

CONTENTS

| | |
|--------------------------|-----|
| Introduction | 4 |
| Puzzles | |
| Number Paths | 6 |
| Polyominoes | 20 |
| Sumdoku | 34 |
| Deka Dots | 48 |
| Difference Pyramids | 62 |
| Greater Than Sudoku | 74 |
| Ordered Paths | 86 |
| Skip-Counting Crosswords | 96 |
| Magic SUMmer | 108 |
| Digit Differences | 122 |
| Shape Connect | 136 |
| Turn Mazes | 148 |
| Hints | 161 |
| Solutions | 187 |

ABOUT THIS BOOK

Beast Academy Puzzles 1 contains over 500 puzzles in 12 different styles. Every puzzle style is part of the broader Beast Academy level 1 math curriculum. Whether used on their own or as part of the complete Beast Academy curriculum, these puzzles will delight and entertain puzzle solvers of all ages.

The puzzles in this book are accessible to anyone with a solid understanding of numbers and good mental addition and subtraction skills as taught in the Beast Academy level 1 series. The difficulty ranges from straightforward puzzles meant to give a feel for how each puzzle works to diabolical stumpers written by national puzzle team competitor Anderson Wang that will challenge older siblings and parents.

WHY PUZZLES?

Entertainment

Puzzles intrigue us and capture our attention in ways that many other problems don't. What makes puzzles so captivating?

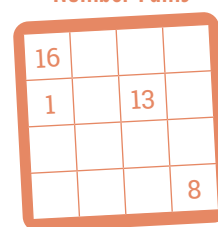
- **Breakthroughs.** The "Aha!" moments of ingenuity and insight that come when solving a well-written puzzle are energizing.
- **Satisfaction.** Not every puzzle has an "Aha!" moment of inspiration. Many involve a series of steps that are satisfying and encouraging in their own way.
- **Accomplishment.** Solving a puzzle that is just at the edge of your ability level gives a wonderful sense of achievement.
- **Gratification.** Unlike many other problems you face, it's often immediately obvious when you've solved a puzzle correctly.

Enrichment

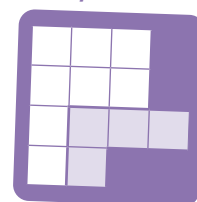
Solving puzzles makes us smarter. What do we learn?

- **Problem Solving.** The skills we learn by solving puzzles—observing, testing, fiddling, and making connections—help us become better, more resilient problem solvers in other areas.
- **Math Skills.** Every puzzle in this book was written to reinforce specific math skills. Puzzles take the monotony out of skill drill and make practice fun.
- **Spatial Reasoning.** Many puzzles require elements of path tracing or grouping that help us build spatial awareness.
- **Pattern Recognition.** Solving puzzles helps us recognize patterns and encourages us to search for new ones.

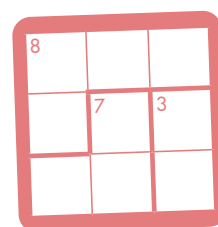
Number Paths



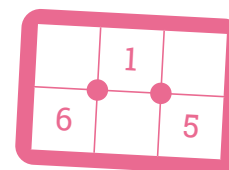
Polyominoes



Sumdoku

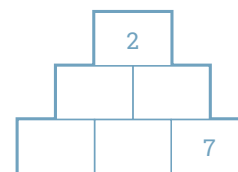


Deka Dots

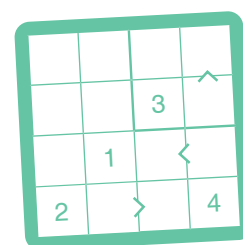


Difference Pyramids

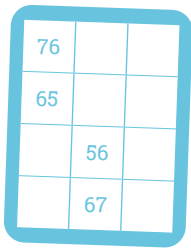
Use: 4, 6, 9, 13



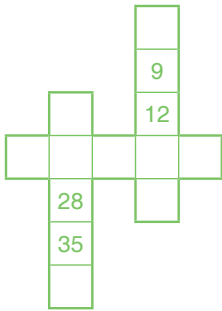
Greater Than Sudoku



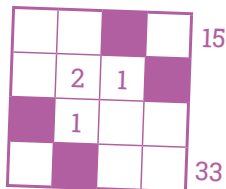
Ordered Paths



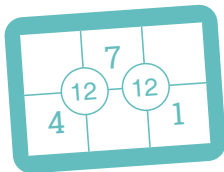
Skip-Counting Crosswords



Magic SUMmer



Digit Differences

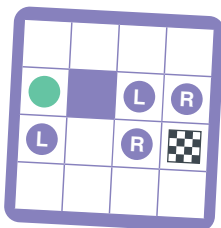


Shape Connect

3, 4, 5



Turn Mazes

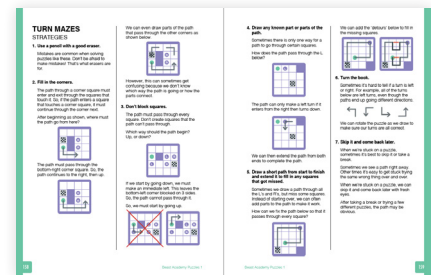
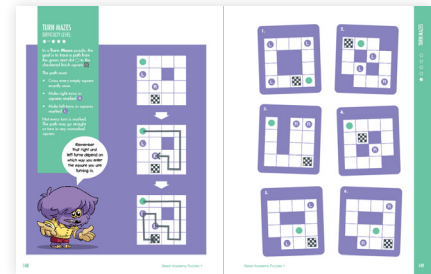


USING THIS BOOK

This book is divided by puzzle type into 12 sections, followed by HINTS beginning on page 161 and SOLUTIONS beginning on page 187.

Each section includes instructions, a solved example, and difficulty ratings. The ratings at the edge of the page refer to the difficulty of the hardest problem on the page and are highly subjective.

At the end of each puzzle set is a STRATEGIES section. We highly recommend reading the strategies section even if you've already solved all of the puzzles. There may be an approach you haven't considered.



Supplementing the BA Curriculum

If you are using this book to supplement the Beast Academy math curriculum, below is a list of the different puzzle types, which chapter they supplement in BA level 1, and what math skills they reinforce.

| | | |
|--------------------------|------------|--|
| Number Paths | Chapter 1 | Counting within 100. New puzzle! |
| Polyominoes | Chapter 2 | Shapes and spatial reasoning. Find more in book 1A. |
| Sumdoku | Chapter 4 | Adding small numbers. New puzzle! |
| Deka Dots | Chapter 4 | Addition — making ten. New puzzle! |
| Difference Pyramids | Chapter 5 | Subtraction. Find similar puzzles in book 1B. |
| Greater Than Sudoku | Chapter 8 | Comparing using $<$ and $>$. Find more in book 1C. |
| Ordered Paths | Chapter 8 | Ordering numbers within 100. Find more in book 1C. |
| Skip-Counting Crosswords | Chapter 9 | Skip-counting patterns. Find more in BA Online Level 3. |
| Magic SUMmer | Chapter 10 | Adding larger numbers. New puzzle! |
| Digit Differences | Chapter 10 | Subtraction within 100. New puzzle! |
| Shape Connect | Chapter 11 | Measuring with a ruler. Find similar puzzles in book 1D. |
| Turn Mazes | Chapter 12 | New puzzle! |