talha Khan** for submitting correct solution to last week's problem. You can see Talha's solution at the newsletter sites in Bailey Hall.

**This week's question(s):** As we turned the calendar recently, it seems like a good time to ask...

Which number is bigger,  $2023^{2024}$  or  $2024^{2023}$ ?

Submit solution(s) to **Prof. Paul Friedman** ([friedmap@union.edu](mailto:friedmap@union.edu)) by **noon on Friday, January 19.**

**CALCULUS HELP CENTER!**

Sunday - Thursday: 7:30 – 10:00pm in the Sorum House Seminar Room