



IDAHO

REGIONAL MATHEMATICS CENTERS

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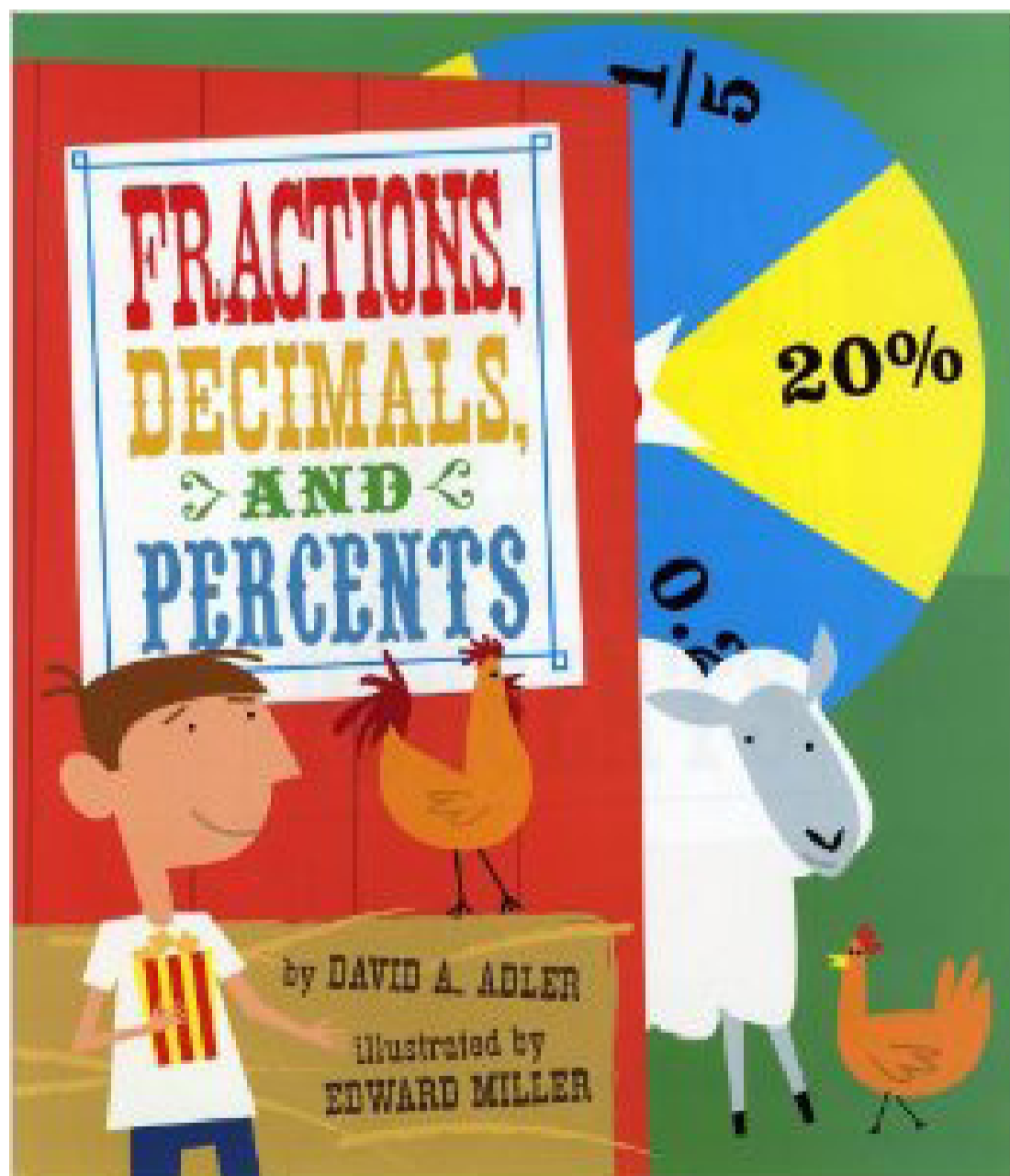
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Micron Created Family Math Night Kit

Fractions, Decimals, and Percents

By: David A. Adler

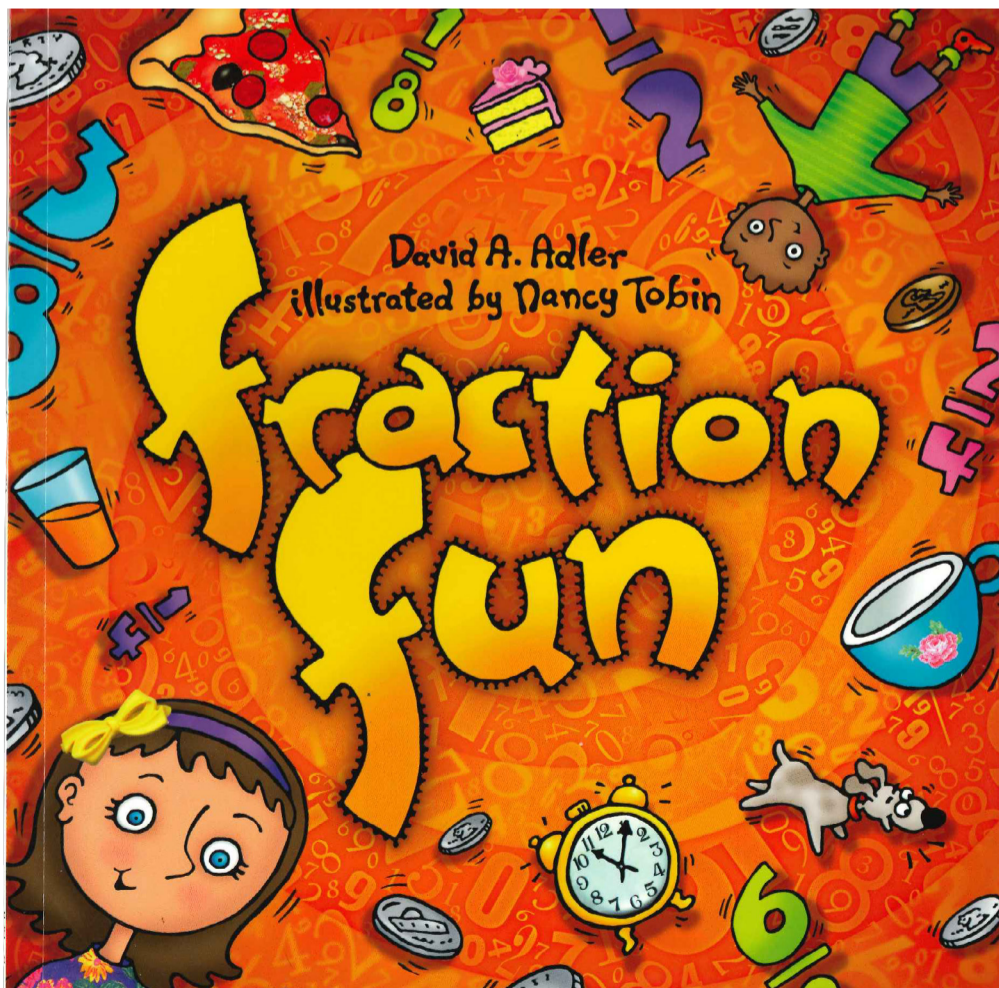
Step right up! Come take part in the county fair, where you'll see fractions, decimals, and percents everywhere. Gobble up a fraction of pie, boost your batting average in the arcade, and take a percent off the price of a toy. Learning about equivalent parts equals a whole lot of fun in this straightforward introduction to a challenging concept.



Fraction Fun

By: David A. Adler

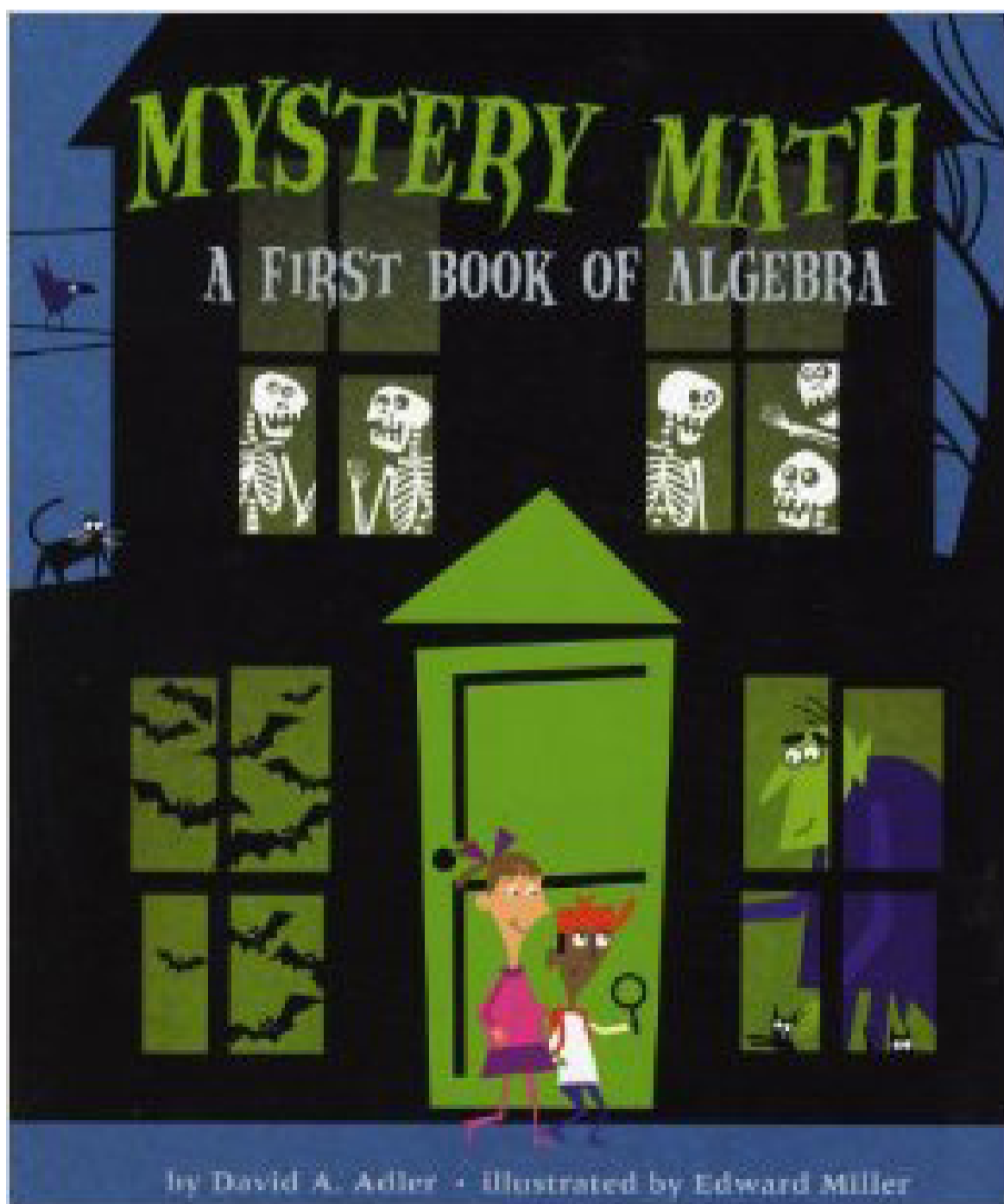
Fraction Fun is a great picture book to introduce fractions to a classroom. David Adler explains the concept of fractions by using slices of a pizza pie. Then by engaging the reader into a simple and fun activity, called Pizza Math, the children learn how fractions can be more than, less than, and equal to each other. Next, the children learn how to use fractions in weight. The children are encouraged to weigh pennies, nickels, pencils, and tissues, all to determine their weight in fractions. Sound complicated? Not with Adler's colorful illustrations, clear directions and the simple, hands on activities. The children learn without much effort and have fun too.



Mystery Math: First Book of Algebra

By: David A. Adler

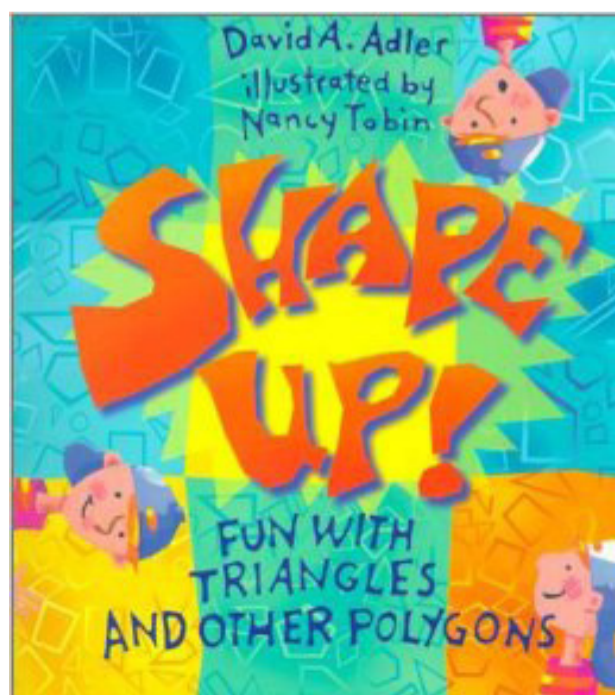
In this accessible first book of algebra set in a creepy haunted house, readers will learn to find the unknown number of skeletons, ravens, and bats by using simple addition, subtraction, multiplication, and division to solve equations.



Shape Up! Fun with Triangles and Other Polygons

By: David A. Adler

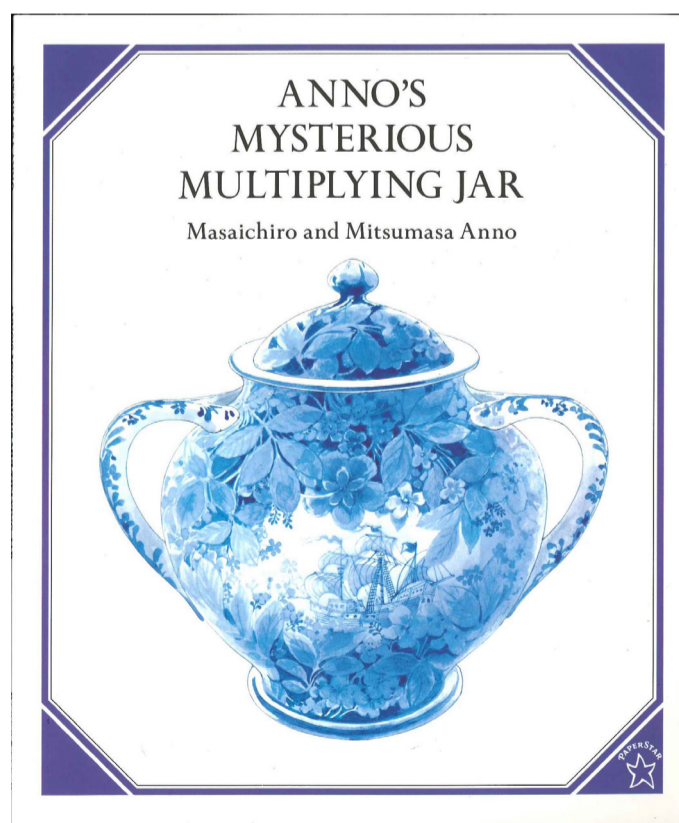
Pretzels, cheese slices, and bread, as well as paper and pencil are used here to teach math concepts. Adler's simple, to-the-point explanations and Tobin's bright, colorful cartoon drawings work well together to bring basic geometry to primary-grade students. The different print sizes and bright colors create a bold visual effect. The book concludes with a one-page list that defines the shapes and angles examined. Although the use of food products to illustrate these concepts is common at the preschool and primary level, many adults have reservations about this practice. Nevertheless, this is a bouncy, hands-on introduction.



Anno's Mysterious Multiplying Jar

By: Masaichiro and Mitsumasa Anno

This book is an amazing way to teach the math concept “factorial” to even very young children. Anno begins with a jar, which contains 1 island, which has 2 countries, each of which has 3 mountains. The story continues like this until 10 is reached. I love the way the pictures are arranged within borders on the page as many times as that of the number of objects being discussed. The explanation of $10!$ in the back of the book is also very helpful in the lesson being taught. Even if children do not understand the concept being taught, they will certainly appreciate the detailed colored drawings and imaginative story! Lots of praise to Masaichiro & Mitsumasa Anno for their creation.

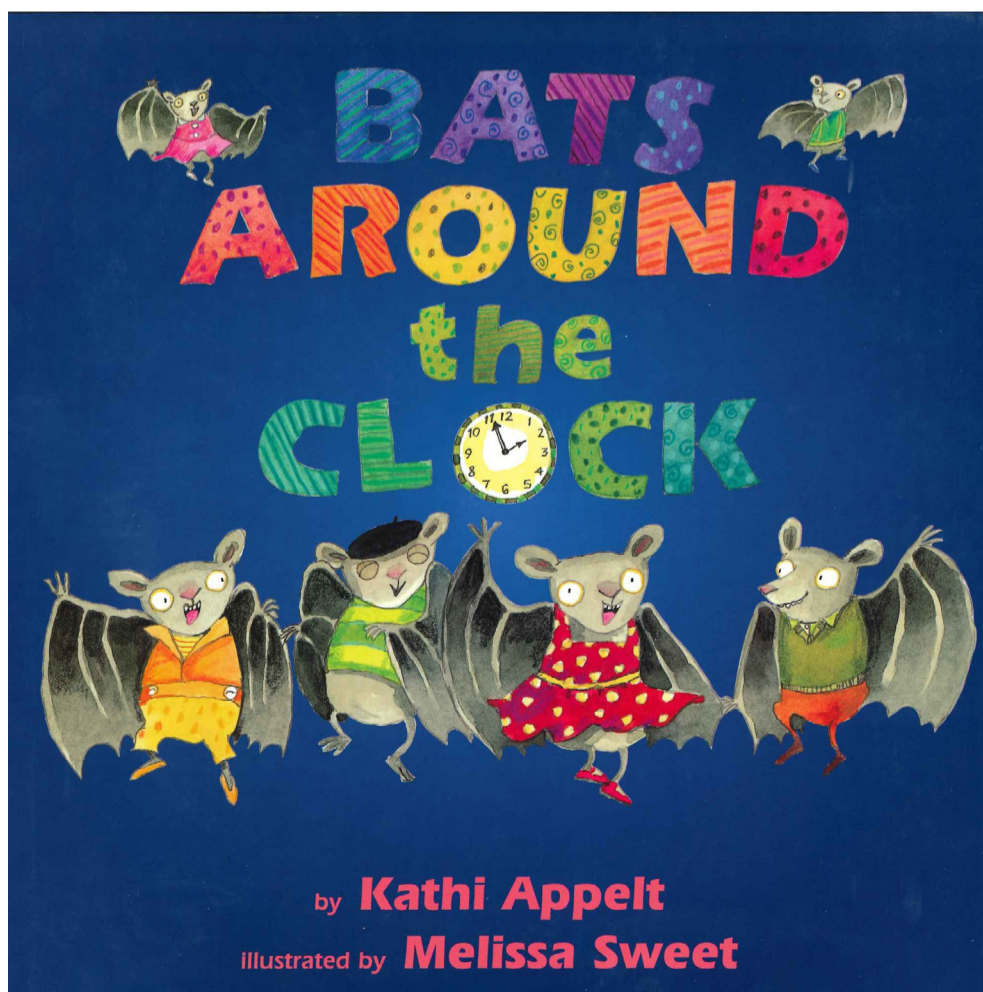


Bats Around the Clock

By: Kathi Appelt

It's fun to tell time as you dance around the clock! Put on your dancing shoes and get ready to boogie! It's American Batstand - a twelve-hour rock and roll extravaganza with Click Dark as your host. Decked in go-go boots and bobby sox, the buoyant bats bebop their way around the clock. And there's a special guest appearance at the end! With their swinging text and groovy illustrations, the creators of Bat Jamboree and Bats on Parade don't miss a beat when it comes to the basics.

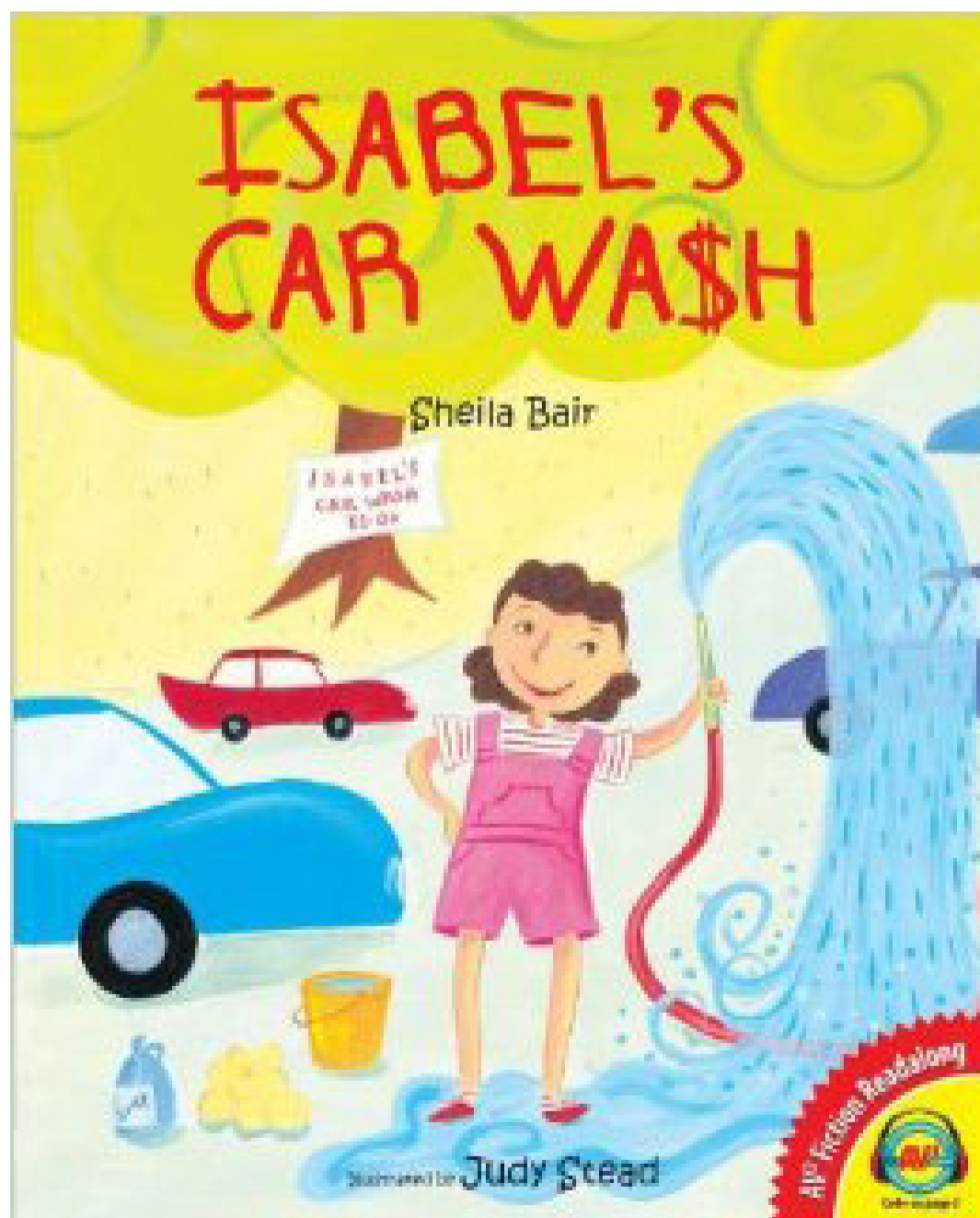
Telling time has never been so much fun!



Isabel's Car Wash

By: Sheila Bair

The Nelly Longhair doll is on sale at Murphy's Toys for ten dollars. But Isabel has only fifty cents. Isabel decides to start a car wash business; she's sure she can make money. But at the hardware store she learns that her supplies will cost five dollars! If five of her friends will invest one dollar each, she'll have enough. Will Isabel be able to pay them back and have enough left over for the Nelly doll?

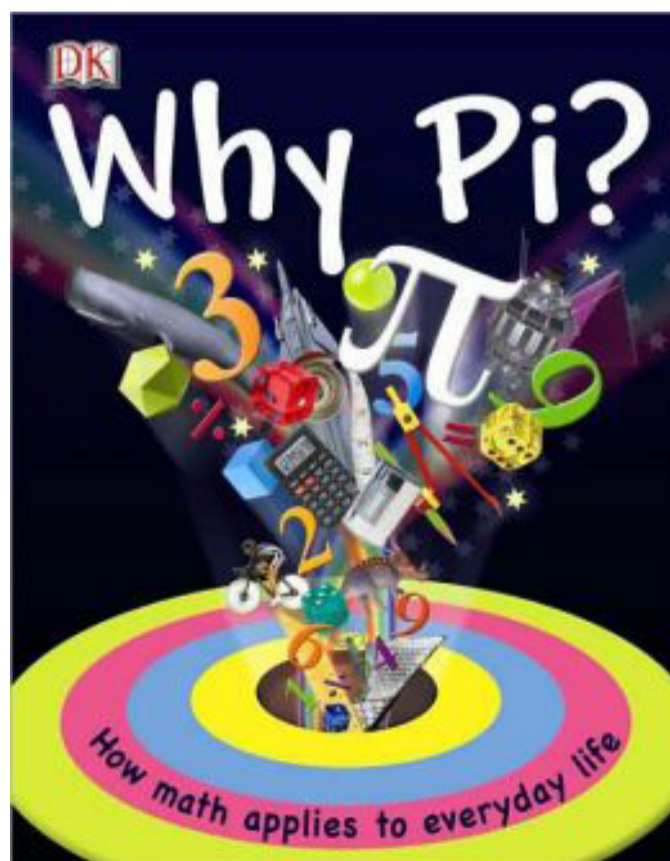


Why Pi?

By: Johnny Ball

This entertaining follow-up to DK's popular Go Figure!, Why Pi? presents even more mind-bending ways to think about numbers. This time, author Johnny Ball focuses on how people have used numbers to measure things through the ages, from the ways the ancient Egyptians measured the pyramids to how modern scientists measure time and space. Johnny Ball has hosted more than 20 UK children's television series about math and science. He is known for making math not just easy to understand, but genuinely fun and fascinating. His shows and videos earned him a New York international EMMY nomination, a BAFTA, and 10 other awards. He has written five children's books, including DK's Go Figure!, and an educational musical.

