

Mathematics Knowledge Graph Wiki

Welcome to the Mathematics Knowledge Graph Wiki

This is an evolving wiki of mathematical knowledge represented as a **knowledge graph**. Our goal is to represent the entire landscape of mathematics as interconnected nodes of **axioms, definitions, theorems, and examples**.

Features

- **Semantic Knowledge Graph:** All mathematical concepts are connected through formal relationships
- **Cross-Referenced Content:** Navigate between related concepts seamlessly
- **Formal Verification:** Integration with Lean 4 for mathematical rigor
- **Interactive Visualizations:** Explore the graph structure visually
- **SPARQL Queries:** Query the knowledge graph for complex relationships

Mathematical Domains

Explore mathematics by domain:

- [Algebra](#)
- [Analysis](#)
- [Topology](#)
- [Geometry](#)
- [Number Theory](#)
- [Combinatorics](#)
- [Logic & Set Theory](#)
- [Probability & Statistics](#)
- [Category Theory](#)

Getting Started

Each mathematical concept in this wiki is:

1. Written as a human-readable document
2. Structured with semantic metadata
3. Connected to related concepts through formal relationships
4. Queryable through our knowledge graph interface

Contributing

This wiki is built using: - **Quarto** for content authoring - **RDF/OWL** for semantic representation - **Python** for graph extraction and processing - **Lean 4** for formal verification

To contribute, please see our [contribution guidelines](#).

Query the Knowledge Graph

Coming soon: Interactive query interface for exploring mathematical relationships.