Discrete Mathematics
Graph Theory and Recursion

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CTTI Workshop: UIC

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These slides are available on my homepage.

What is discrete mathematics anyway?

To name a few topics . . .

- Combinatorics
- Logic
- Probability
- Statistics

- Graph Theory
- Iteration and recursion
- Game Theory
- Cryptography

What is discrete mathematics anyway?

The flavor is often . . .

- ▶ Meaningful applications
- ▶ Easy to understand problems
- ▶ Fun and engaging

What's Fair?

Math & Social Justice
*Explored through Fair Division, Game
Theory, and Resource Distribution.*

Social studies teachers invited
Please reserve spots early

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Workshop 4: Introduction to Graph Theory

Workshop goals:

- ▶ Coloring Maps and Graphs
- ▶ Coloring Bagels
- ▶ Conflict Resolution

Workshop 4: Recursion and Self-Similarity

Workshop goals:

- ▶ Common Examples
- ▶ 121312141213 . . .
- ▶ Maybe a connection to graph theory

Other Resources:

Sierpinski Triangle Movie

Koch Snowflake

Introduction to Coding contains some activities on ASCII code, base 8 arithmetic, and the 1213 . . . sequence.