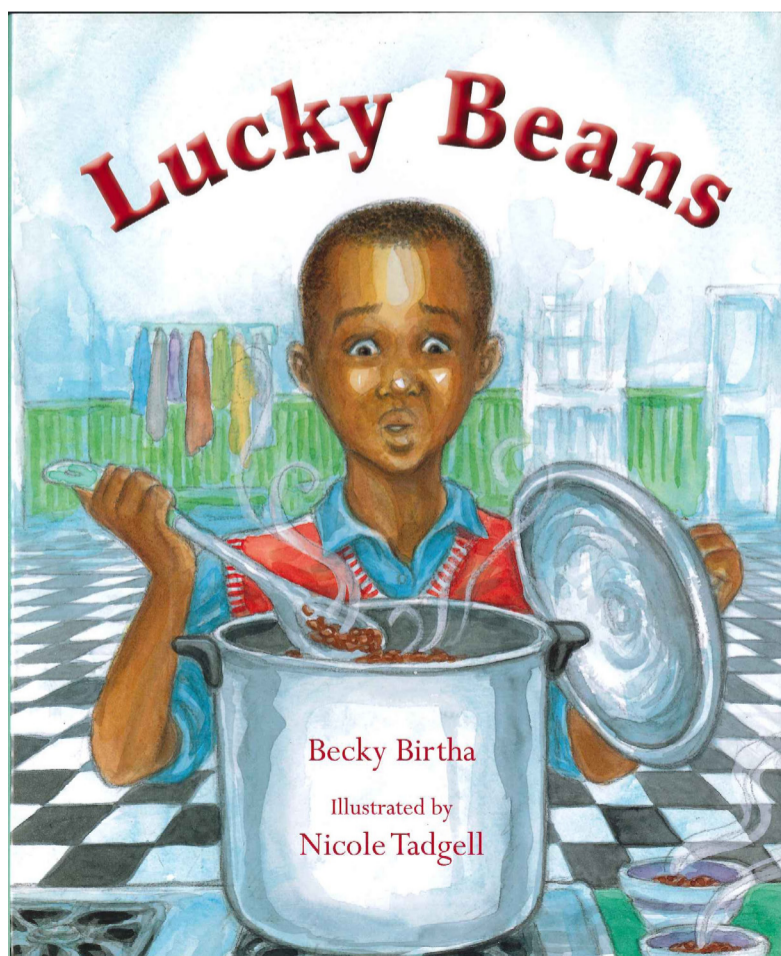
His academic credentials include three honorary science doctorates and fellowship of the British Mathematical Association.



Lucky Beans

By: Becky Birtha

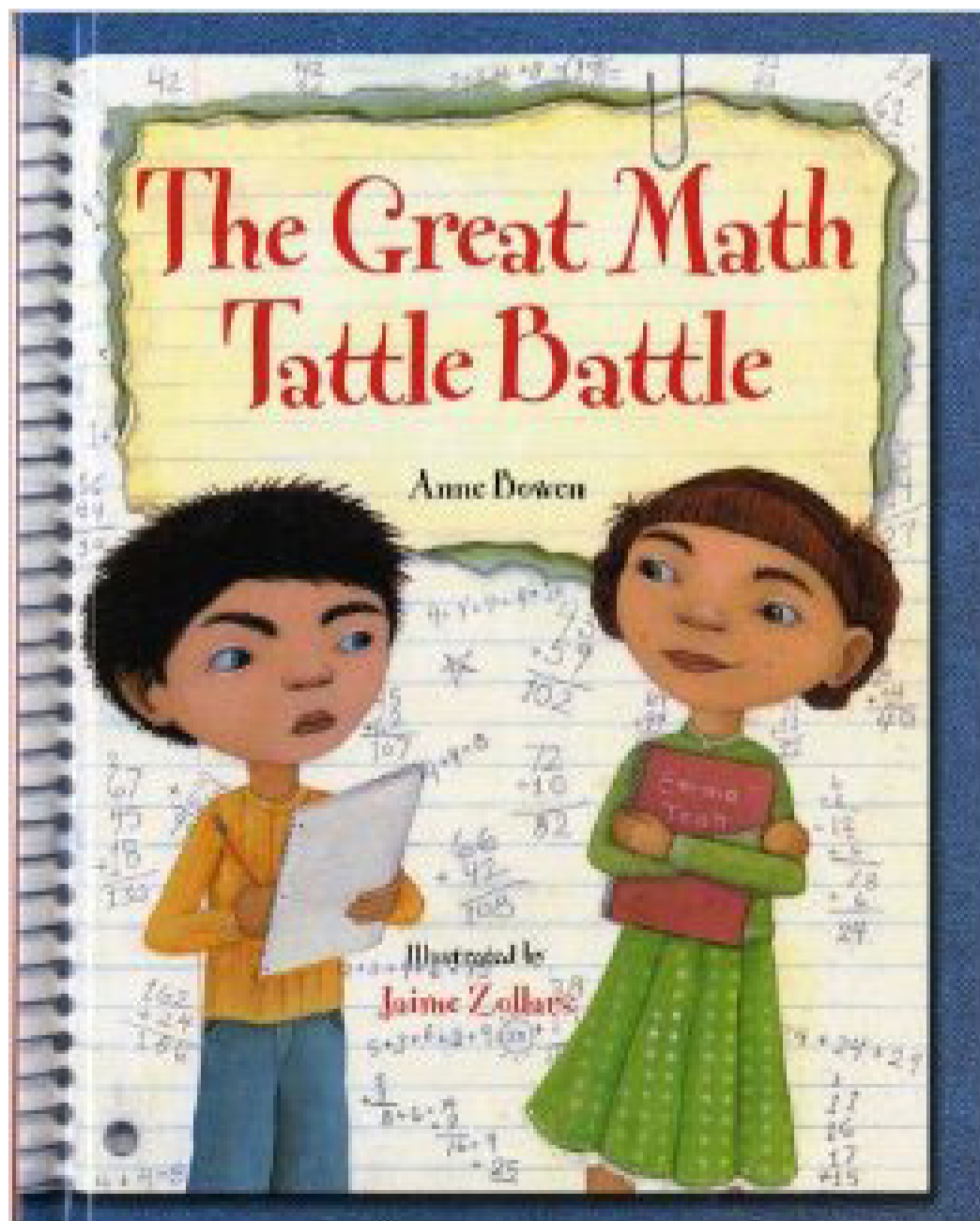
Like so many people during the Great Depression of the 1930s, Marshall Loman's dad has lost his job. There's little money, but there are plenty of beans-in fact, Ma cooks them for supper every single night! Beans start looking better when Marshall sees the contest posted in the furniture store window. HOW MANY BEANS ARE IN THE JAR? WIN THIS BRAND NEW SEWING MACHINE! Ma needs that sewing machine-but how can Lomans possibly guess right? Then Marshall remembers something he learned in arithmetic class. Becky Birtha's engaging story, based on her grandmother's memories of Depression years in the African American community, is illustrated by Nicole Tadgell's expressive paintings.



The Great Math Tattle Battle

By: Anne Bowen

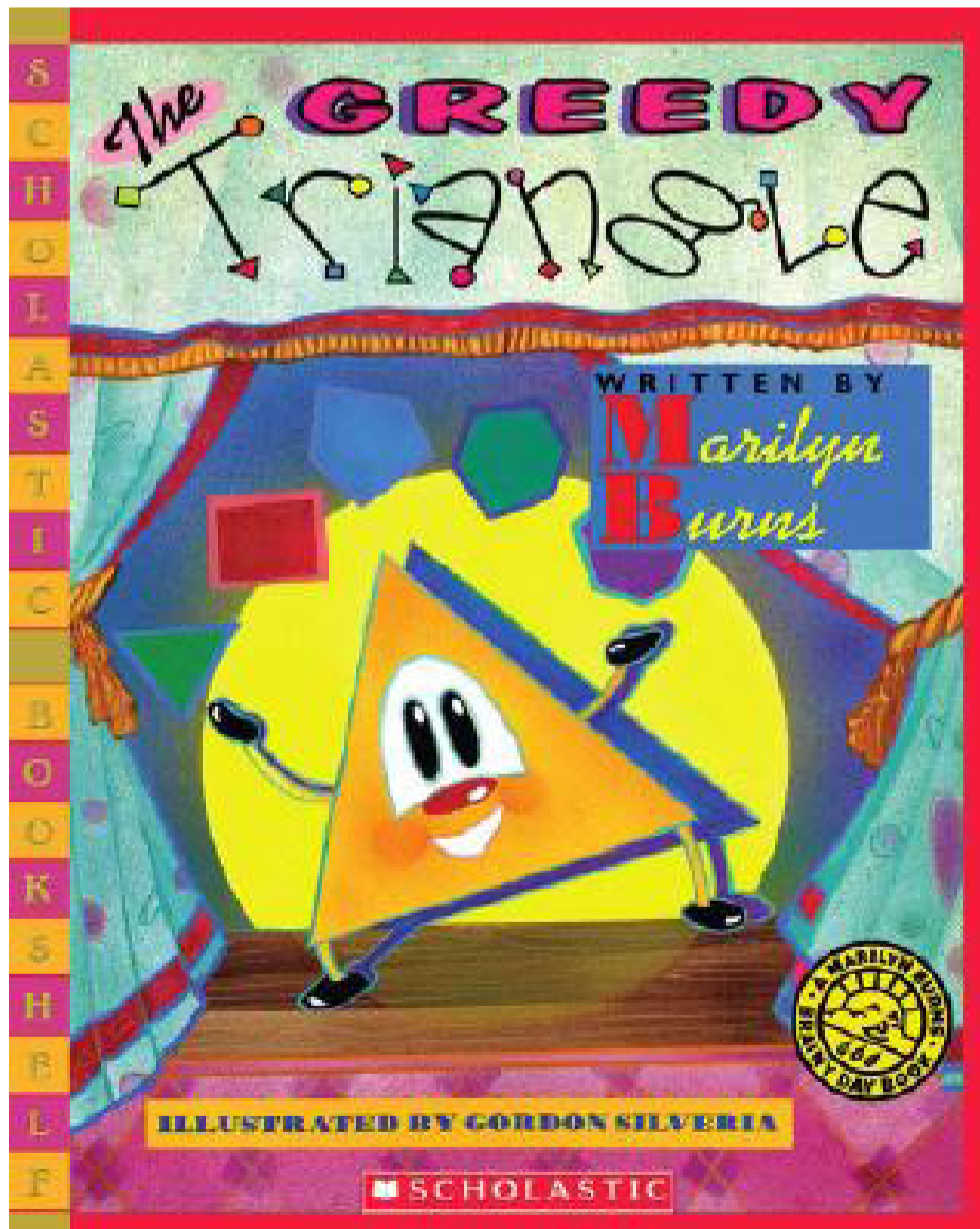
Harley Harrison is the best math student in second grade; he is also the biggest tattletale. Then Emma Jean arrives. She is good at math too, but is also a tattletale. Soon they're using their math skills to tattle on each other every chance they get.



The Greedy Triangle

By: Marilyn Burns

Kids will get their early math skills in shape with this bestselling picture book--now available in Scholastic Bookshelf! Bored and dissatisfied with his life, a triangle visits a local shape shifter to add another angle to his shape. Poof! He becomes a quadrilateral. But then he gets greedy and keeps adding angles until he's completely transformed. Kids will enjoy this boldly colorful introduction to shapes and basic math concepts.

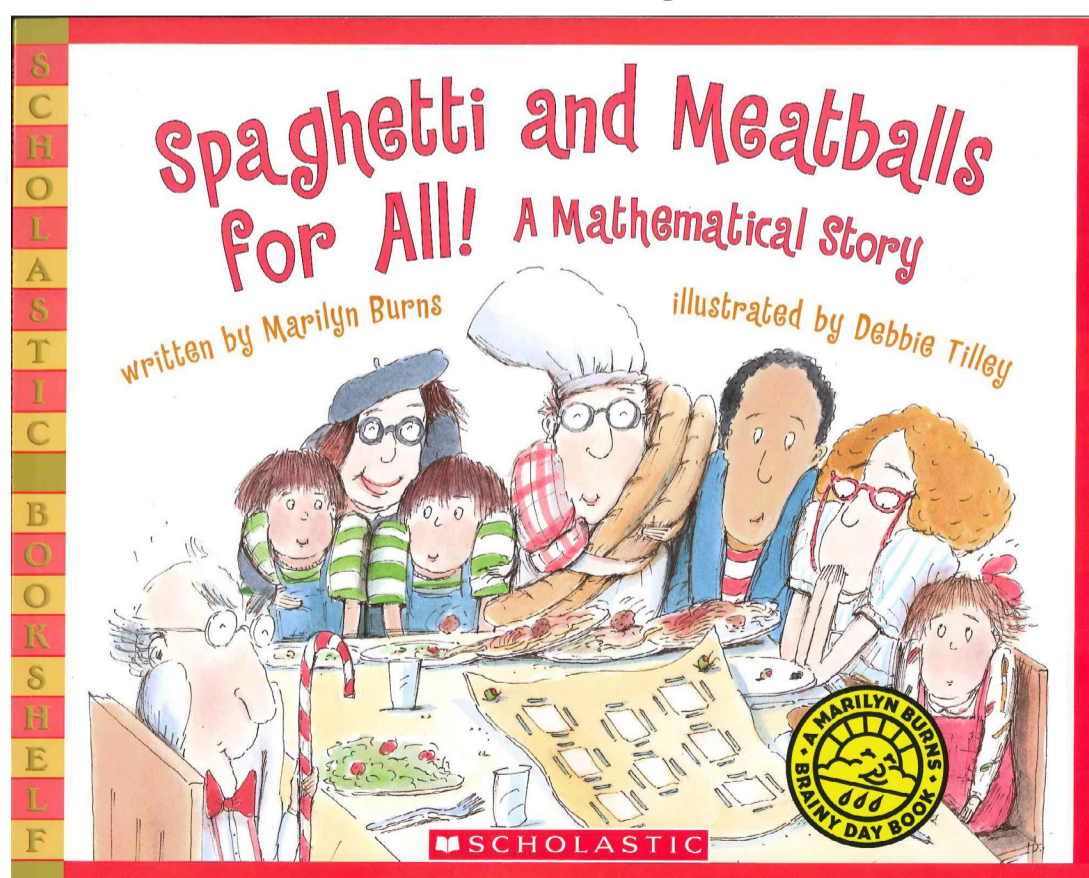


Spaghetti and Meatballs for All! A Mathematical Story

By: Marilyn Burns

Kids will exercise their early math skills with this bestselling picture book--now available in Scholastic Bookshelf! Mr. and Mrs. Comfort are having a family reunion! Mr. Comfort starts cooking up his famous spaghetti and meatballs, while Mrs. Comfort carefully arranges eight tables and thirty-two chairs so that everyone will have a seat. The tables look lovely, the food is ready, and here come the guests--with their own seating plans!

This delightful Marilyn Burns Brainy Day Book uses wit and humor to draw children into thinking about area and perimeter.



Multiplying Menace: The Revenge of Rumpelstiltskin

By: Pam Calvert

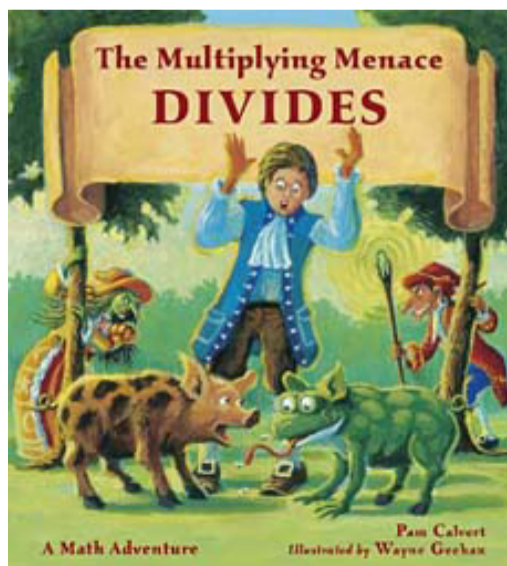
Rumpelstiltskin is back! This time he's making mischief with his multiplying stick. Can Peter unlock the secret of the stick in time to save the kingdom? Whimsical illustrations bring fun to multiplying whole numbers and fractions.



The Multiplying Menace Divides

By: Pam Calvert

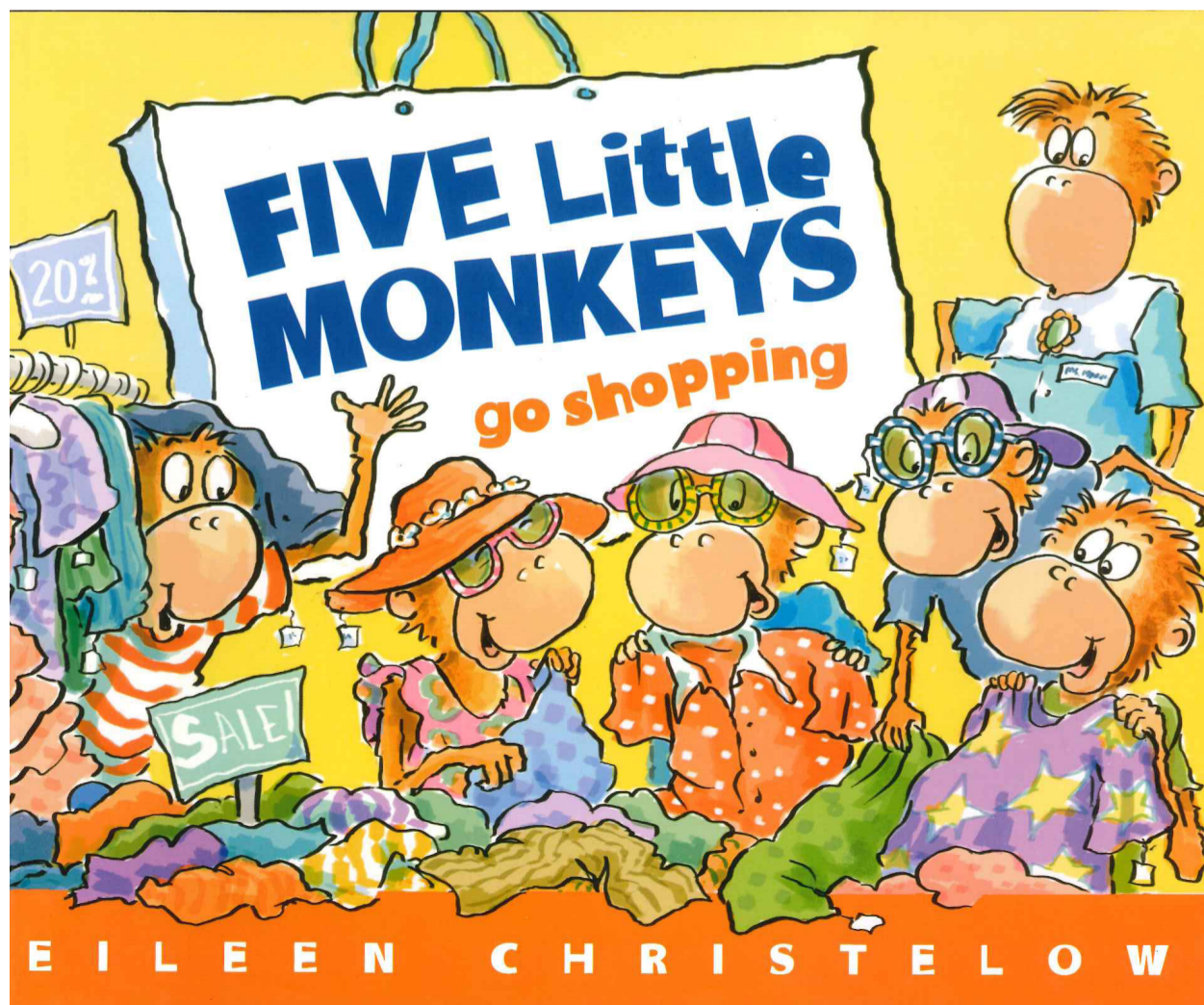
A ribbiting math adventure! After being banished to the Abyss of Zero in MULTIPLYING MENACE: THE REVENGE OF RUMPELSTILTSKIN, Rumpelstiltskin is back, and he's stirring up more trouble than ever. Together with his sidekick, a witch named Matilda, Rumpelstiltskin plots his revenge on Peter and uses his magical powers to divide the kingdom into frogs. Peter and his dog, Zero, must locate the Great Multiplier and find a solution that will break the Great Divide before Rumpelstiltskin has a chance to combine the two mighty math sticks. Can Peter once again save the kingdom in time, or will it meet a green and warty fate? Young readers will fall in love with this math adventure and learn all about dividing by whole numbers and fractions, as well as division rules for equations involving zero. Beautifully rendered illustrations will grab readers' attention as they learn basic math skills in a fun and inventive way. Back matter includes a summary of the basics of division.



Five Little Monkeys Go Shopping

By: Eileen Christelow

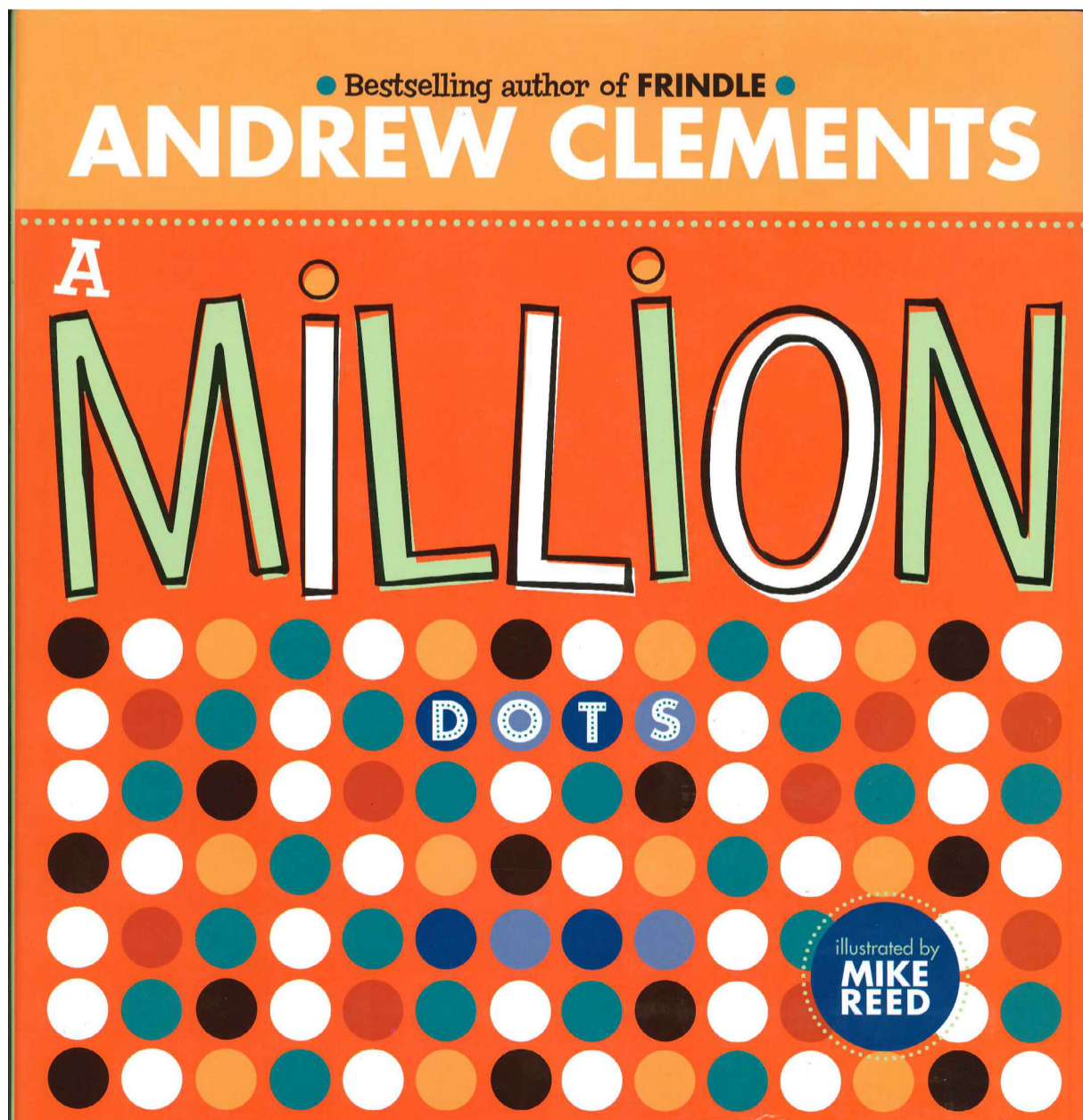
It's the day before school starts, and Mama takes her five little monkeys shopping for clothes. "Stay right here," she says, "AND DON'T GO WANDERING OFF!" But it doesn't take long for her rambunctious brood to scatter every which way. Will Mama ever have all five monkeys together again? Kids will love finding out in this adorable addition to the Five Little Monkeys paperback collection filled with repetitive phrases and counting fun.



