



# Discrete Mathematics: Mathematical Reasoning and Proof with Puzzles, Patterns, and Games

Doug Ensley & Winston Crawley

2018

704 pp

Paperback

ISBN: 9788126574384

Price: 1,465.00

## About the Book

These active and well-known authors have come together to create a fresh, innovative, and timely approach to Discrete Math. One innovation uses several major threads to help weave core topics into a cohesive whole. Throughout the book the application of mathematical reasoning is emphasized to solve problems while the authors guide the student in thinking about, reading, and writing proofs in a wide variety of contexts. Another important content thread, as the sub-title implies, is the focus on mathematical puzzles, games and magic tricks to engage students.

## Table of Contents

1. Puzzles, Patterns, and Mathematical Language.
  2. A Primer of Mathematical Writing.
  3. Sets and Boolean Algebra.
  4. Functions and Relations.
  5. Combinatorics.
  6. Probability.
  7. Graphs and Trees.
- Appendix A: Rules of the Game.
- Appendix B: Matrices and Their Operations.
- Selected Answers and Hints.
- References and Further Reading.
- Index.

## About the Author

**Doug Ensley** :- is a full professor at Shippensburg University with a Ph.D. from Carnegie Mellon. He is an active participant in national and regional committees determining the future of the discrete math curriculum, and he regularly speaks at Joint Math and MathFest.

**Winston Crawley** :- is a full professor and chair of the math department at Shippensburg University. He has a Ph.D. from University of Tennessee-Knoxville. Crawley developed the undergraduate computer science curriculum at Shippensburg.