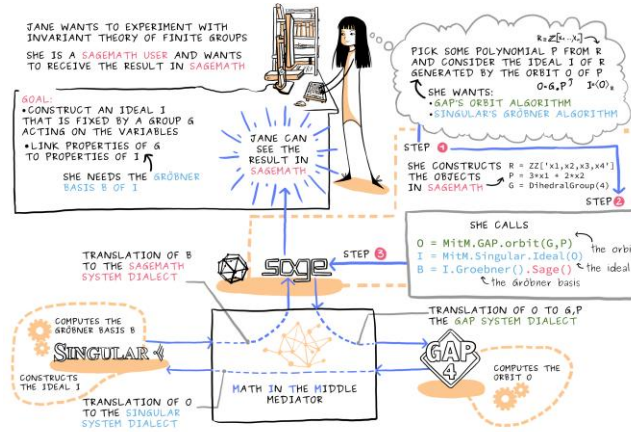


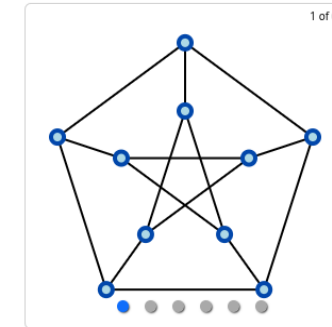
# Mathematics research as eResearch

Paul Leopardi, ACCESS-NRI



## Graph 660

Name: Petersen Graph  
Submitted by GraPHedron



Adjacency Matrix Adjacency List

Adjacency Matrix	Adjacency List
0111000000	1: 2 3 4
1000110000	2: 1 5 6
1000001001	3: 1 7 10
1000000110	4: 1 8 9
0100001010	5: 2 7 9
0100000101	6: 2 8 10
0010100100	7: 3 5 8
0001011000	8: 4 6 7
0001100001	9: 4 5 10
0010010010	10: 3 6 9

Edit drawing

code4math

### code4math: Consortium of Digital Ecosystems for Mathematics

code4math is a professional organization dedicated to the advancement of mathematical research through the development of high-quality sociotechnical infrastructure: software, databases, communities, and more.

Subcollections: Convenings Projects Steering



Learn more at [code4math.org](http://code4math.org).

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### Chapter 8 Math Projects Powered by GitHub 8.1 PreTeXt authoring system

PreTeXt<sup>1</sup> is an authoring and publishing system for scholarly documents, especially in STEM disciplines. Works authored in PreTeXt can be converted to HTML, PDF, braille, and many other formats. This book was written in PreTeXt!

PreTeXt is particularly well-suited for the creation of interactive and accessible Open Educational Resources in mathematics and computer science. Works authored in PreTeXt can be deployed to Runestone Academy<sup>2</sup>, allowing students to log into their textbook and persist progress on exercises and activities.

The PROSE Consortium<sup>3</sup> forms the broader ecosystem serving open-source STEM open educational resources and offers regular drop-in meetings for community members to learn more about its products, which also include WeBWork<sup>4</sup> and Doenet<sup>5</sup>.

Getting Started with PreTeXt<sup>6</sup> is a tutorial that uses GitHub Codespaces to get authors up and writing quickly, and helps them share their works on GitHub and GitHub Pages.

### 8.2 $\pi$ -Base Community Database of Topological Counterexamples

To paraphrase Mary Ellen Rudin, "topology is a dense forest of counterexamples, and a usable map of the forest is a fine thing.". The  $\pi$ -Base<sup>1</sup> aims to serve as this atlas, turning the classic text Counterexamples in Topology<sup>2</sup> into an open, living, and interactive database supported by a community of researchers, instructors, and students.

## Credits:

- Katja Berčič
- Steven Clontz
- code4math
- OpenDreamKit
- The House of Graphs