A Million Dots

By: Andrew Clements

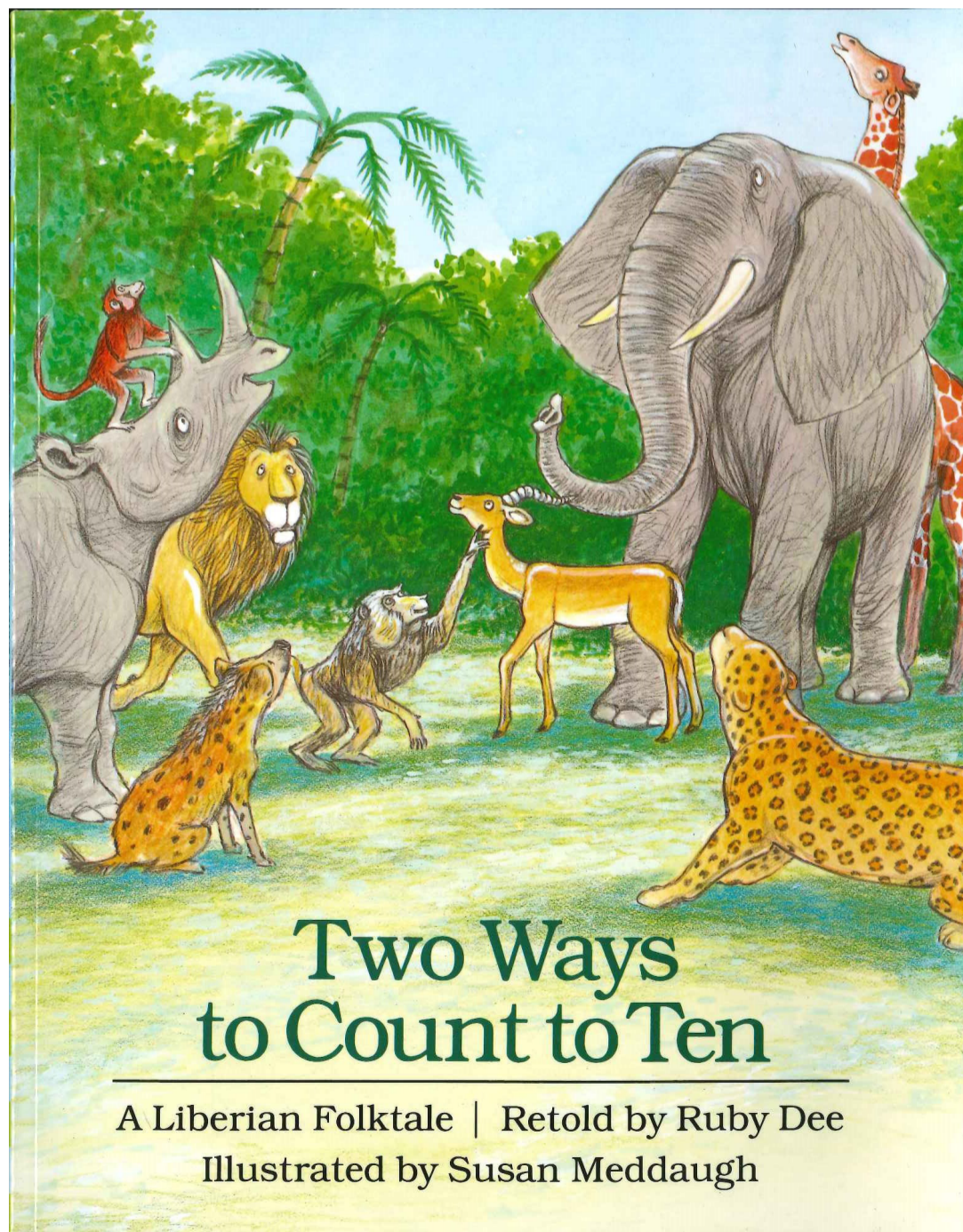
It's a long way to a million, right? Of course it is. But do you really know what a million looks like? If you'd like to see-- actually see, right now, with your own eyes-- what a million looks like, just open this book. Be prepared to learn some interesting things along the way. Like how many shoe boxes it would take to make a stack to Mount Everest. And be prepared to do some number wondering of your own. But, most of all, be prepared to be amazed. Because a million is a LOT of dots.



Two Ways to Count to Ten

By: Ruby Dee

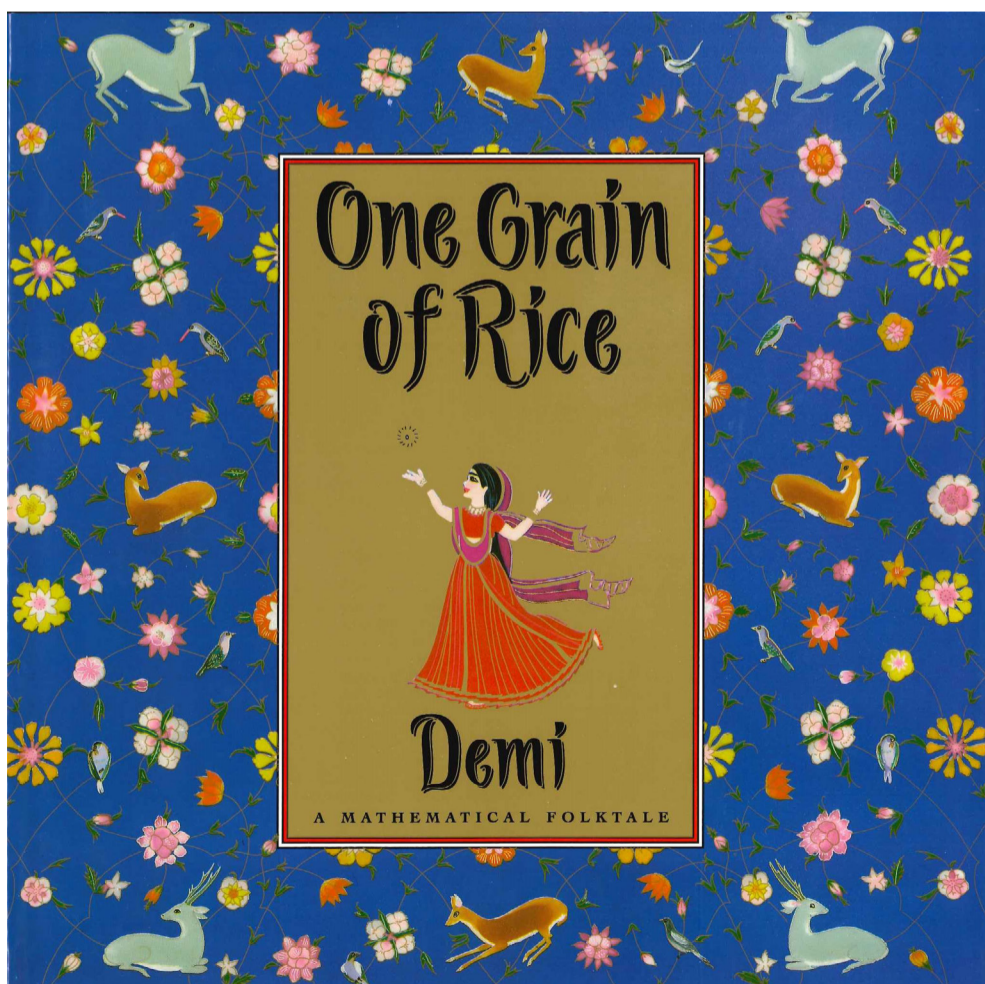
A retelling of a traditional Liberian tale, in which King Leopard invites all the animals to a spear-throwing contest, whose winner will marry his daughter and succeed him as king.



One Grain of Rice: A Mathematical Folktale

By: Demi

Exotic, beautiful, and instructive, this “mathematical folktale” by author-illustrator Demi emerged from her love of India. The narrative and the evocative illustrations combine to create a real sense of the culture and atmosphere of this romantic land. It’s the story of Rani, a clever girl who outsmarts a very selfish raja and saves her village. When offered a reward for a good deed, she asks only for one grain of rice, doubled each day for 30 days. Remember your math? That’s lots of rice: enough to feed a village for a good long time--and to teach a greedy raja a lesson.

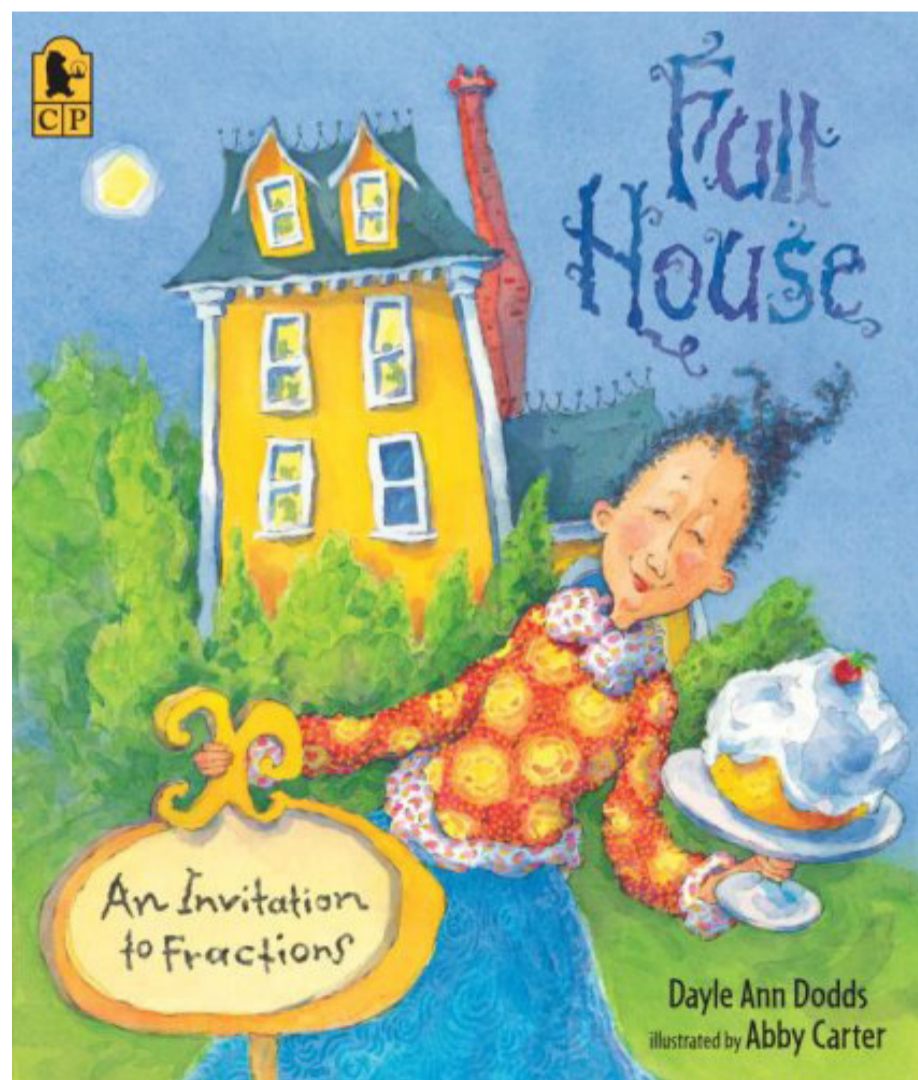


Full House: An Invitation to Fractions

By: Dayle Ann Dodds

Miss Bloom runs the Strawberry Inn, and she loves visitors. All through the day she welcomes a cast of hilarious characters until all the rooms are taken. It's a full house! But in the middle of the night, Miss Bloom senses that something is amiss—and sure enough, the guests are all downstairs eating dessert. Readers will be inspired to do the math and discover that one delicious cake divided by five hungry guests and one doting hostess equals a perfect midnight snack at the Strawberry Inn.

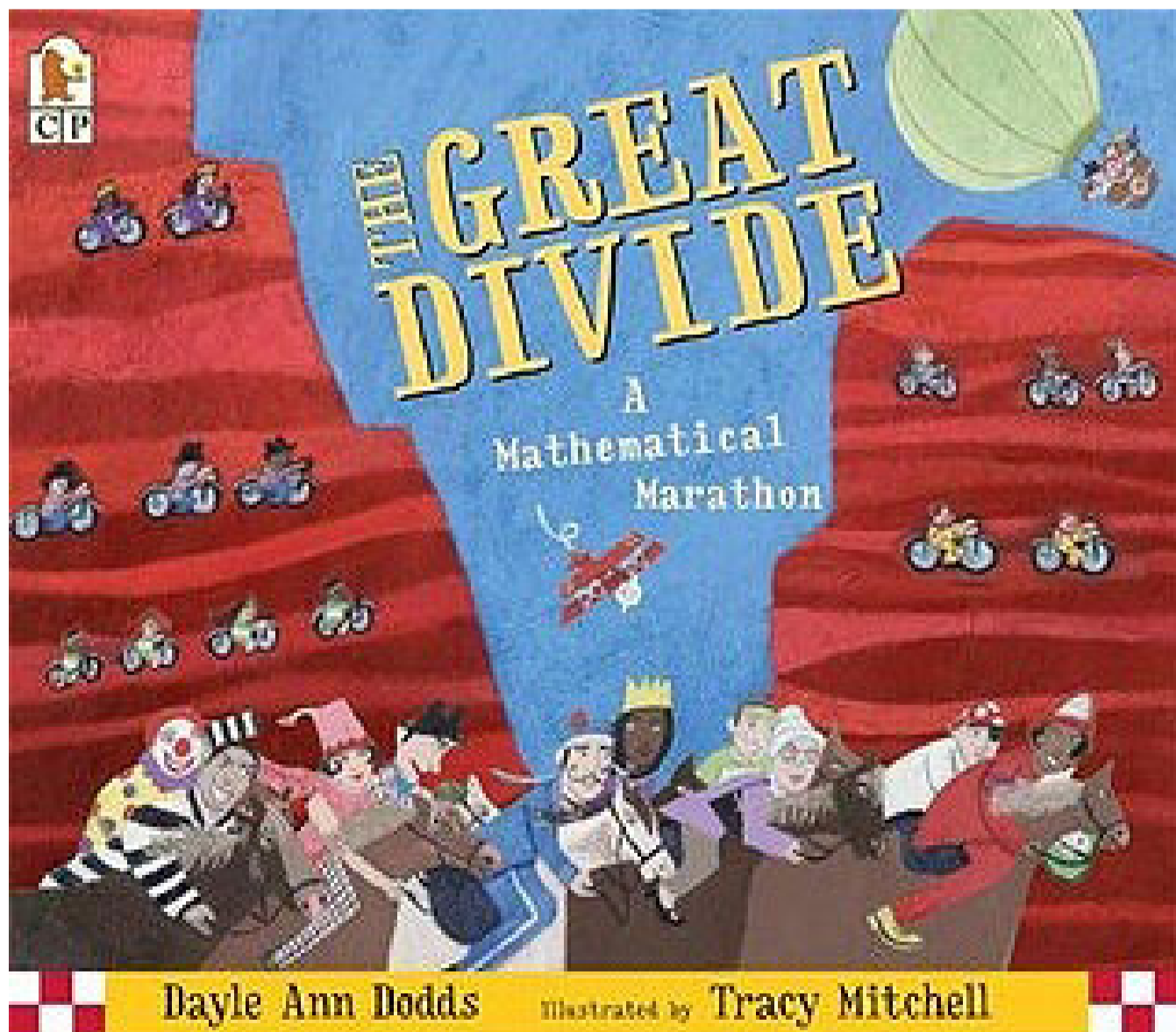
Piece of cake!



The Great Divide: A Mathematical Marathon

By: Dayle Ann Dodds

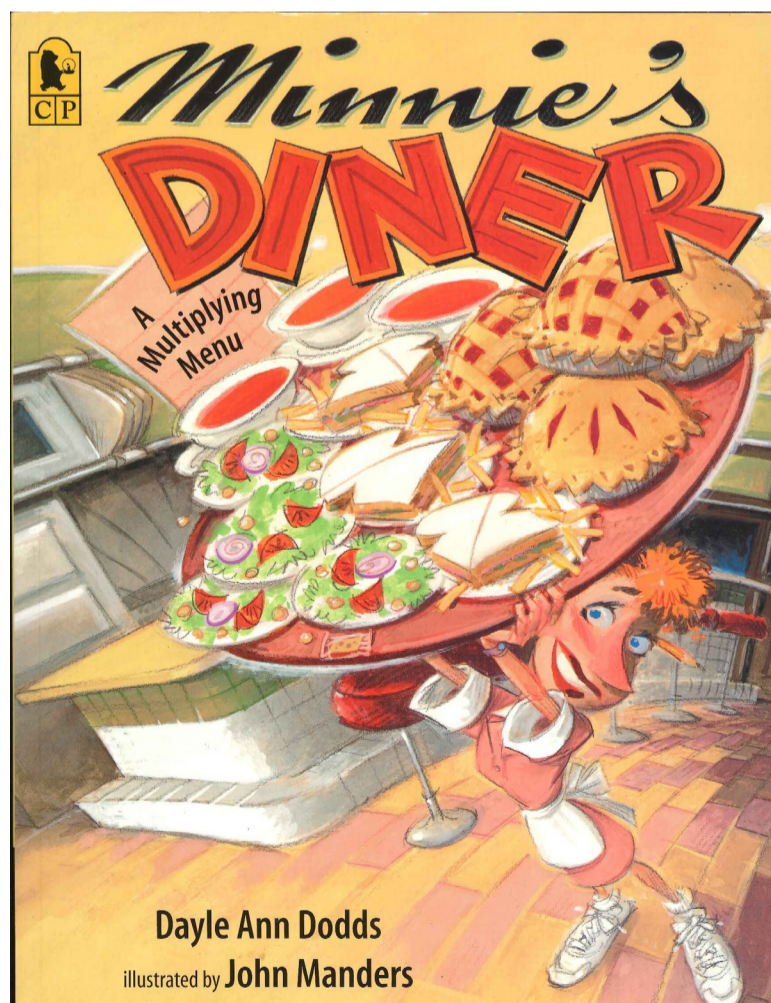
“Bang!” goes the gun. The race is on. Eighty racers explode from the starting gate, determined to win The Great Divide. They surge ahead, rushing toward—OH NO!—the wide hungry mouth of a grand canyon that claims half the racers. And this is only the beginning. More dangers lie ahead, waiting to divide the group once, twice, three times, and more. Will there be anyone left to cross the finish line?



Minnie's Diner: A Multiplying Menu

By: Dayle Ann Dodds

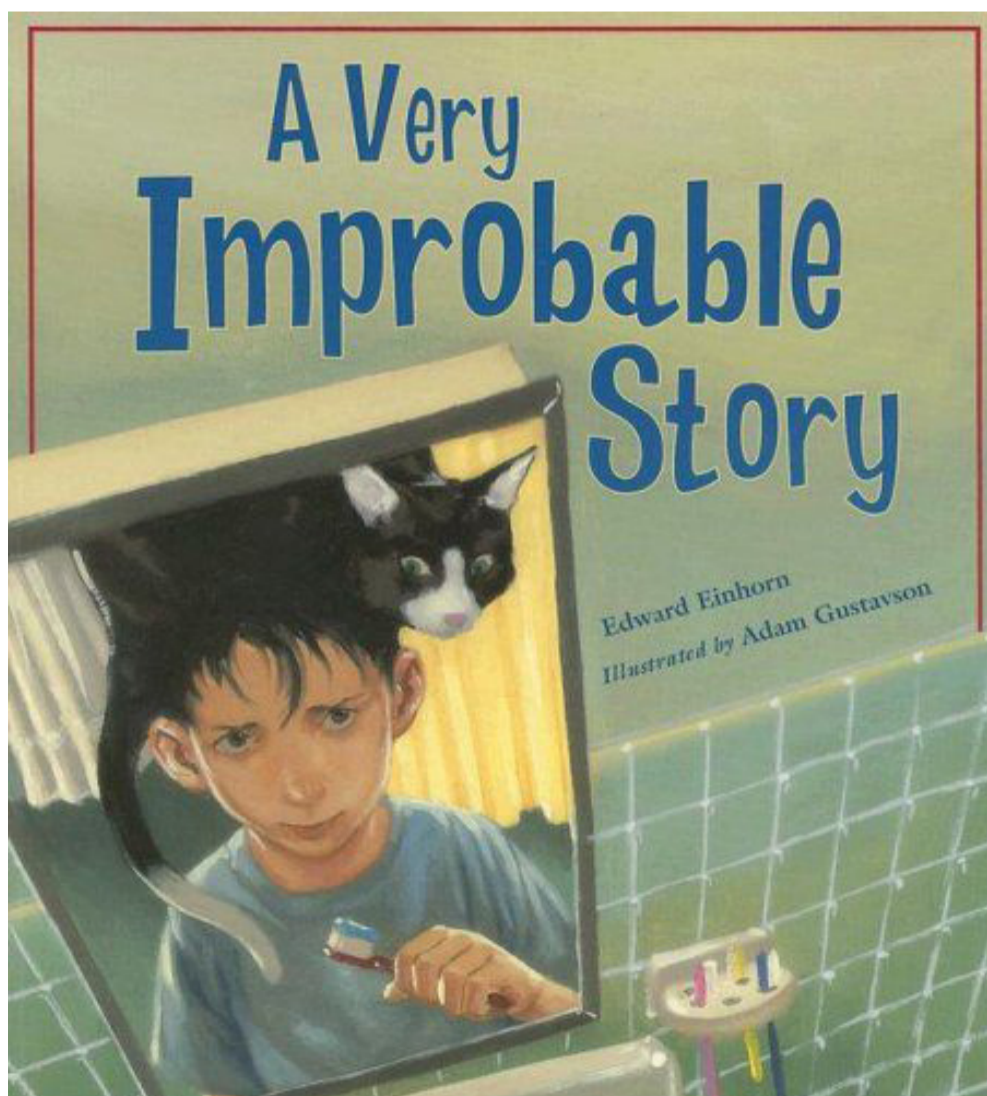
Down on the farm one morning, Papa McFay orders his sons to hop to their chores. But from Minnie's kitchen wafts a smell that gets the boys itchin', and one by one, they succumb to the call of that sweet aroma. Each brother arrives at Minnie's twice as hungry as his brother before — and looking for twice as much grub. Will they be in double trouble when Papa McFay tracks them down? With singsong rhythms and comical illustrations spiced with flavor, Dayle Ann Dodds and John Manders serve up a humorous lesson in multiplication.



A Very Improbable Story

By: Edward Einhorn

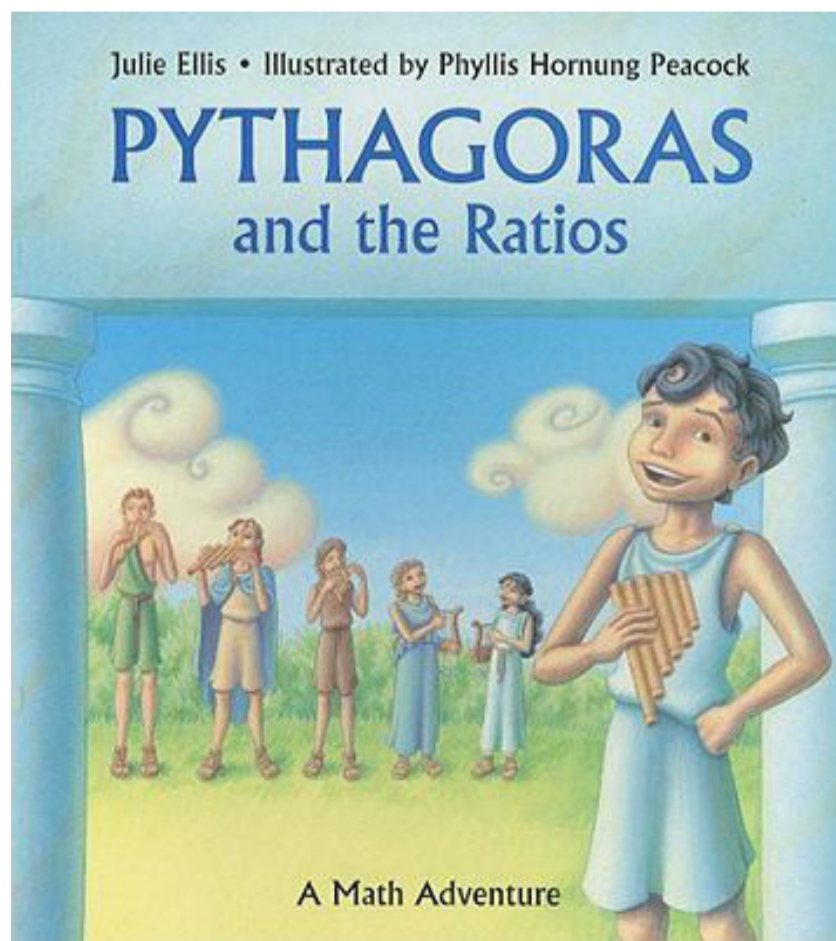
What are the odds? Ethan wakes up one morning to find a very strange cat stuck on his head. The cat, Odds, refuses to budge until Ethan wins a game of probability. Without looking, Ethan must pick out a dime from his coin collection or two matching socks from his dresser, or do something else improbable. If he doesn't, Odds is there to stay, and Ethan has a 100% chance of missing his big soccer game. A very improbable story about a challenging math concept.



Pythagoras and the Ratios

By: Julie Ellis

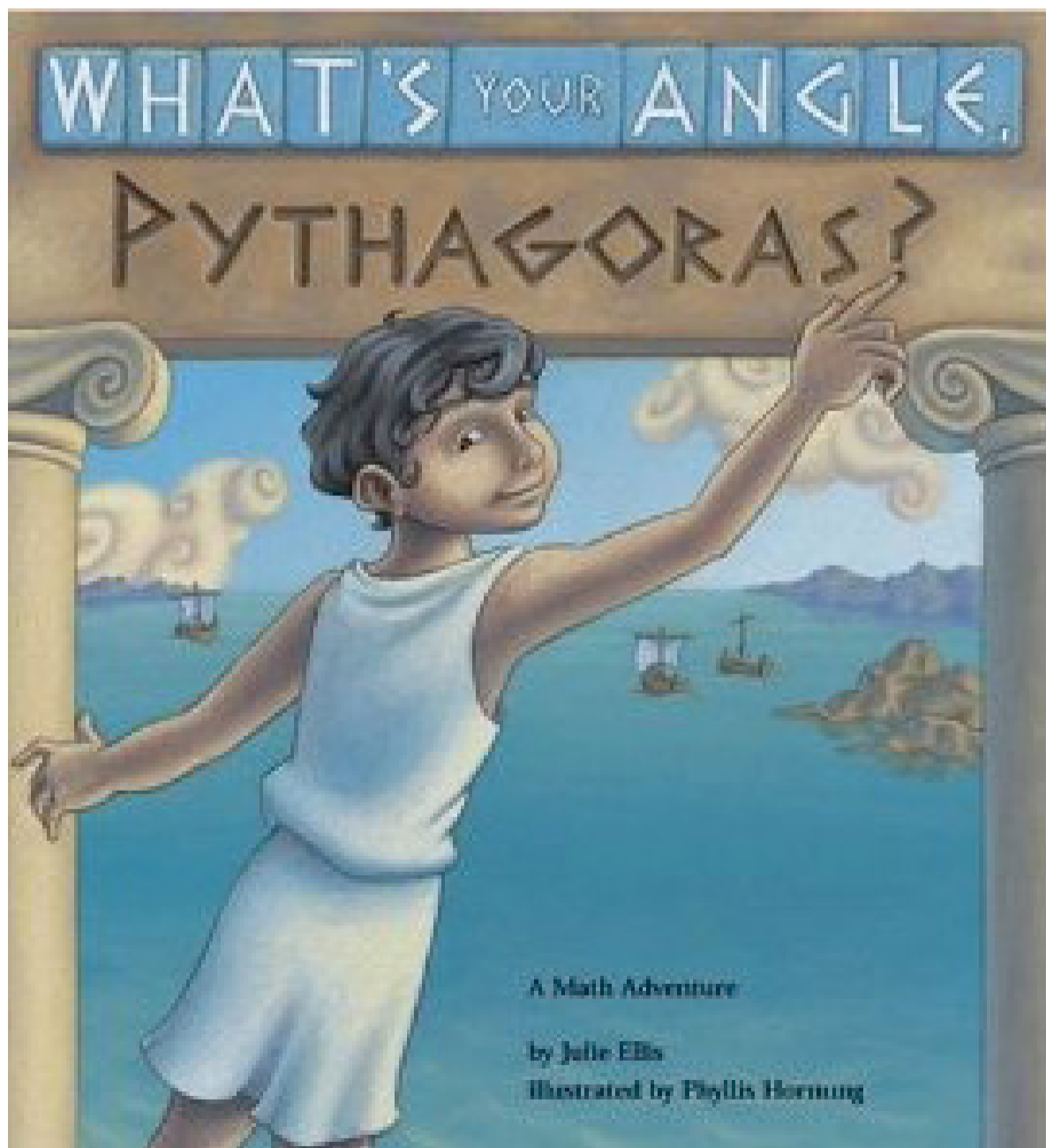
Julie Ellis and Phyllis Hornung Peacock team up once again to explore Pythagorean ratios in this humorous sequel to *WHAT'S YOUR ANGLE, PYTHAGORAS?* Pythagoras and his cousins want to win a music contest, but first they must figure out how to play their instruments in tune, something that's never been done before. While trying to fix the problem, Pythagoras makes an important discovery--notes that sound pleasant together have a certain mathematical relationship. When Pythagoras applies this ratio to his cousins' pipes and lyres, the result is music to the ears.



