CONTENTS

1 Geometry: Learn About Shapes 11

Prisms and pyramids and Platonic solids, oh my!

2 Topology: Mind-Bending Shapes 35

Learn about squeezable, squishable shapes and surfaces

3 Color Maps Like a Mathematician 45

Using the fewest number of colors possible, fill in a map so adjacent shapes are different

4 Stitching Curves 57

Learn to create curves using only straight lines

5 Fantastic Fractals 67

A fractal is a shape that is similar to itself no matter how far you zoom in on one particular part

6 Terrific Tangrams 83

Solve ancient Chinese puzzles by making different shapes from the same seven pieces

7 Toothpick Puzzles 91

Create and solve brainteasers using patterns of toothpicks

8 The Game of Nim 99

Learn the game of Nim and develop a strategy to win every time

9 Graph Theory 111

Explore how points and edges are interconnected