What's Your Angle, Pythagoras?

By: Julie Ellis

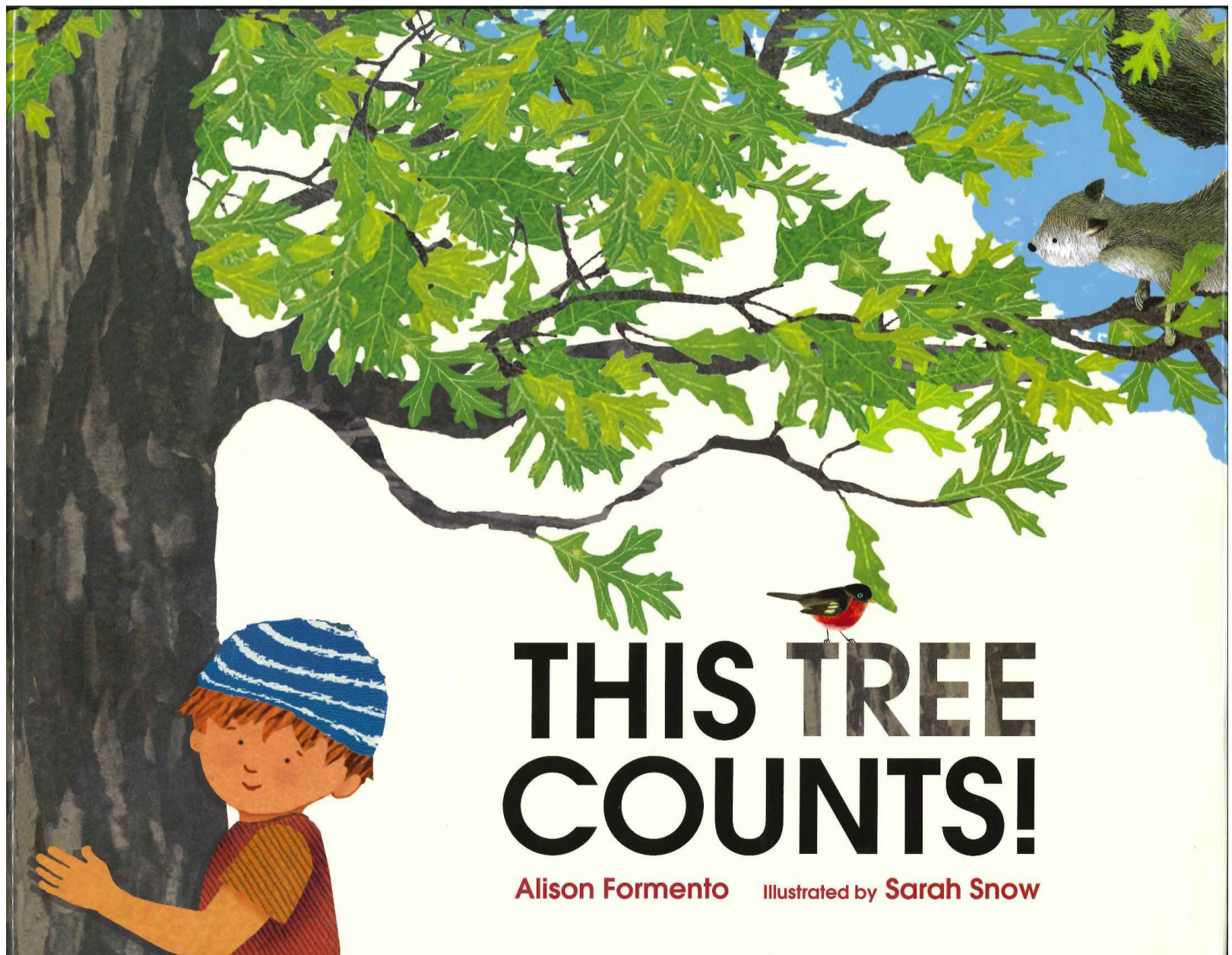
Young Pythagoras can't seem to stay out of trouble. Every time he tries to help, people get angry. What's a curious kid to do? On a trip to Egypt, Pythagoras' curiosity helps him discover the secret of the right triangle. A clever introduction to the Pythagorean Theorem.



This Tree Counts!

By: Alison Formento

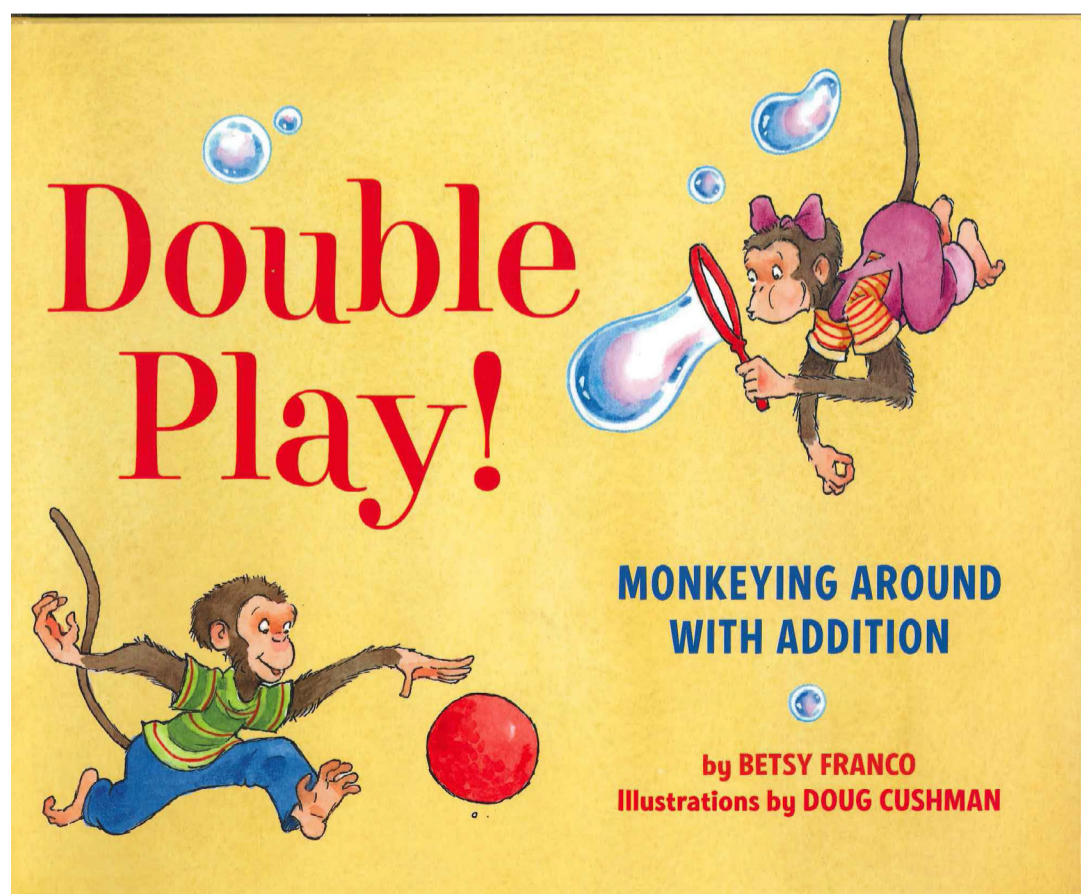
If you listen carefully to the lone tree behind Oak Lane School, it has a story to tell, about... one owl, two spiders, three squirrels, four robins, five caterpillars, six ants, seven crickets, eight flies, nine ladybugs, and ten earthworms, all living safe and free in their tree home. What does this tree need? The children know-it needs friends! Alison Formento's gentle story, illustrated with Sarah Snow's beautiful papercuts, whispers important ideas to all young tree lovers.



Double Play! Monkeying Around with Addition

By: Betsy Franco

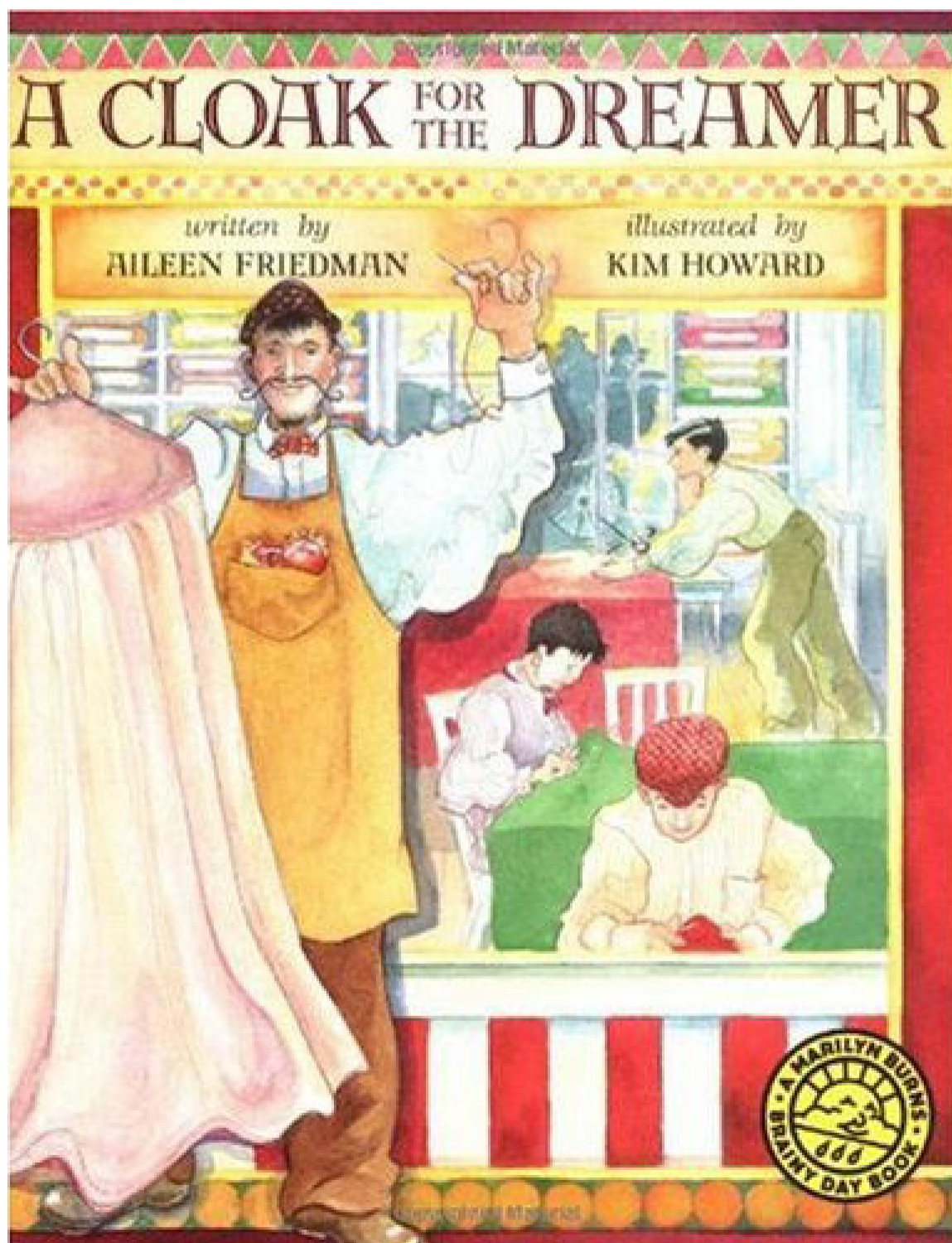
Brrriiiiing! Recess time! Little chimps Jill and Jake find more than just their favorite games in the schoolyard today. They also discover the important mathematical concept of doubling, or adding a number to itself. Easy to learn and fun to memorize, doubling is a valuable problem-solving tool that helps kids prepare for multiplication. A must-have addition to any math-themed picture book library, Double Play makes this arithmetic lesson as welcome as recess.



A Cloak for the Dreamer

By: Aileen Friedman

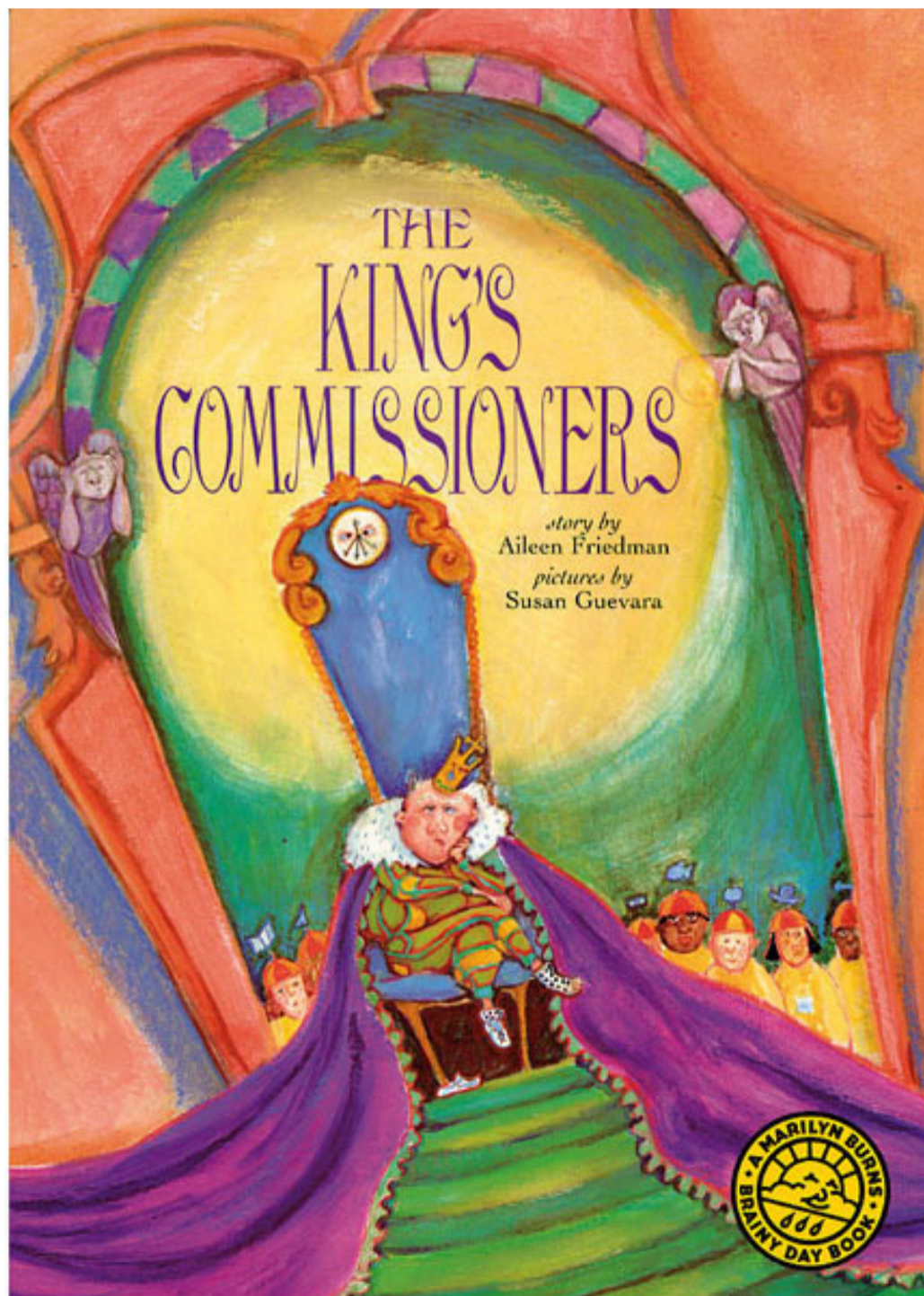
In an entertaining introduction to the concept of geometry, a tailor's son attempts to create a cloak with only circles, with unfortunate results, and then works with his brothers to find a shape that works.



The King's Commissioners

By: Aileen Friedman

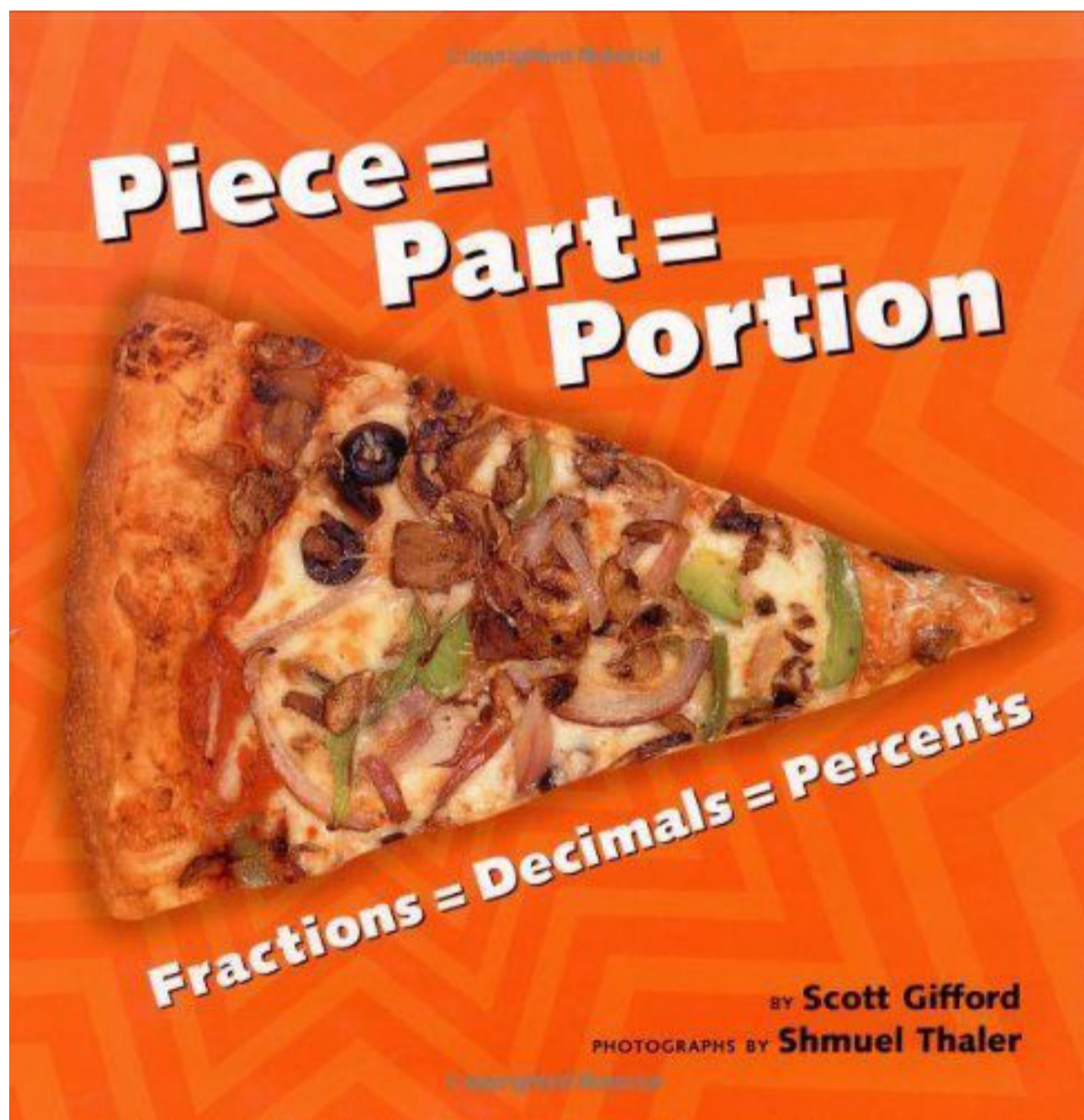
A delightful beginning for those learning the concepts of counting, addition, and the place value system encourages children to have fun while learning important math skills.



Piece=Part=Portion: Fractions=Decimals=Percents

By: Aileen Friedman

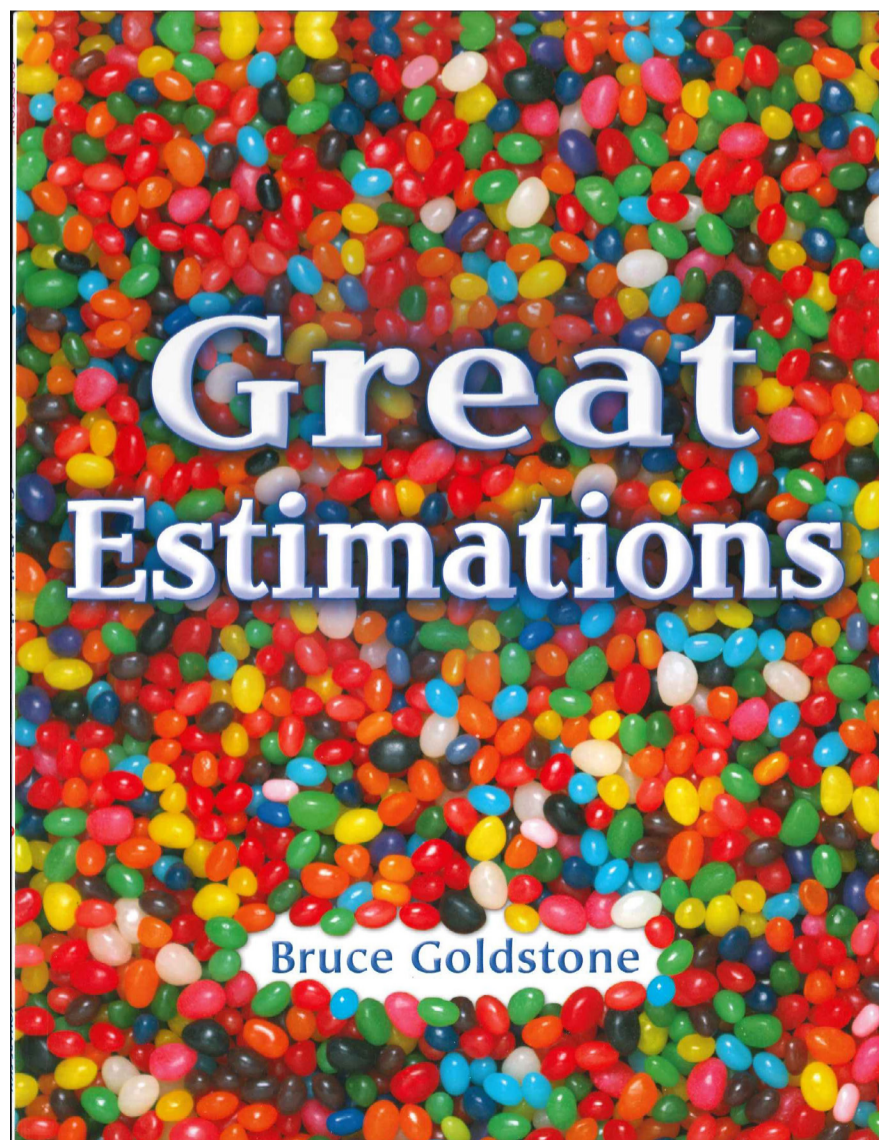
Just as hola and bonjour express “hello” in different ways, fractions, decimals, and percents describe the same quantities in different ways. While it may sound simple, this basic math concept often baffles children. The straightforward text and photographic examples from everyday life in Piece=Part=Portion are a terrific boon to elementary school math students everywhere.



Great Estimations

By: Bruce Goldstone

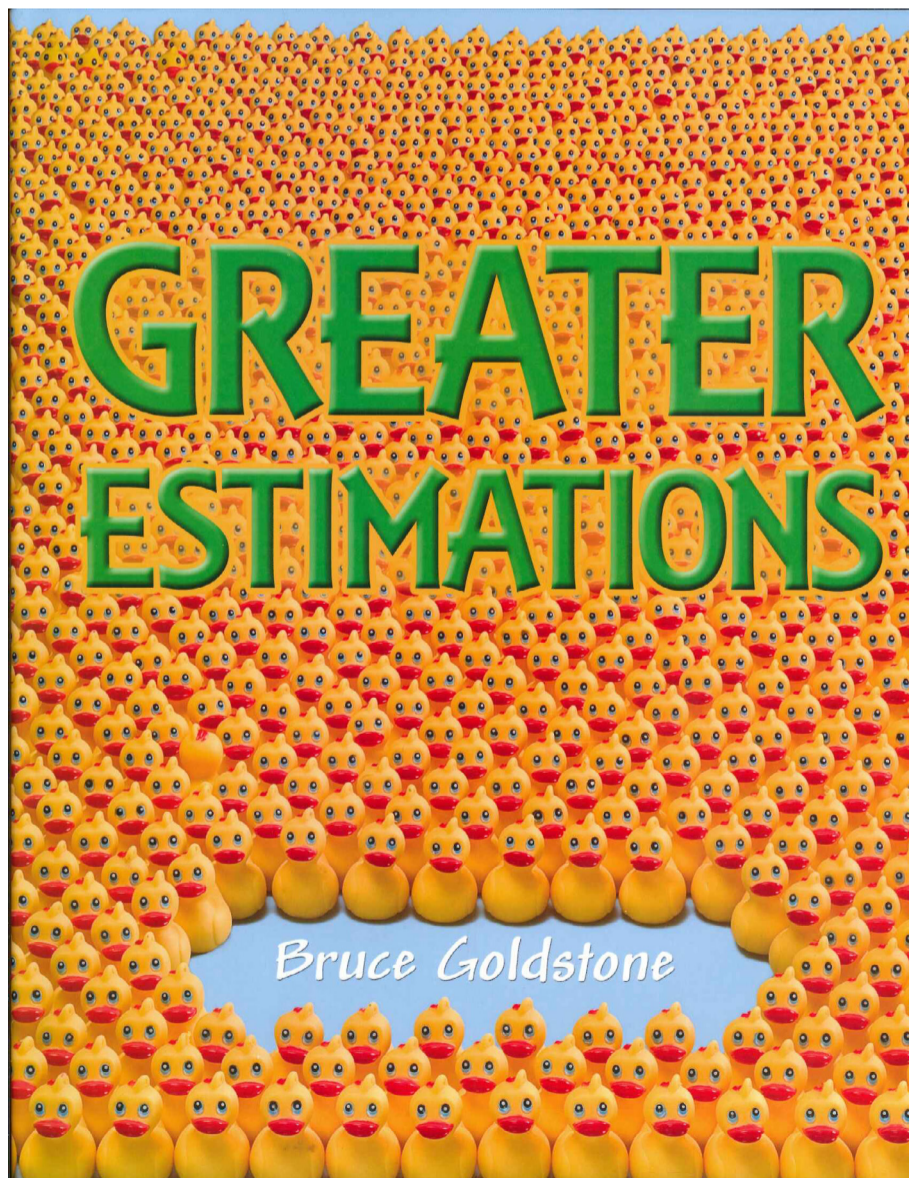
How many jelly beans are on this book's cover? Don't count—estimate! If someone handed you a big bowl of jelly beans, how would you figure out how many there are? You could count them, one by one—or you could estimate. Do you see more than five jelly beans? Less than a million? This unique book will show you how to train your eyes and your mind to make really great estimations—by making estimating into a game. Jelly beans are just the beginning! Great Estimations is a 2007 Bank Street - Best Children's Book of the Year.



Greater Estimations

By: Bruce Goldstone

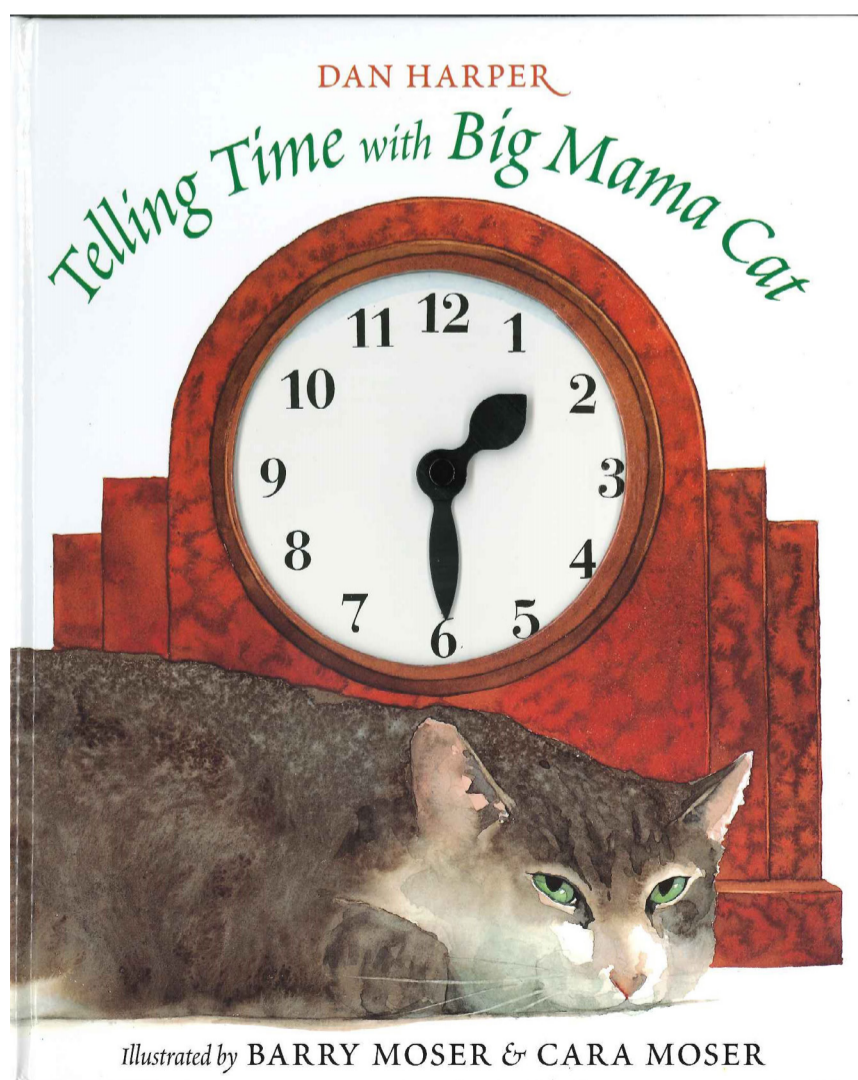
To find out how many rubber duckies are on the cover of this book you could count each one—or you could estimate. An estimate is a good guess. Are there more than ten rubber ducks? Are there fewer than a thousand? Those estimates are not very accurate. A great estimate is close to the real number. Filled with fun, creative examples, this companion to Great Estimations will show you how to train your eyes and your mind to make really great estimations about length, volume, area, and much more.



Telling Time with Big Mama Cat

By: Dan Harper

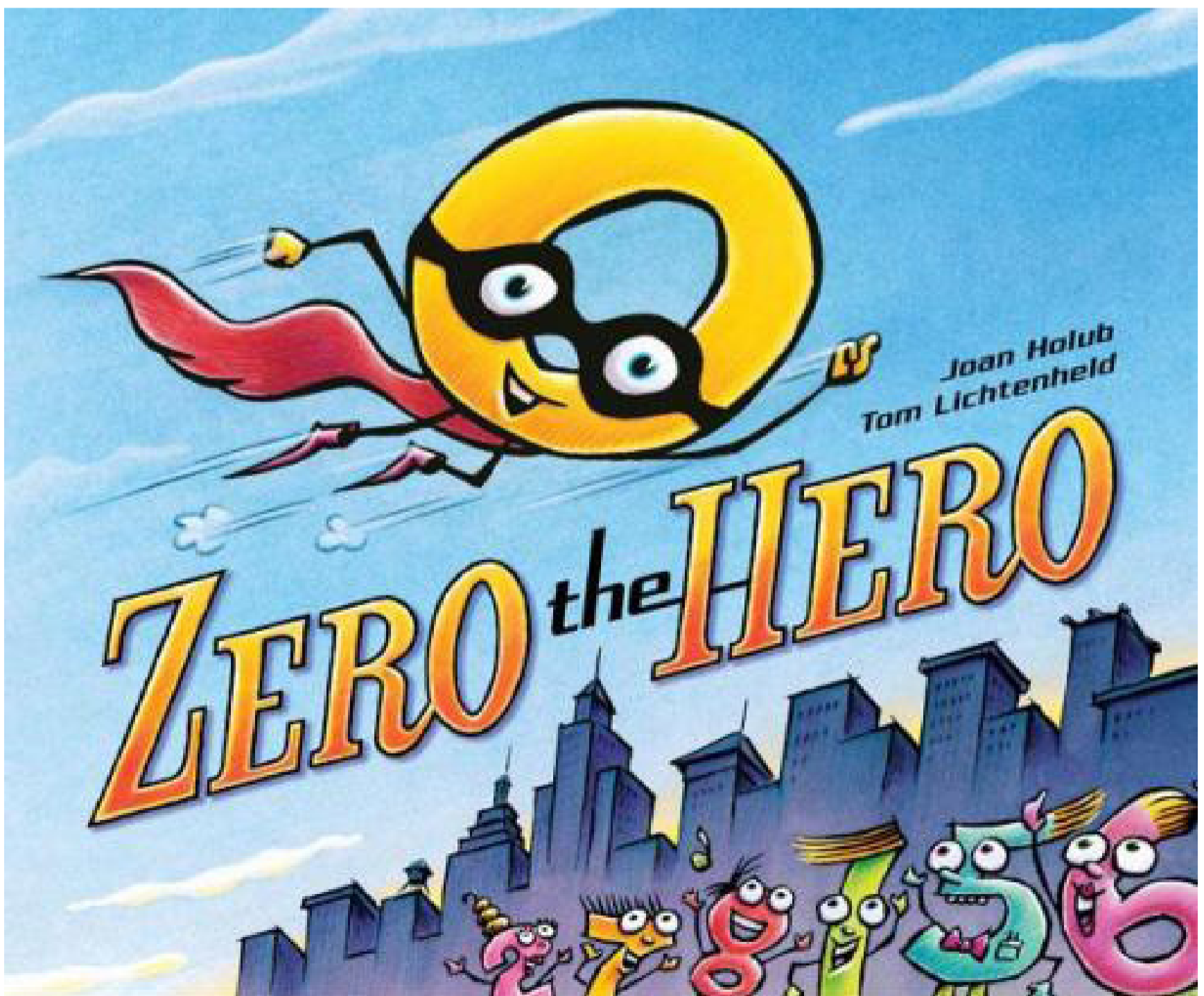
A snack at 9:00, a nap at 10:00, sneaking onto the forbidden chair at 11:00--telling time is the only way Big Mama Cat can remember all the important things she has to do. Follow Big Mama Cat from sunrise till day's end, and you can learn to tell time, too! A sturdy fold-out page at the front of the book reveals a clock with movable plastic hands. Young readers can change the time as Big Mama Cat moves from one adventure to the next in her busy day.



Zero the Hero

By: Joan Holub and Tom Lichtenheld

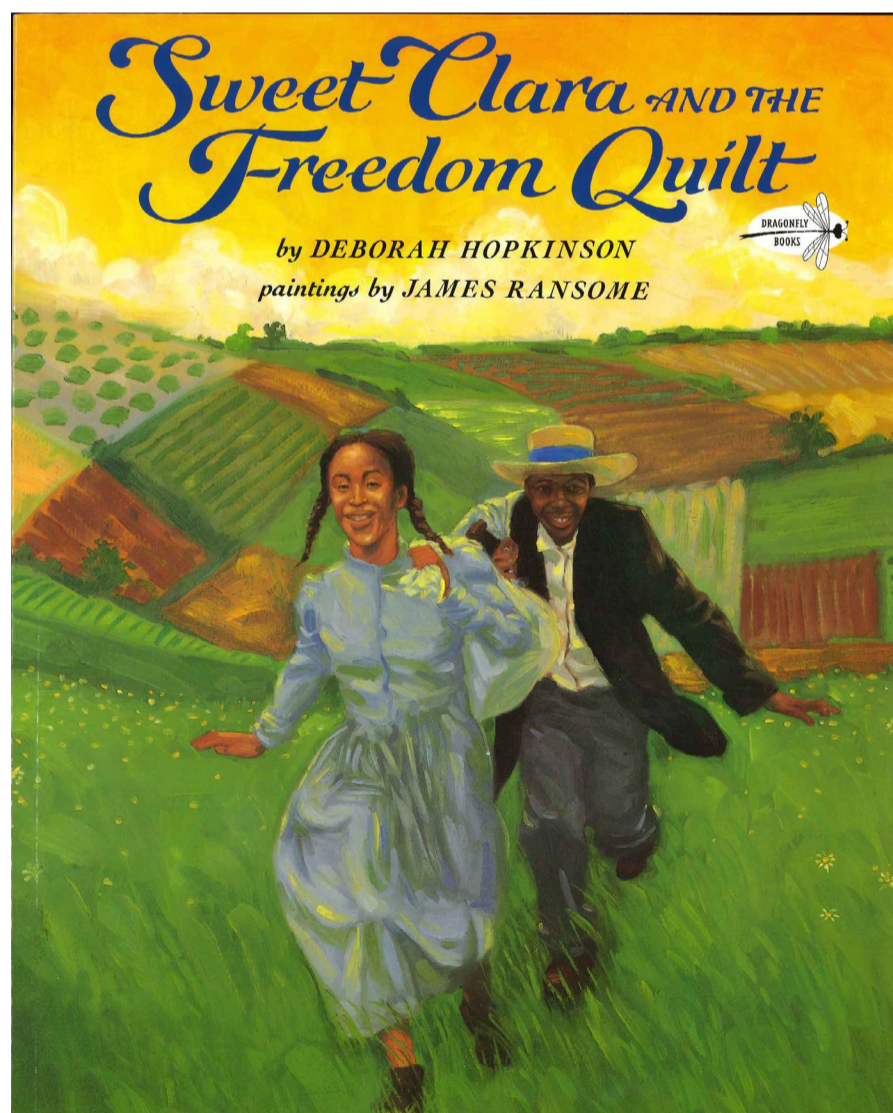
Zero. Zip. Zilch. Nada. That's what all the other numbers think of Zero. He doesn't add anything in addition. He's of no use in division. And don't even ask what he does in multiplication. (Hint: Poof!) But Zero knows he's worth a lot, and when the other numbers get into trouble, he swoops in to prove that his talents are innumerable.



Sweet Clara and the Freedom Quilt

By: Deborah Hopkinson

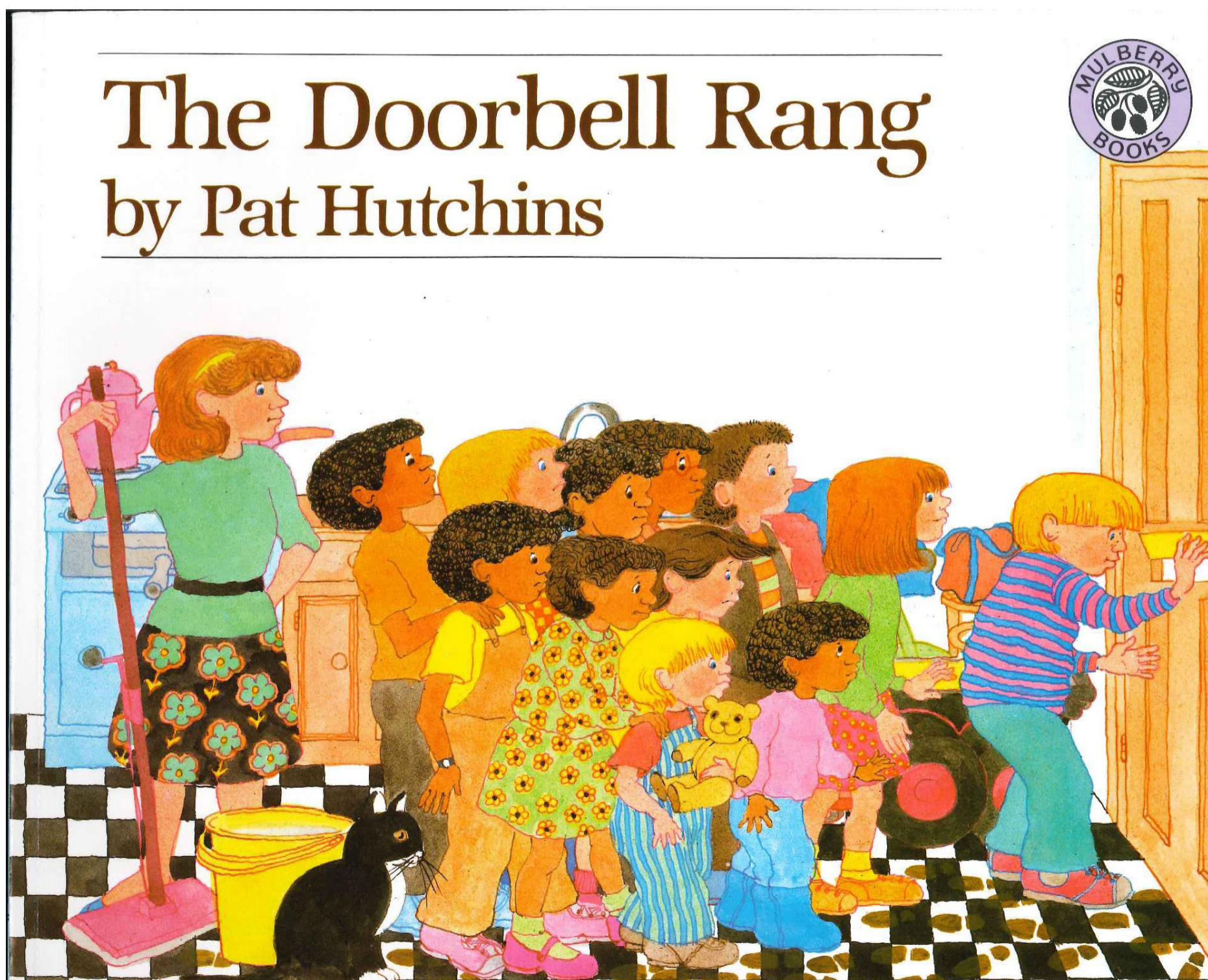
2013 marks the 20th anniversary of *Sweet Clara and the Freedom Quilt*! As a seamstress in the Big House, Clara dreams of a reunion with her Momma, who lives on another plantation--and even of running away to freedom. Then she overhears two slaves talking about the Underground Railroad. In a flash of inspiration, Clara sees how she can use the cloth in her scrap bag to make a map of the land--a freedom quilt--that no master will ever suspect.



The Doorbell Rang

By: Pat Hutchins

Ma has made a dozen delicious cookies. It should be plenty for her two children. But then the doorbell rings -- and rings and rings. Each ring of the doorbell brings more friends to share the delicious cookies Ma has made.



2X2=Boo!

A Set of Spooky Multiplication Stories

By: Loreen Leedy

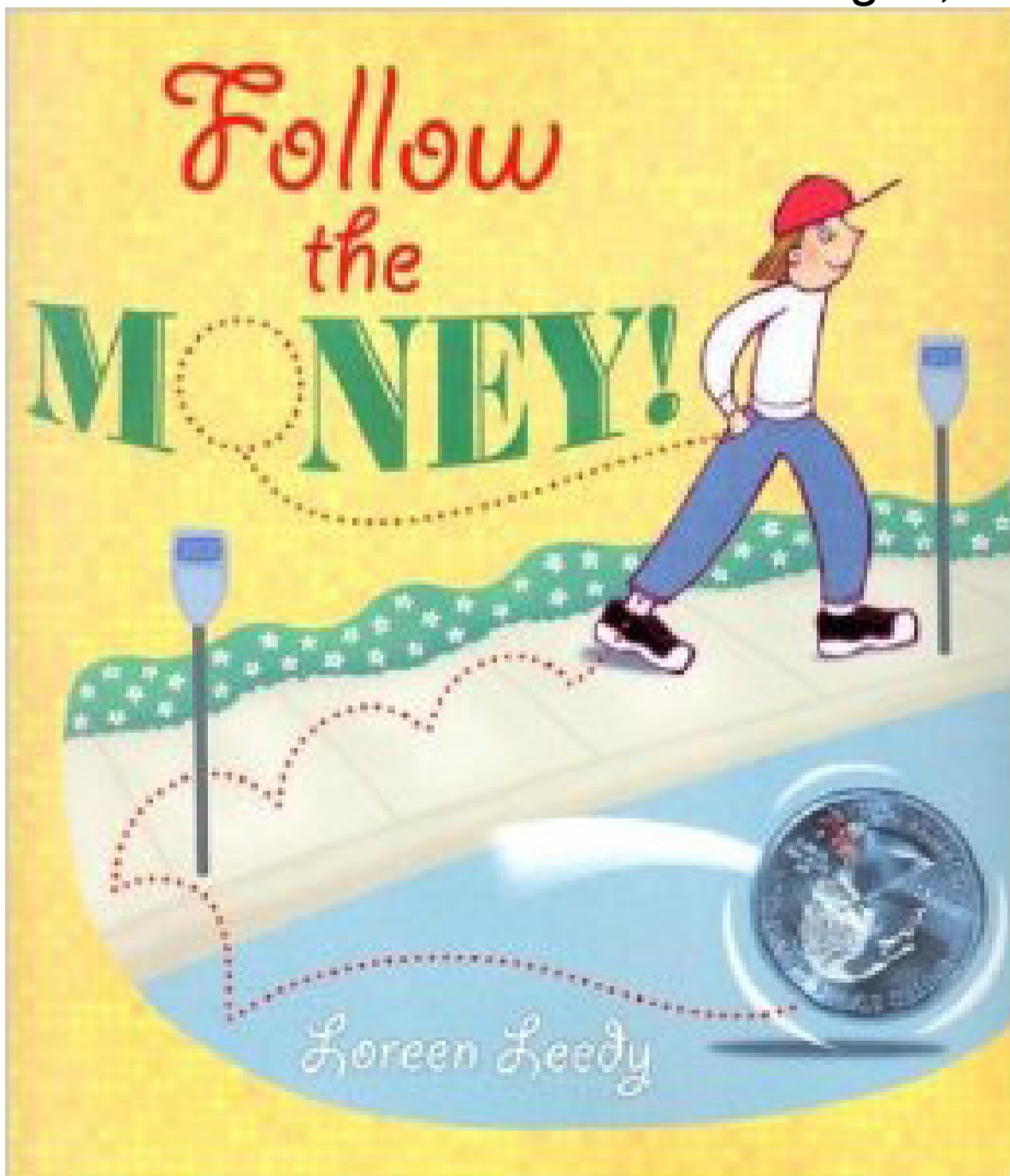
Witches, vampires, bats, and skeletons are some of the Halloween creatures in these cheerfully ghoulish math stories. How do you make boo stew for 5 if the recipe serves only one? Answer: multiply all the ingredients by 5; that means multiplying five bouncy eyeballs, 10 knobby knuckles, 15 ears, and 20 toes. The first chapter, about the number zero, is the most difficult (How do you make a vampire vanish? Answer: multiply him by zero), but the concept is demonstrated with a great many examples of disappearing creatures. After that, it's pretty straightforward multiplication from one to five. Leedy's pictures, in comic style, are gory and silly, and kids will work out the numbers as they giggle at the creepy monsters.



Follow the Money!

By: Loreen Leedy

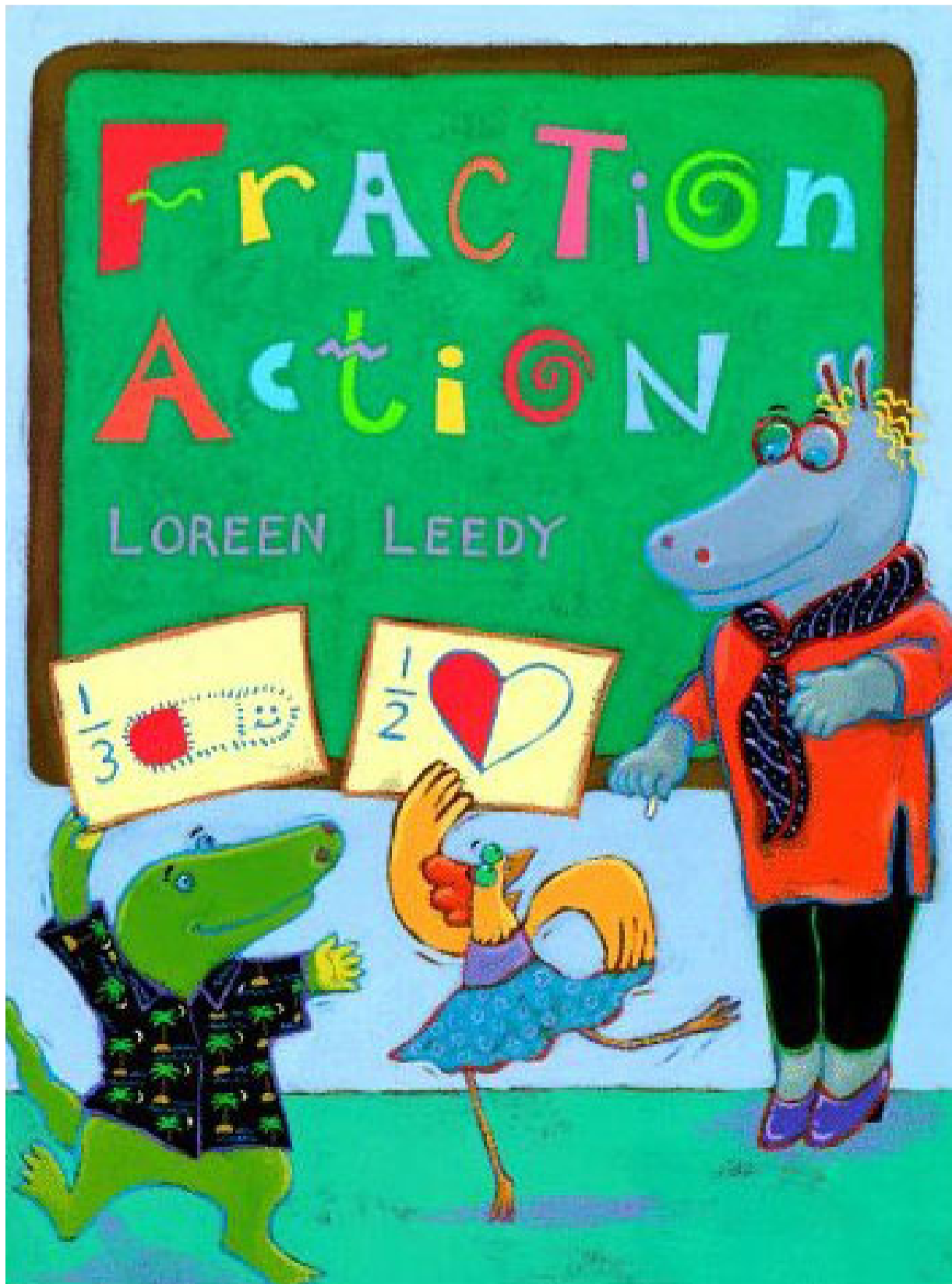
George, a newly minted quarter on his way to the bank, is in for quite a day. He's about to be traded, spent, lost, found, donated, dropped into a vending machine, washed in a washing machine, and generally passed all around town. By the time George finally ends up back at the bank, he's given readers a real run for their money. By George, what a way to practice math, learn about basic economics and have a few laughs, too!



Fraction Action

By: Loreen Leedy

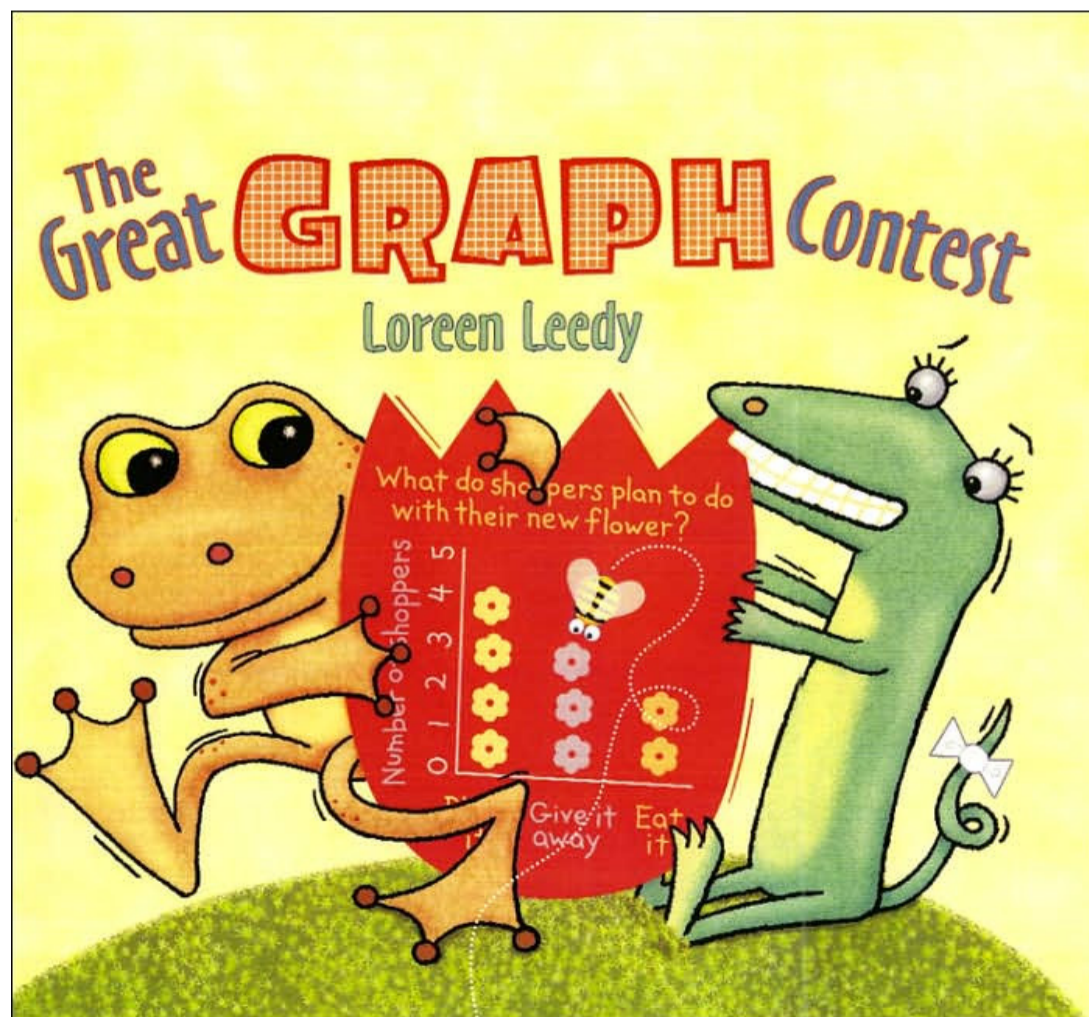
Miss Prime and her animal students explore fractions by finding many examples in the world around them.



The Great Graph Contest

By: Loreen Leedy

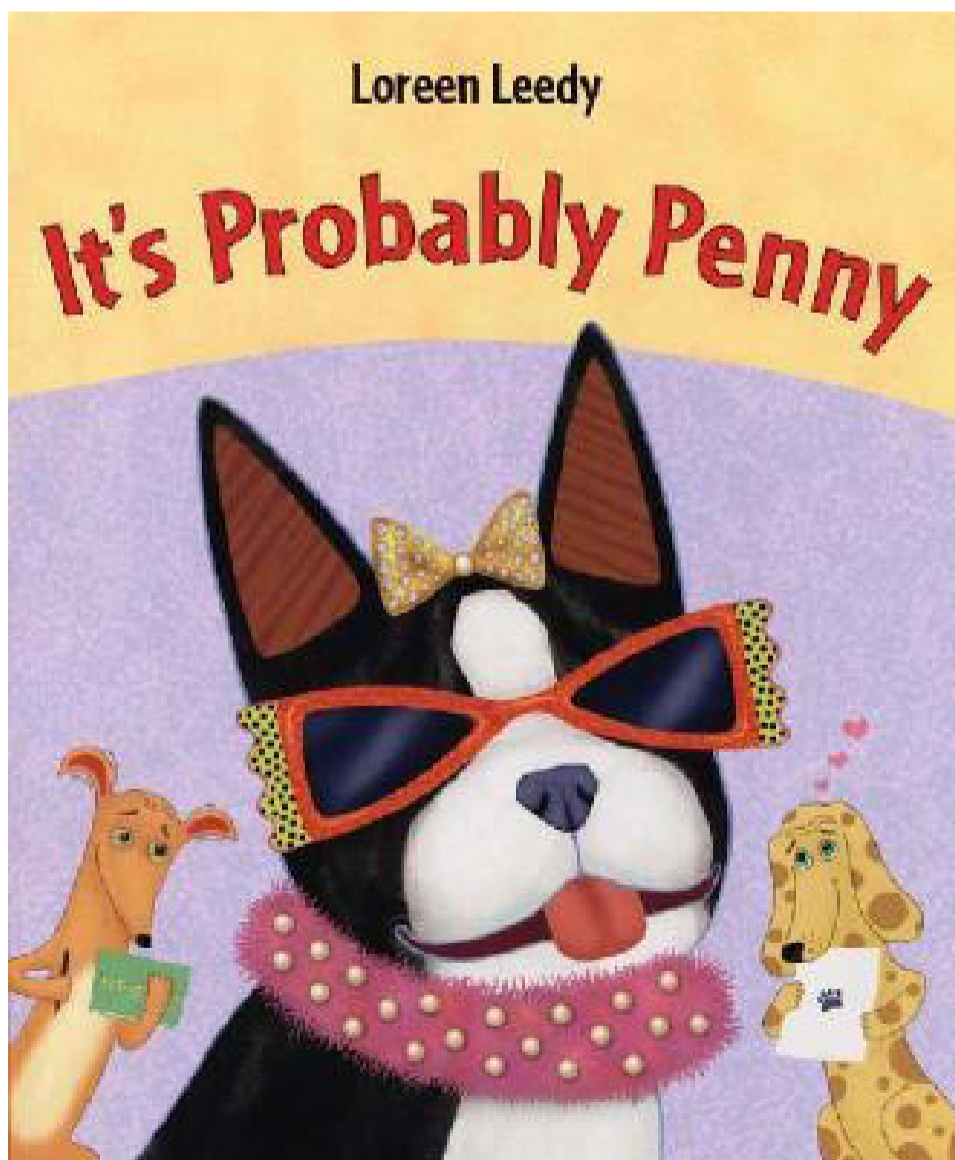
A delightful companion to *Measuring Penny*. Lisa's class is learning about probability. For part of her homework, she has to think of an event that will happen, one that might happen, and one that can't happen. Who is that Boston terrier that keeps popping into Lisa's imagination? It's probably Penny! Loreen Leedy is widely praised for her ability to make concepts fun and accessible to children, and she has done it again in this great introduction to probability. *It's Probably Penny* is a 2008 Bank Street - Best Children's Book of the Year.



It's Probably Penny

By: Loreen Leedy

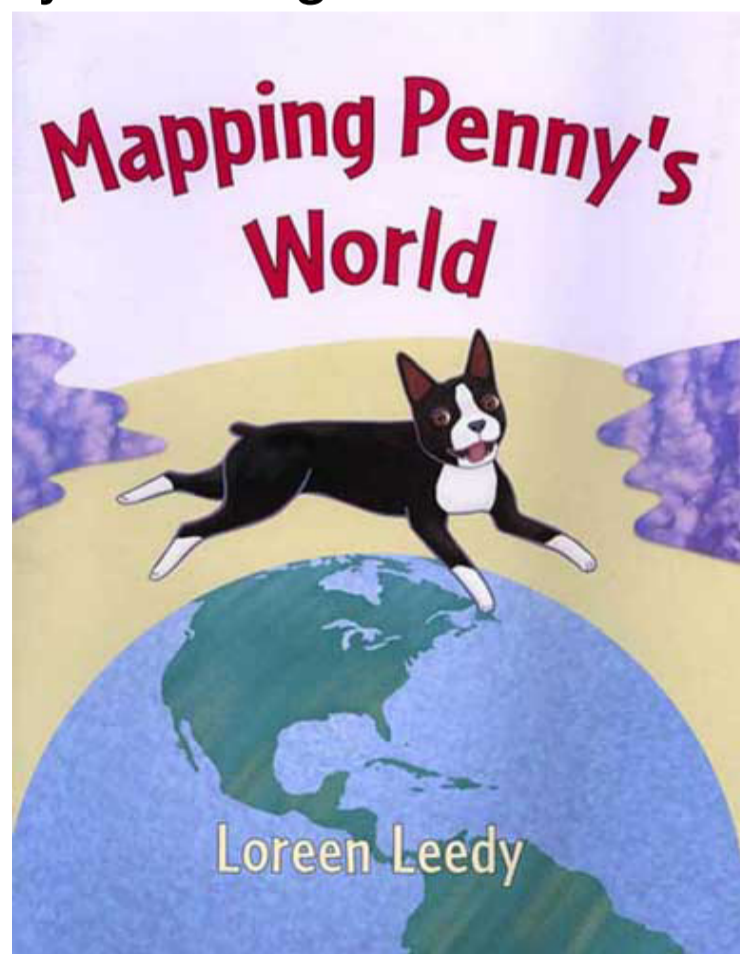
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Mapping Penny's World

By: Loreen Leedy

Lisa and her dog, Penny, learn the basics of mapmaking in this delightful sequel to *Measuring Penny*. Lisa's class is learning how to make maps. The teacher says they can make maps of anyplace, so Lisa starts with her bedroom. She includes all the things that people will need to read the map, such as a scale and a key to the symbols she has used. Her dog, Penny, helps with the map. This gives Lisa an idea: Why not map Penny's world? Making maps is so much fun that Lisa and Penny decide to visit some of the exotic places that they've drawn-but they won't forget to take a map along! Now available in paperback, this engaging sequel to the bestselling *Measuring Penny* will delight teachers and students alike.

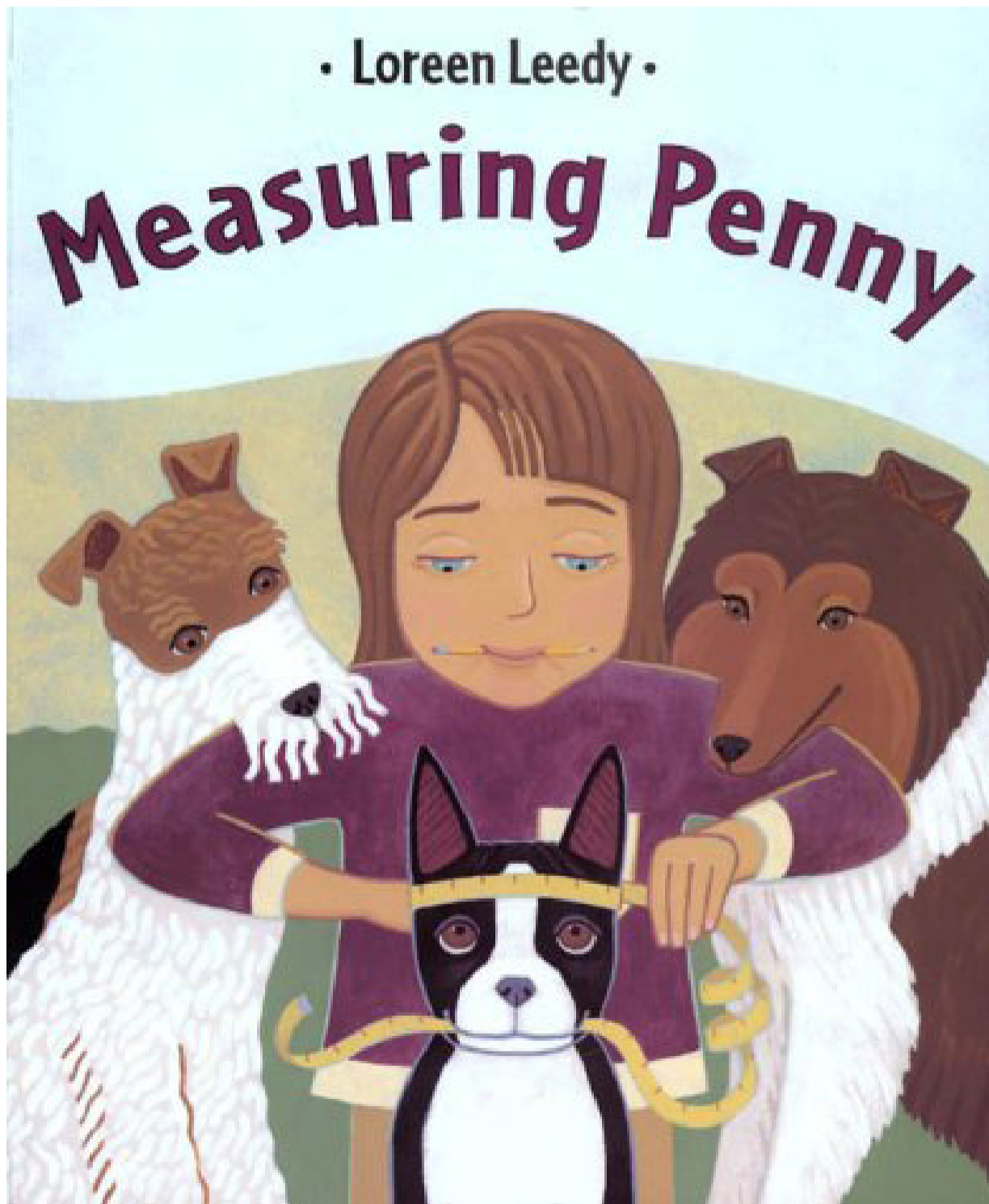


Measuring Penny

By: Loreen Leedy

Lisa has an important homework assignment--to measure something in several different ways. She has to use standard units like inches and nonstandard units like paper clips to find out height, width, length, weight, volume, temperature, and time.

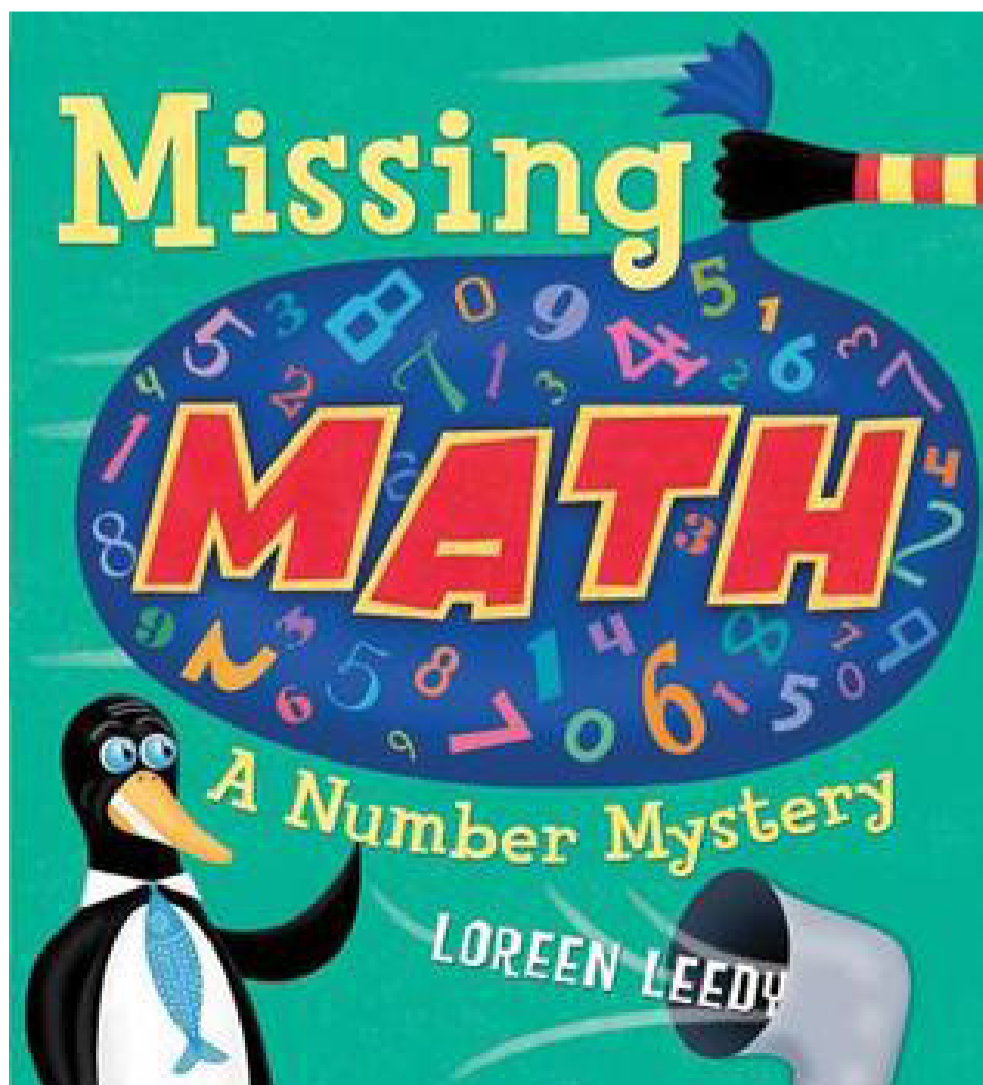
Lisa decides to measure her dog, Penny, and finds out...



Missing Math: A Number Mystery

By: Loreen Leedy

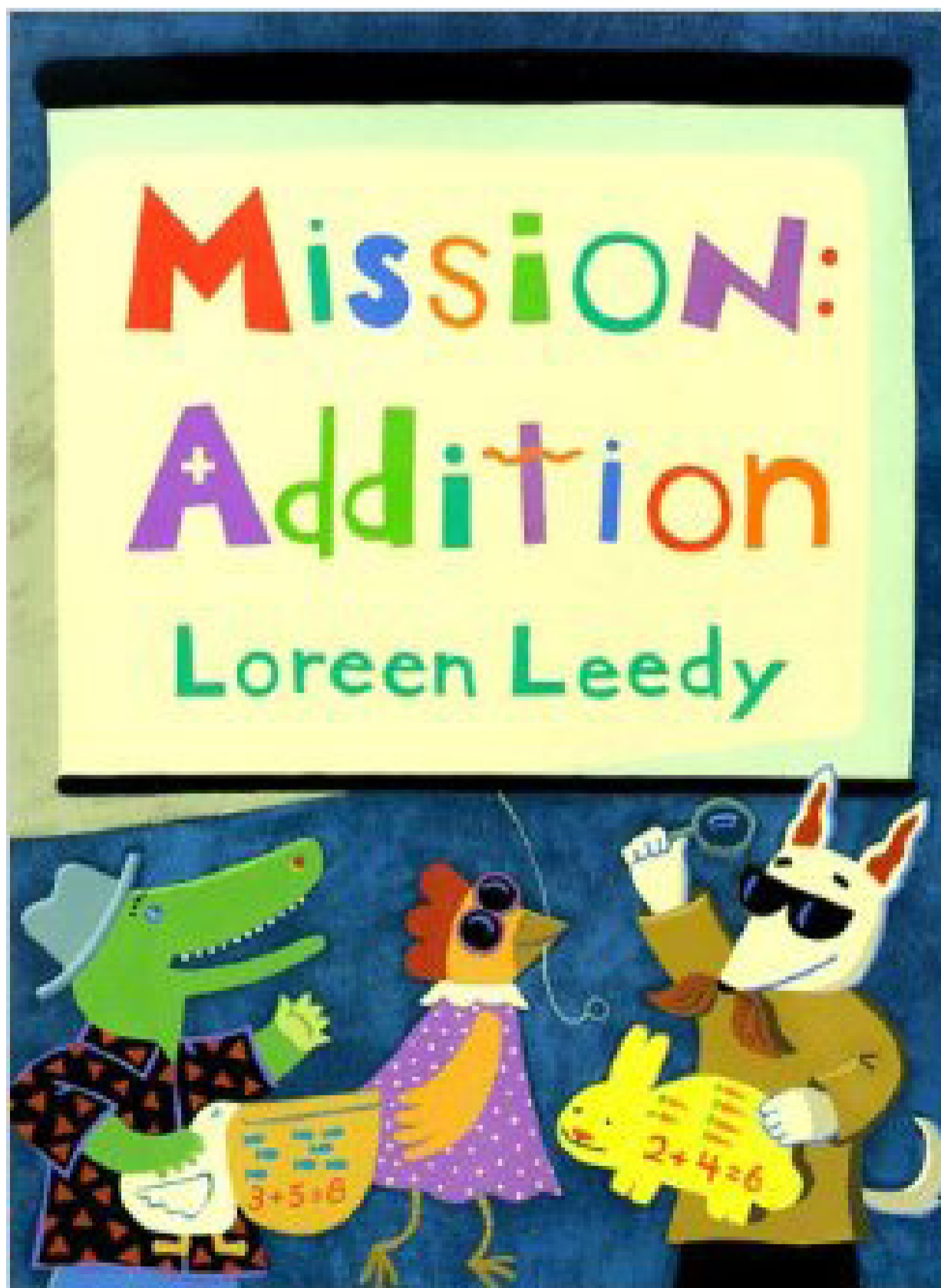
In Missing Math, the numbers all over town suddenly disappear. The animals can't count, use the phone, or even find out what time it is. Rulers, money, and computers have all become completely useless...Can the town's detective solve this numerical mystery? Will he ever bring the numbers back home again? Loreen Leedy's clever rhyming text PLUS her amusing digitally painted illustrations EQUALS proof that we need math each and every day.



Mission Addition

By: Loreen Leedy

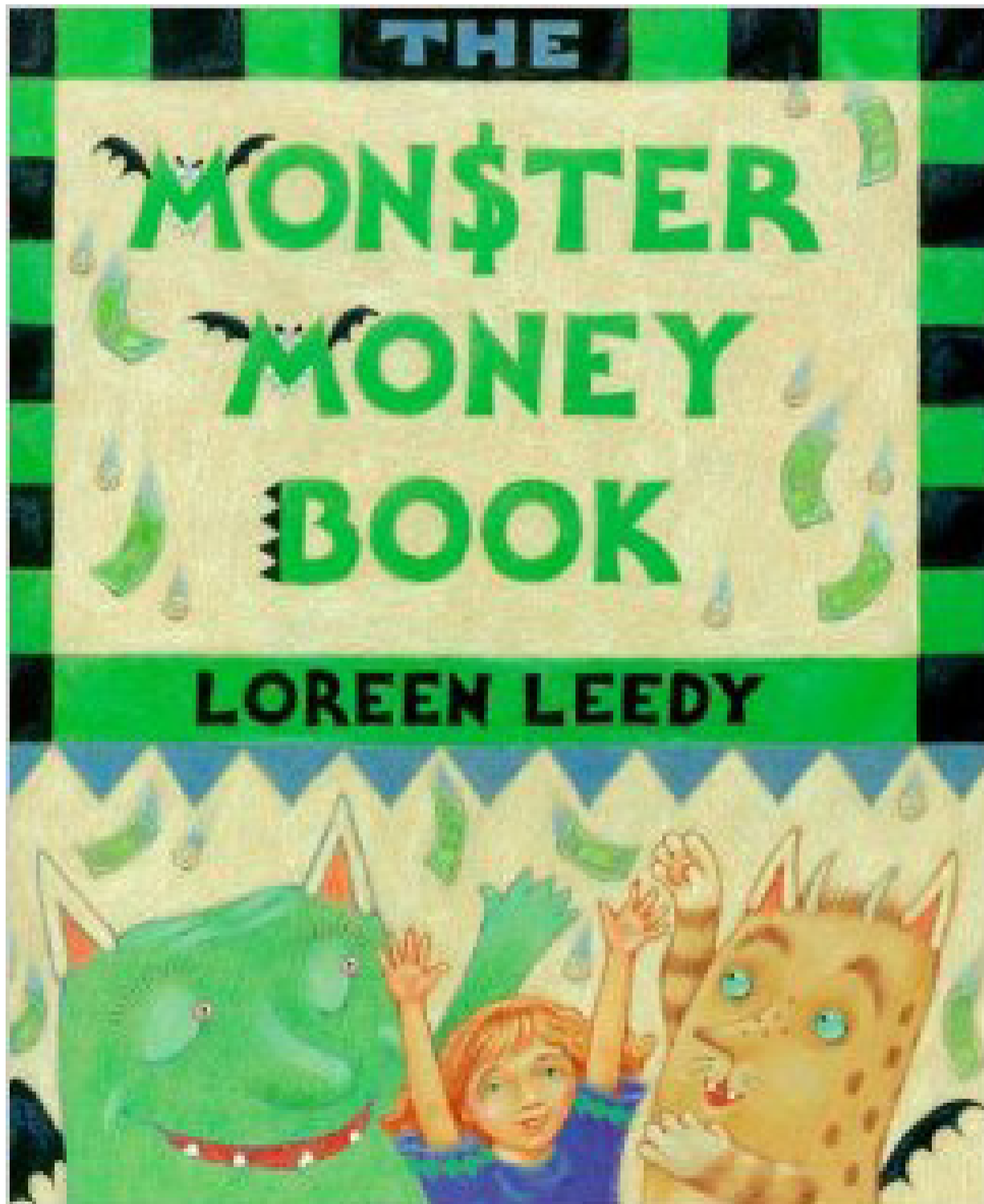
Animal students learn about addition from the world around them.



The Mon\$ter Money Book

By: Loreen Leedy

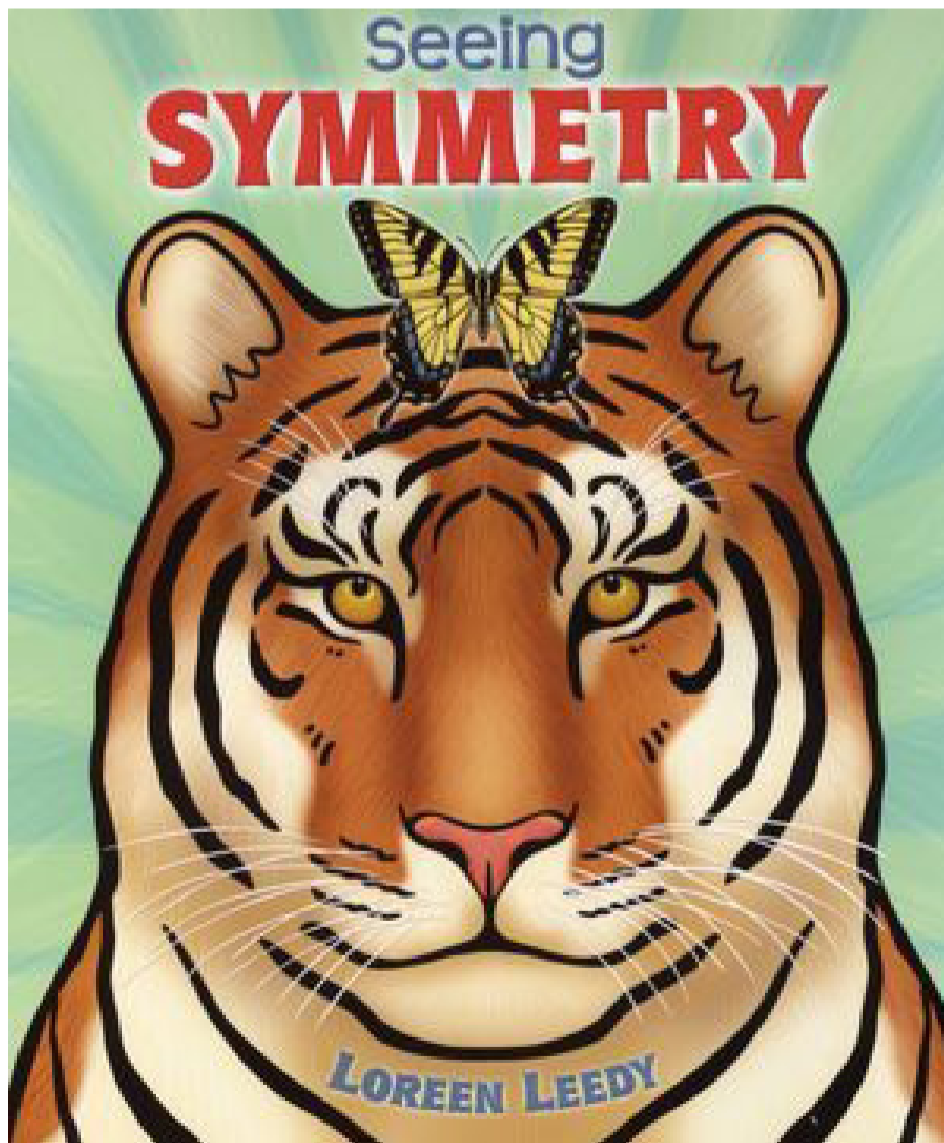
Silly monsters and one little girl learn about money and how to manage it.



Seeing Symmetry

By: Loreen Leedy

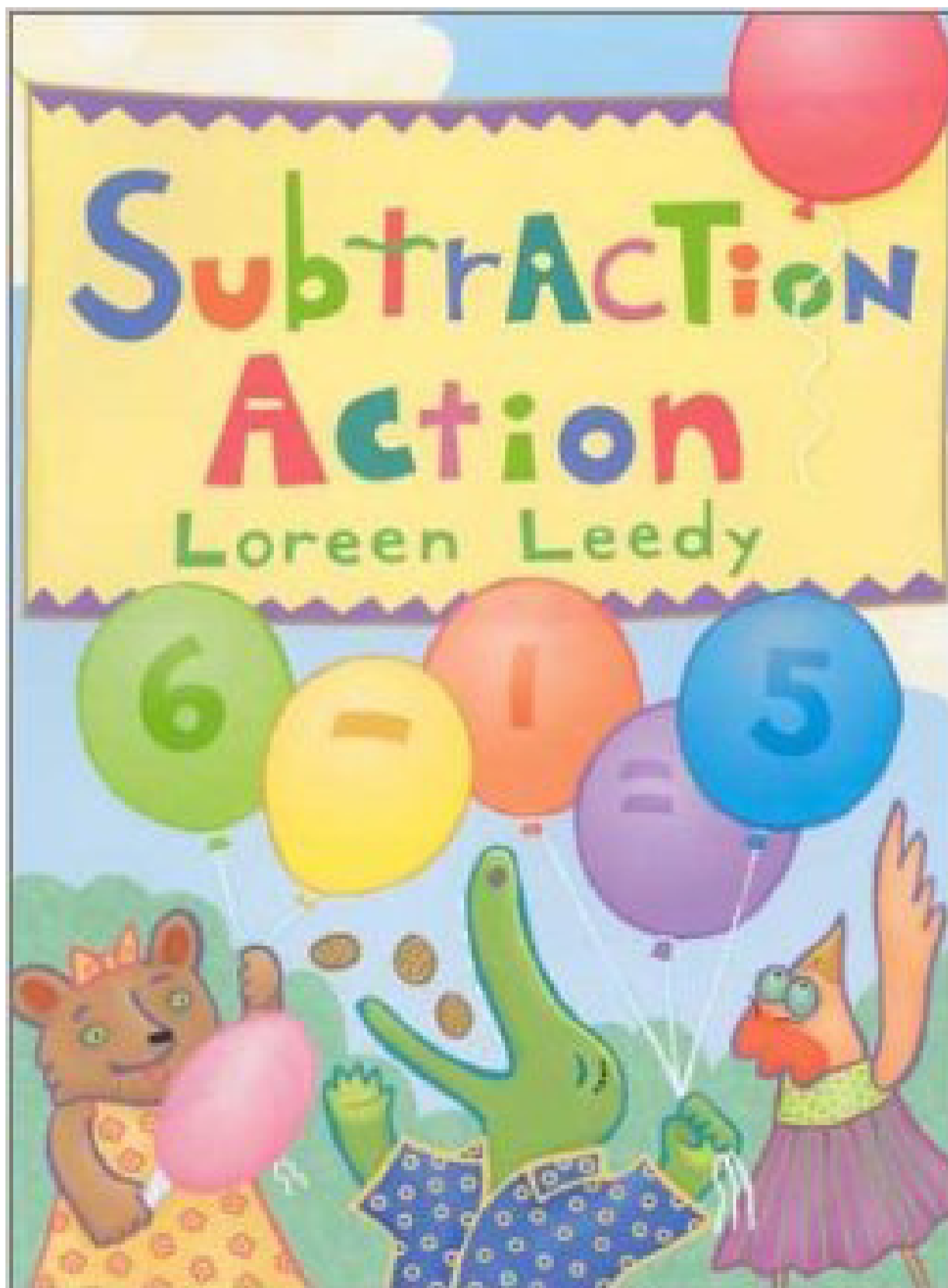
This book is aligned with the Common Core State Standards for fourth-grade mathematics in geometry: (4.G.3). Once you start looking, you can find symmetry all around you. Symmetry is when one shape looks the same if you flip, slide, or turn it. It's in words and even letters. It's in both nature and man-made things. In fact, art, design, decoration, and architecture are full of it. This clear and concise book explains different types of symmetry and shows you how to make your own symmetrical masterpieces. Notes and glossary are included.



Subtraction Action

By: Loreen Leedy

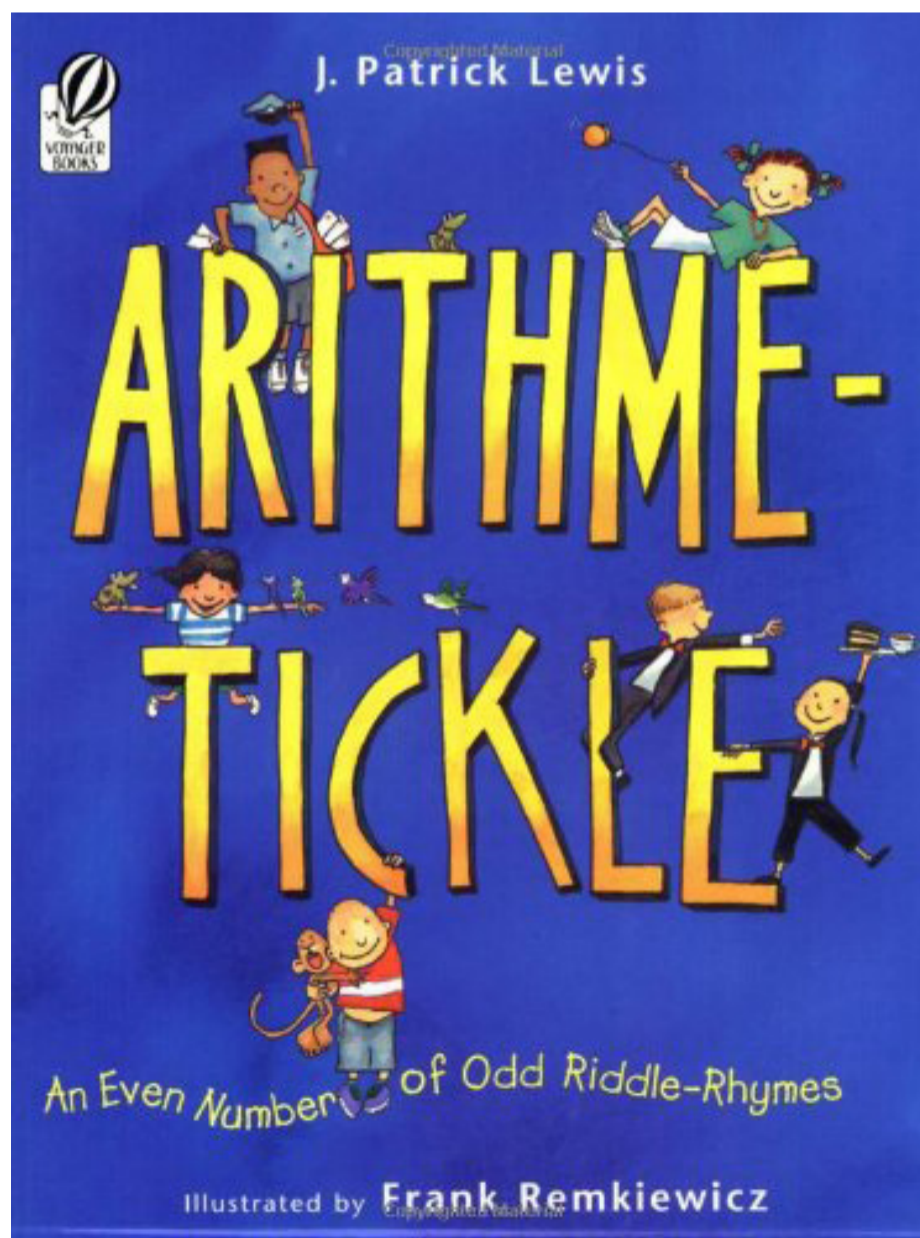
Introduces subtraction through the activities of animal students.



Arithme-Tickle: An Even Number of Odd Riddle-Rhymes

By: J. Patrick Lewis

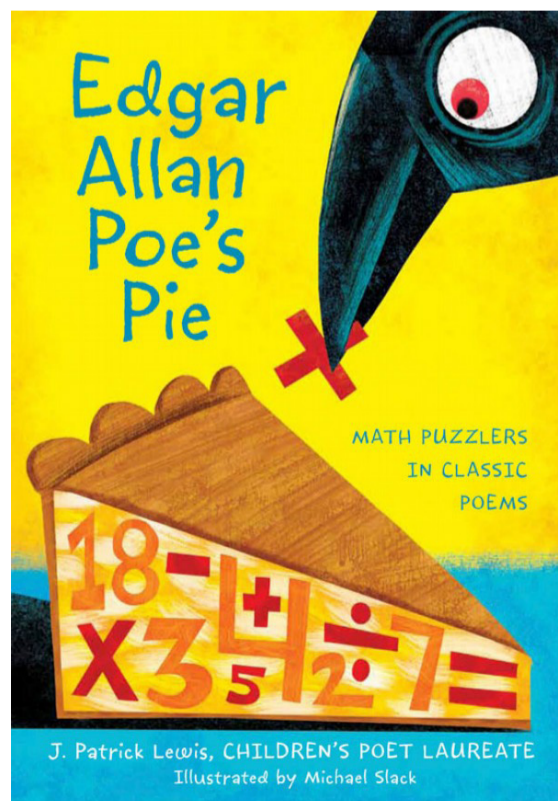
These eighteen zany rhyming riddles involve addition, subtraction, and simple multiplication to calculate everything from poodle weights to travel time. And for anyone who's stumped, the answers are included in mirror-writing below each riddle.



Edgar Allan Poe's Pie: Math Puzzlers in Classic Poems

By: J. Patrick Lewis

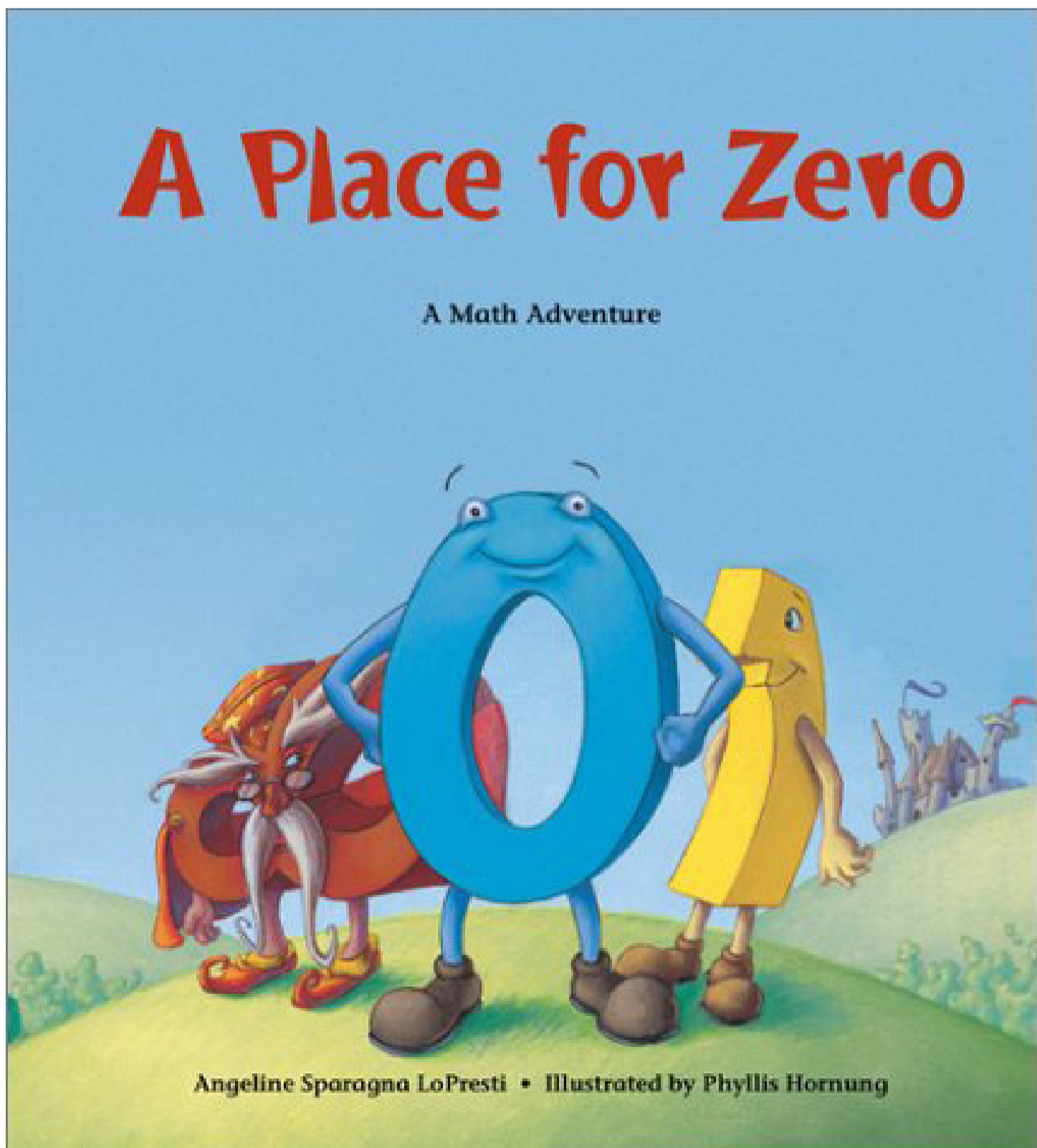
Is this poetry? Math? A brainteaser? Yes! It's all that and more. The poet J. Patrick Lewis has reimagined classic poems—such as Edgar Allan Poe's "The Raven" and Langston Hughes's "April Rain Song"—and added a dash of math. Between the silly parodies and the wonderfully wacky art, kids will have so much fun figuring out the puzzles, they won't guess they're learning! Answers appear unobtrusively on each page, and engaging information about the original poets is included. Math games and concepts, poetry and poet biographies—it's all so cleverly put together. This funny book is a treat for fans of words and numbers alike.



A Place for Zero

By: Angeline Sparagna LoPresti

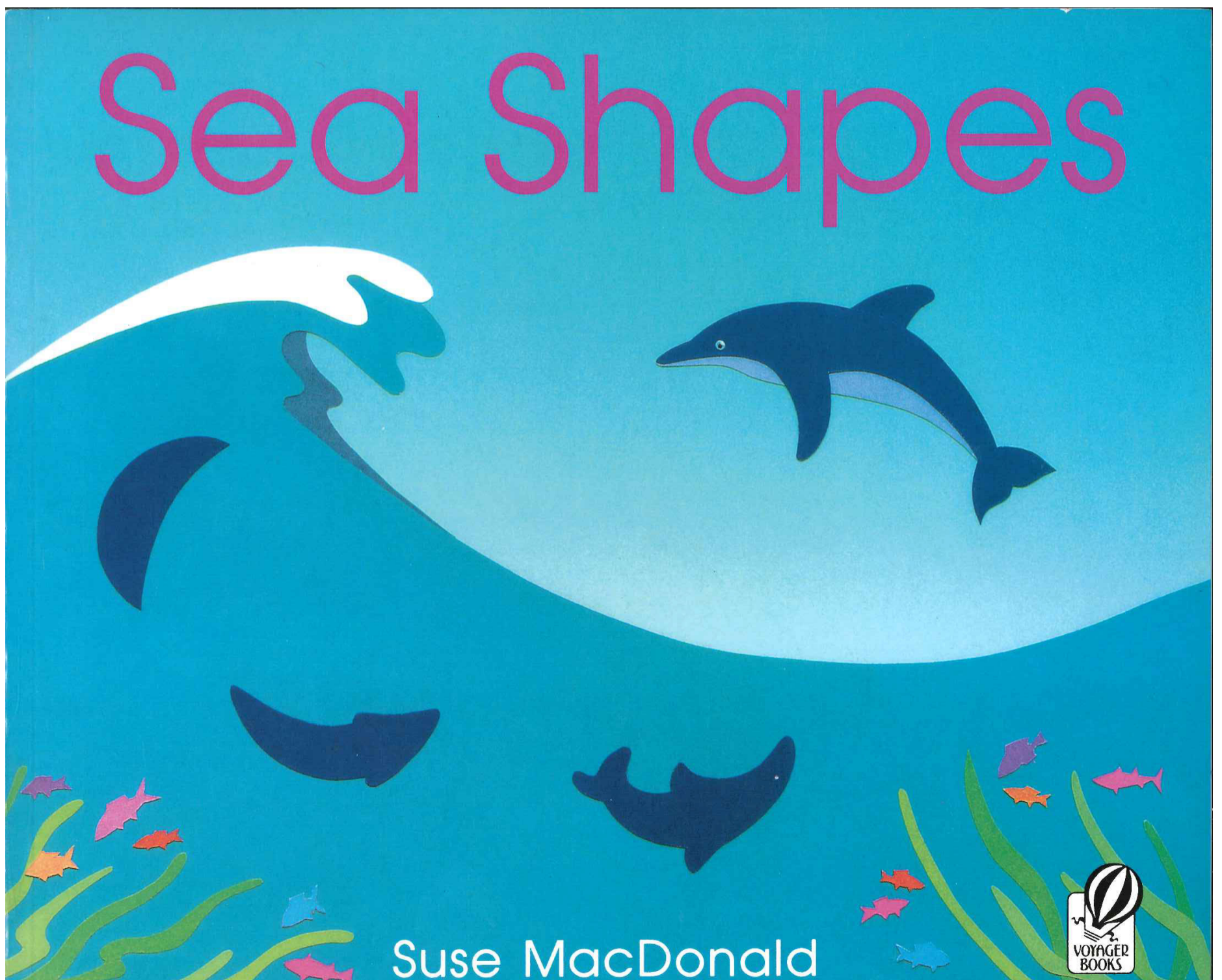
Zero is lonely in Digitaria. He can't play Addemup with the other numbers, because he has nothing to add. What's a digit to do? Join Zero as he goes on a journey to discover his place.



Sea Shapes

By: Suse MacDonald

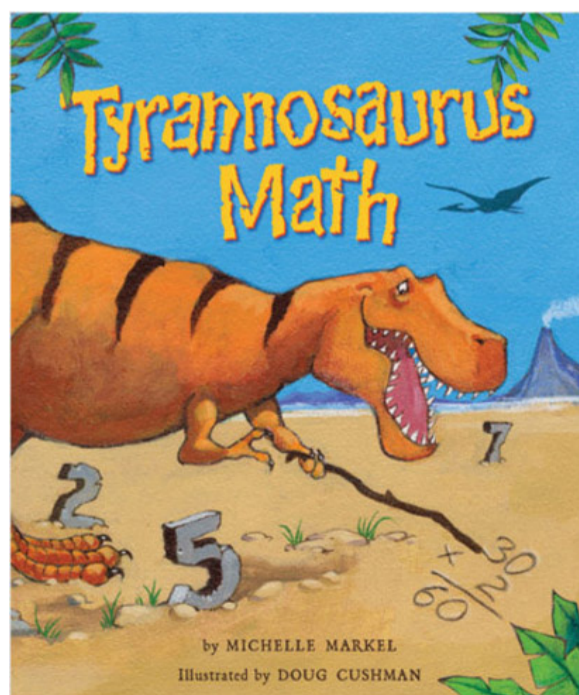
This engaging concept book invites very young children to identify basic shapes that transform into beautiful undersea creatures. Includes an informative glossary of sea facts.



Tyrannosaurus Math

By: Michelle Markel

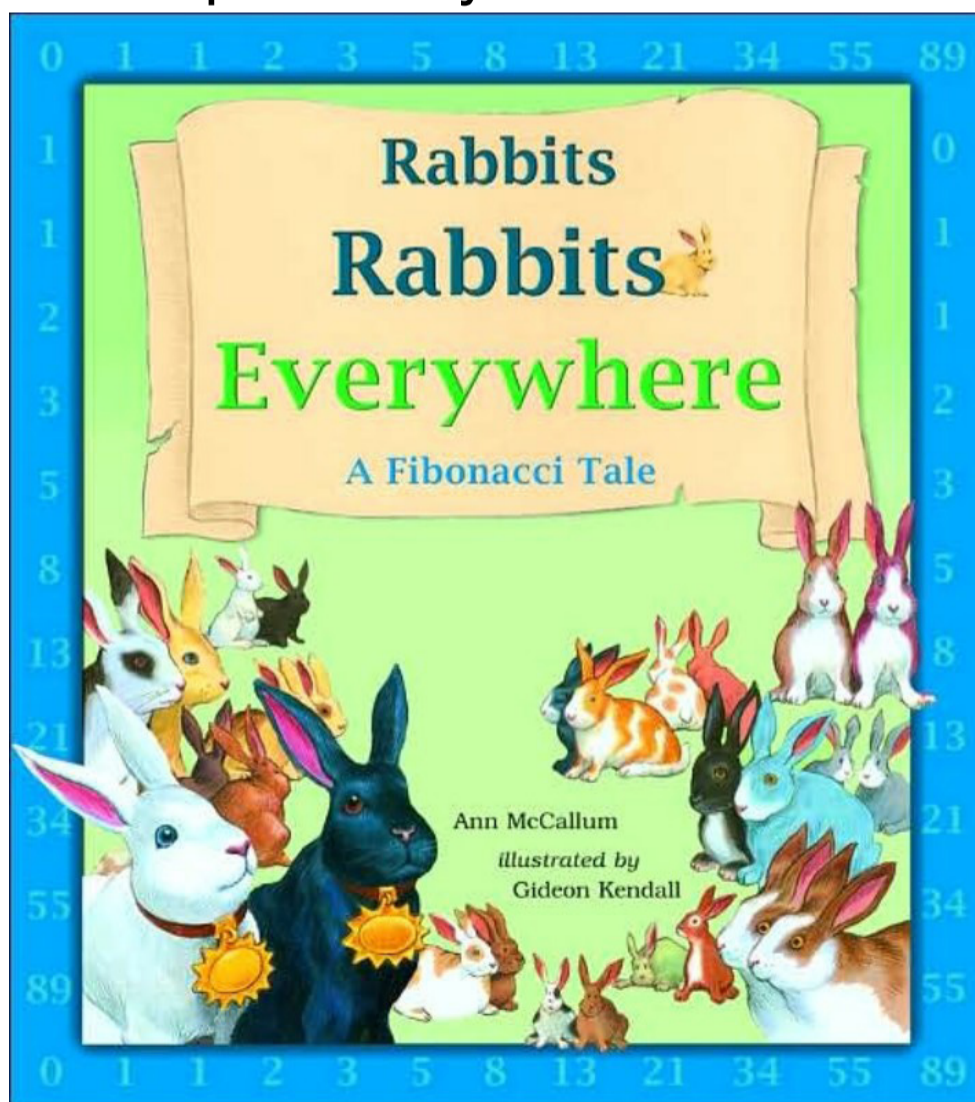
From the moment Tyrannosaurus Math (T-Math for short) is hatched, he views the world in mathematical terms. He begins with simple addition (how many siblings have also hatched) and proceeds through such skills as grouping (counting a herd of triceratops, though he's not yet old enough to consume them), ordering and comparing (who ate the most dragonflies), and geometric shapes (is that meteor a sphere or a cube?). In all, 15 concepts are demonstrated with clear, logical, and amusing examples. The skills are also identified and explained at the back of the book. Markel never misses an opportunity to weave math into the lively text: "At his full size, nothing was scarier than the sight of T-Math thundering through the forest, chewing on a problem in his head." Cushman's acrylic cartoons, with their clean lines and vibrant colors, add considerably to readers' enjoyment. The artwork clearly illustrates the math problems while gleefully depicting the dinosaurs. This is a clever addition to the growing number of books that make a sometimes daunting subject both more understandable and just plain fun.



Rabbits Rabbits Everywhere

By: Ann McCallum

Each week the residents of Chee take a portion of their bountiful crops to the wizard who lives on the hill. One week the Pied Piper decides that the wizard doesn't deserve his full portion. The next day two rabbits appear in a field. The day after that, there are two more rabbits. Each day the number of rabbits increases and they are eating everything in their path. It is up to a young girl named Amanda to save Chee's crops by figuring out the pattern by which the rabbits multiply.

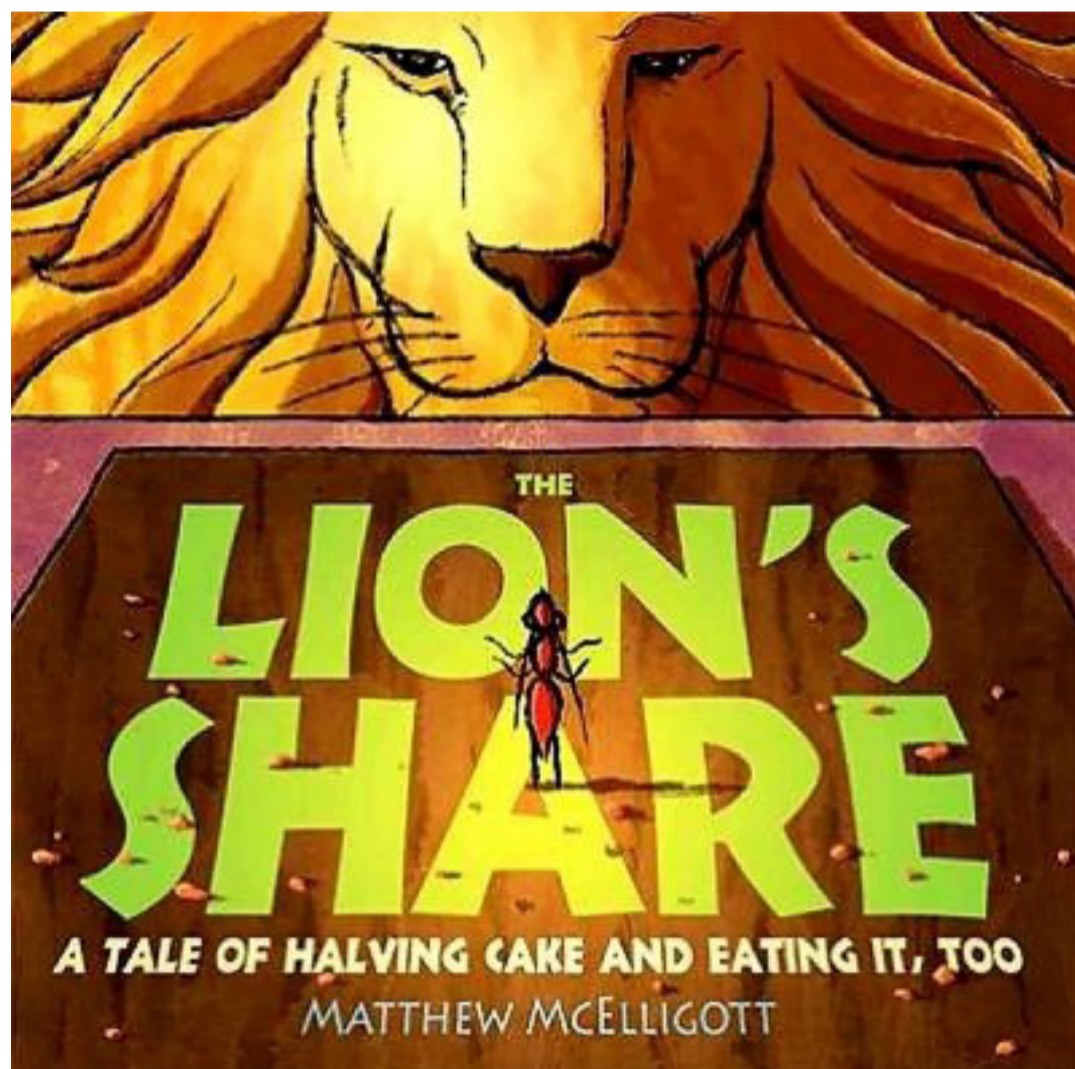


The Lion's Share: A Tale of Halving Cake and Eating It, Too

By: Matthew McElligott

When Ant receives a special invitation to dine with Lion, she is ready to be on her best behavior. During dessert, the other guests do not mind their manners, and by the time the dessert cake reaches Ant, barely a crumb is left for her to share with the King! Baking a cake seems like the perfect way to make it up to him...until the other guests turn her kind gesture into a contest.

Exactly how many cakes are fit for a king?



Teddy Bear Math

By: Barbara Barbieri McGrath

The bears are back in this sequel to the popular TEDDY BEAR COUNTING. This time they take math to the next level, exploring graphing, estimation, addition, subtraction, multiplication, division, and ordinal numbers. Playful rhymes and hands-on interaction make this book perfect for use with bear counters and other classroom manipulatives.

McGrath Math **TEDDY BEAR MATH**

red	■	■	■	■	■	■	■	■	■	■	10
yellow	■	■	■	■	■	■	■	■			8
purple	■	■	■	■							4
blue	■	■	■	■	■	■	■	■	■	■	11
orange	■	■	■	■	■						5
green	■	■	■	■	■	■	■	■	■		9

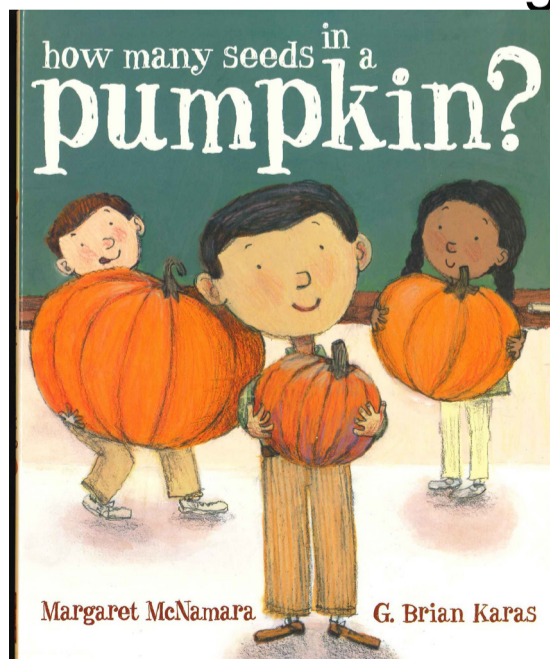
Barbara Barbieri McGrath ■ Illustrated by Tim Nihoff

How Many Seeds in a Pumpkin?

By: Margaret McNamara

Here is an adorable picture book for curious kids, which explores skip counting and estimation in a fun pumpkin-themed classroom experiment. “How many seeds are in a pumpkin?” Mr. Tiffin asks his class as they gather around the big, medium, and small pumpkins on his desk. Robert, the biggest kid, guesses that the largest one has a million seeds; Elinor, sounding like she knows what she’s talking about, guesses the medium one has 500 seeds; and Anna, who likes even numbers better than odd ones, guesses that the little one has 22.

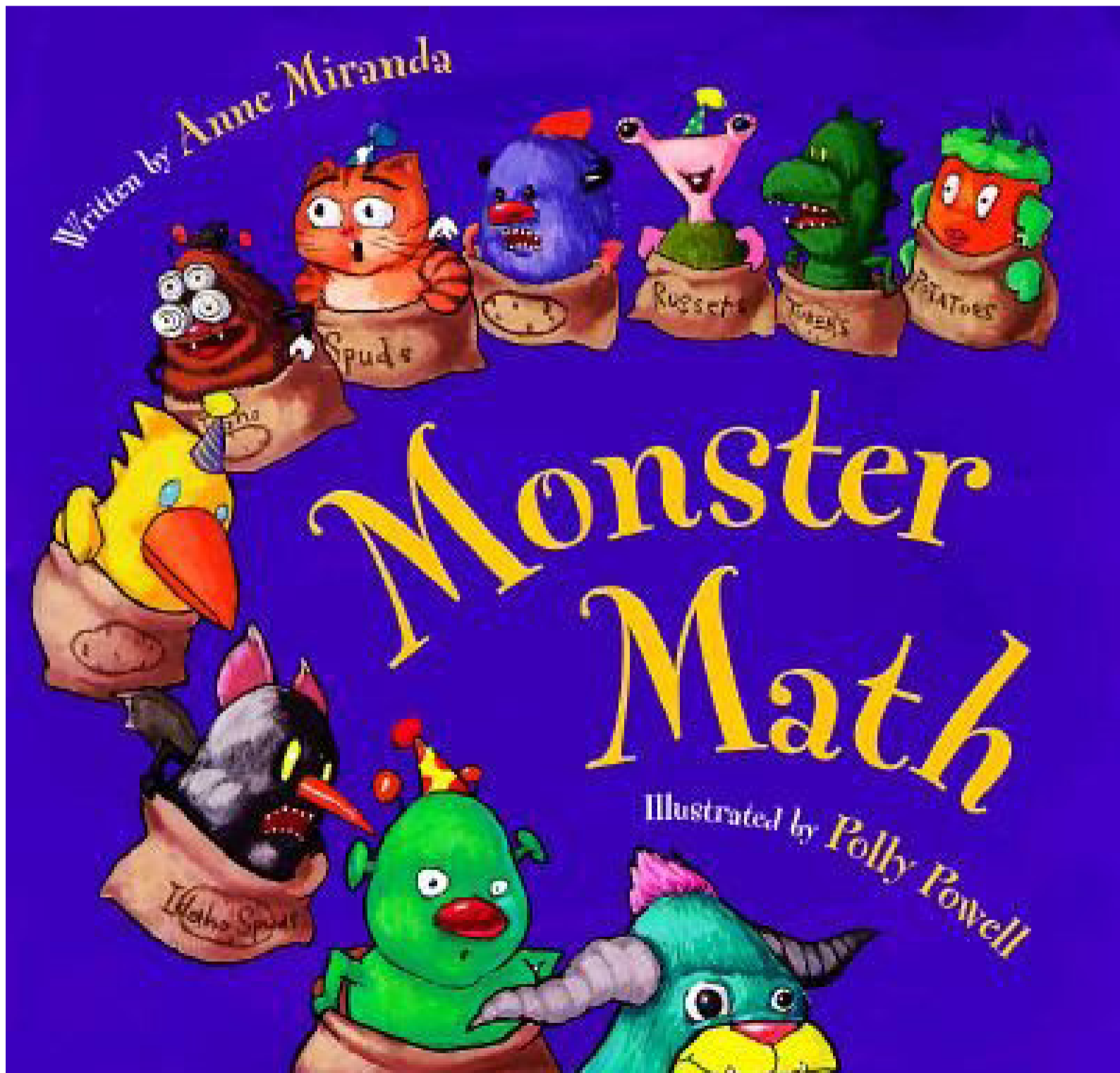
Charlie, the smallest boy in the class, doesn’t have a guess. Counting pumpkin seeds is messy business, but once the slimy job is done, to everyone’s surprise, the smallest pumpkin has the most seeds! As Charlie happily exclaims, “Small things have a lot going on inside of them.” This book makes a wonderful read-aloud companion to any math or science curriculum, and it’s a fun way to reinforce counting skills at home.



Monster Math

By: Anne Miranda

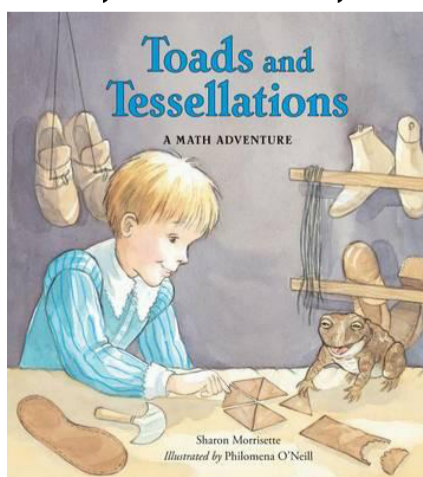
As one little monster finds out at her birthday party, it takes about fifty. Get ready for a monstrously good time! Little ones will learn counting and basic math concepts while they're laughing over these rollicking rhymes and hilarious, energetic illustrations.



Toads and Tessellations

By: Sharon Morrisette

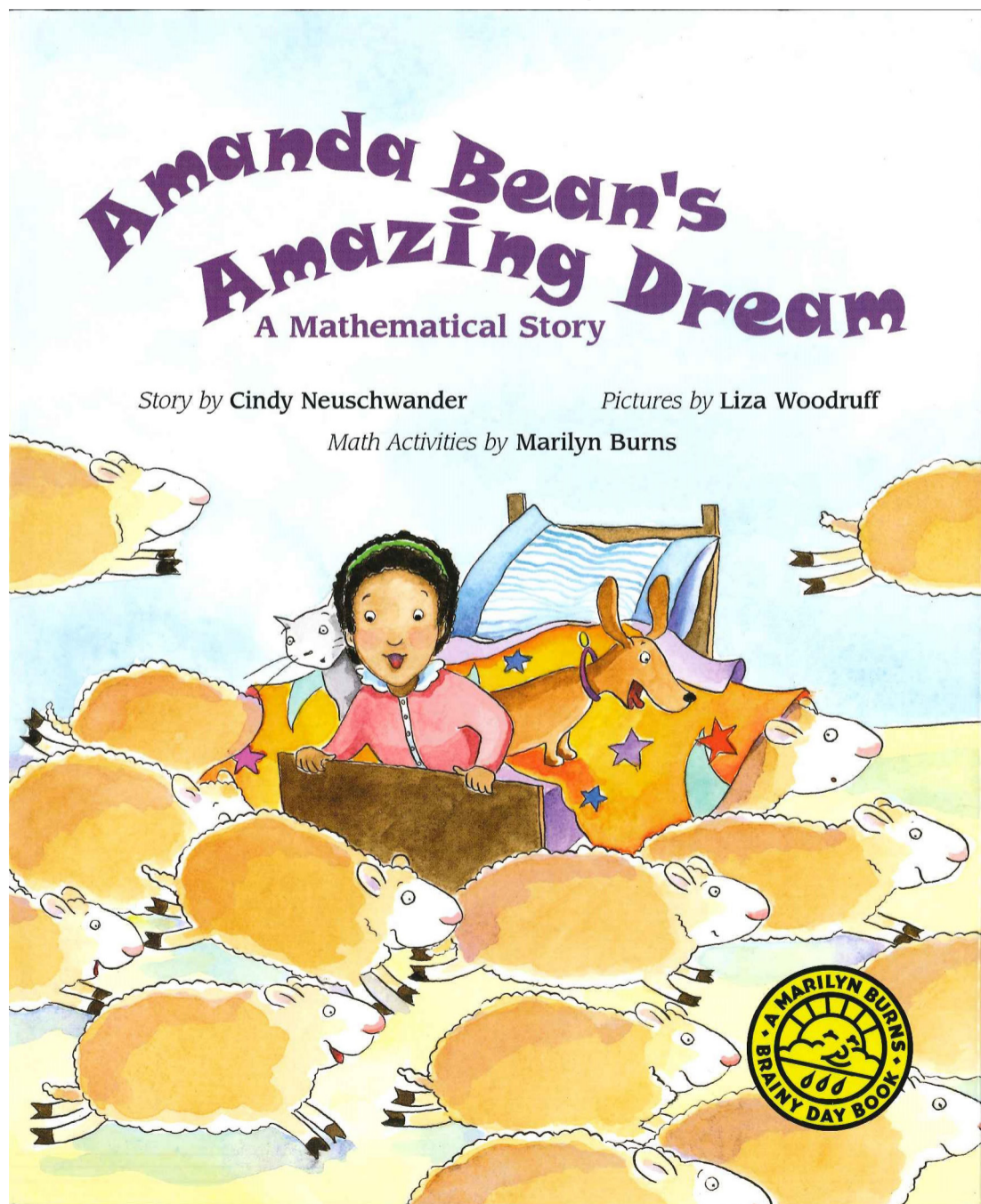
Enzo is the son of a great magician, however unlike his father, his spells create chaos instead of order. What really interests Enzo, more than books about magic, are books by and about the lives of famous physicists and astronomers like Galileo Galilei and Johannes Kepler. Enzo dreams not of becoming a magician, but a mathematician instead. When Tessel, the village shoemaker, is called upon to make twelve identical shoes out of only one piece of leather, Aida, the shoemaker's sister, goes to Enzo's father for some magic to help her brother. With Enzo's father out of town at a magic convention, it's up to Enzo to help Aida and Tessel out of their predicament. A spell snafu leads Enzo and Aida to a method of forming patterns without gaps or overlaps, and they discover that math, not magic, may be the answer to their problem. Sharon Morrisette's accessible text introduces readers to the concept of tessellations, while Philomena O'Neill's illustrations offer a clear visual to what tiling is—children will enjoy finding the tessellations hidden throughout the images. Back matter includes a glossary and notes about tessellations, Galileo, and Kepler.



Amanda Bean's Amazing Dream

By: Cindy Neuschwander

Amanda Bean loves to count everything, from the books in the library to the popcorn in her bowl. If only she could count faster! Her teacher tries to persuade her of the virtues of multiplication, but Amanda remains unconvinced--until she has an amazing dream.

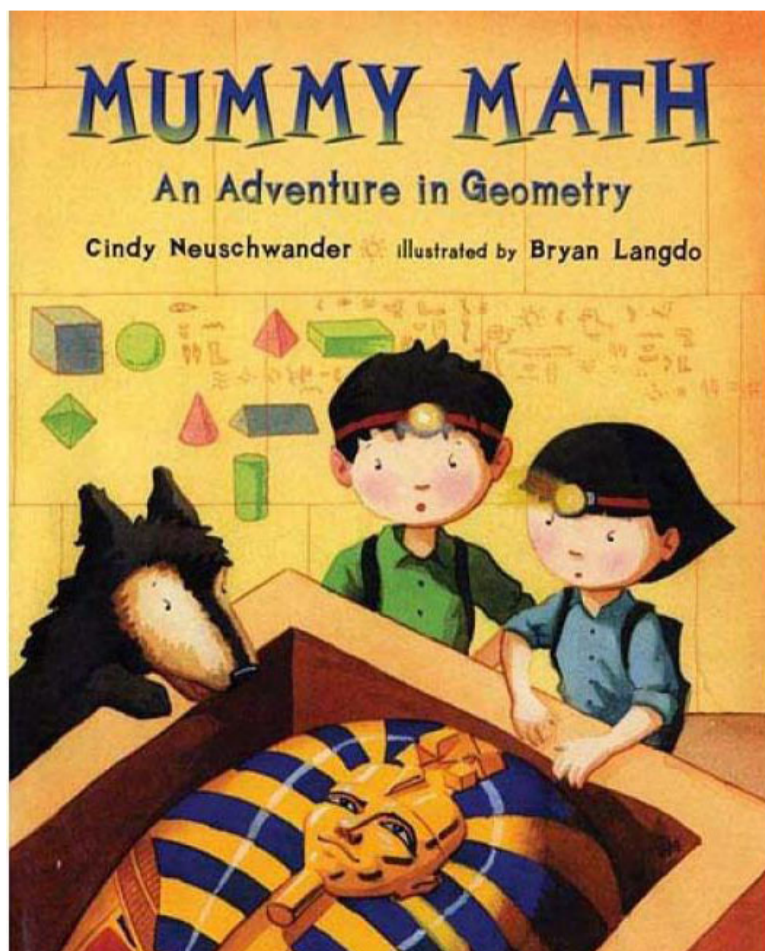


Mummy Math: An Adventure in Geometry

By: Cindy Neuschwander

Matt, Bibi, and their dog Riley crawled through the tiny opening first. FWUMP! A secret door suddenly closed behind them...The Zills family is summoned to Egypt to help find the hidden burial chamber of an ancient pharaoh. But when Matt and Bibi get trapped in the pharaoh's pyramid, they stumble upon an even bigger mystery. With only each other, their dog

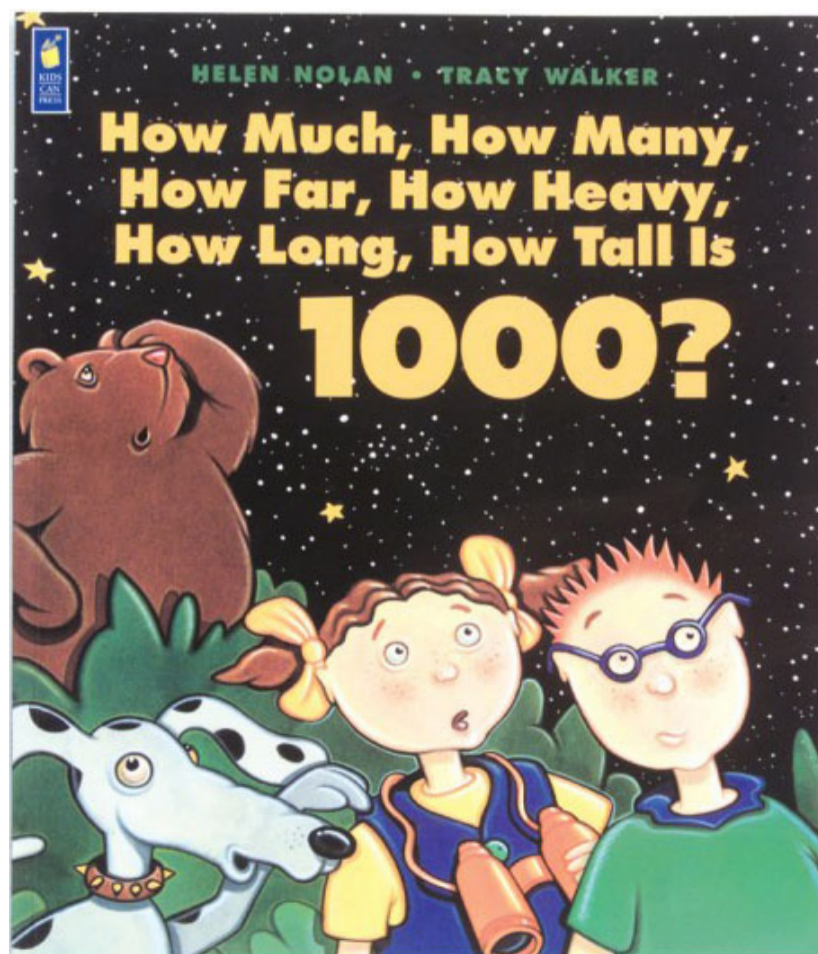
Riley, and the geometric hieroglyphics on the walls to help them, the twins must use their math skills to locate the burial chamber—and the way out. Luckily, Matt and Bibi know their stuff when it comes to geometric solids, and so will the readers of this adventure in math!



How Much, How Many, How Far, How Heavy, How Long, How Tall Is 1000?

By: Helen Nolan

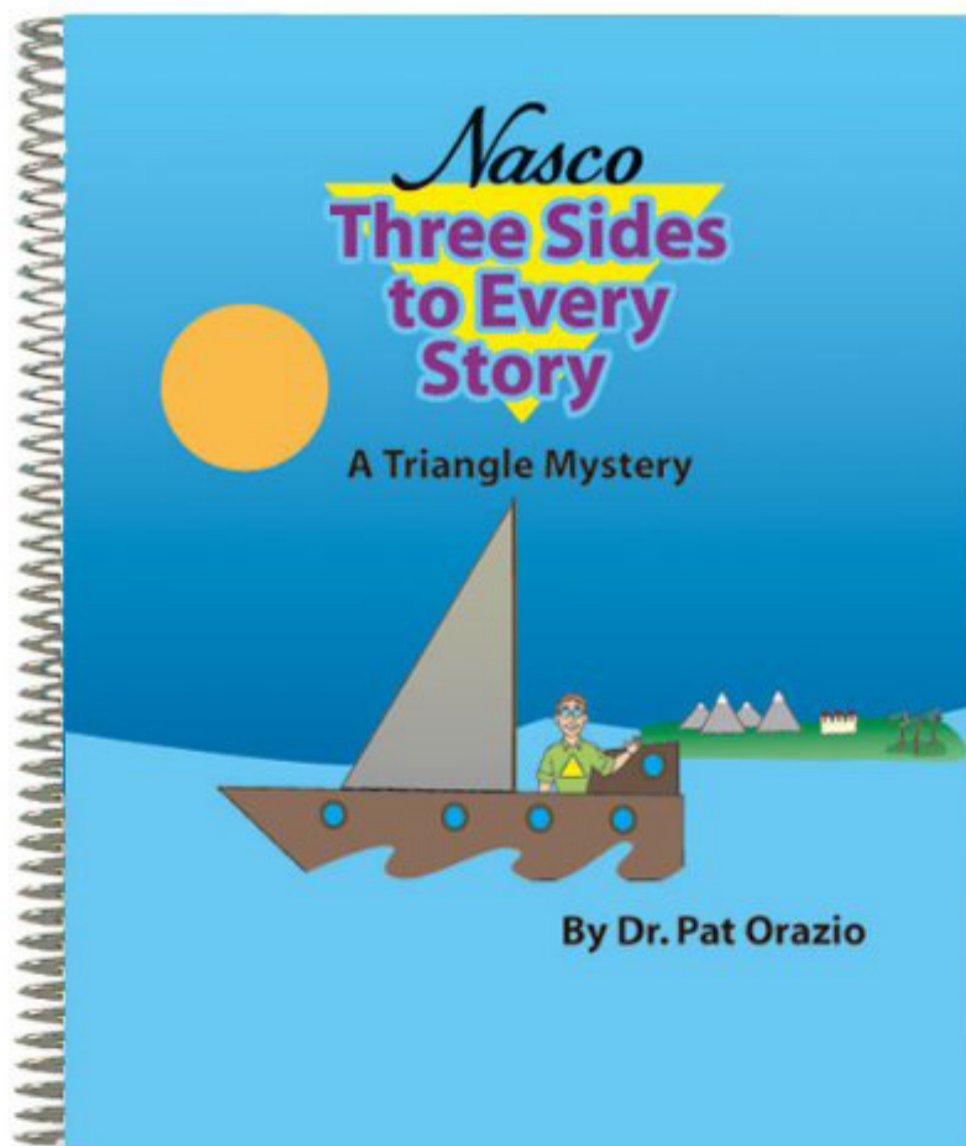
How tall would a pile of 1000 acorns be? And if those acorns grew into 1000 oak trees, how big would that forest be? As children learn about large numbers, counting becomes less practical and understanding these numbers becomes more and more important. In this playful and mathematically sound book, children will develop an understanding of how big, how small, how long and how tall 1000 really is!



Three Sides to Every Story: A Triangle Mystery

By: Dr. Pat Orazio

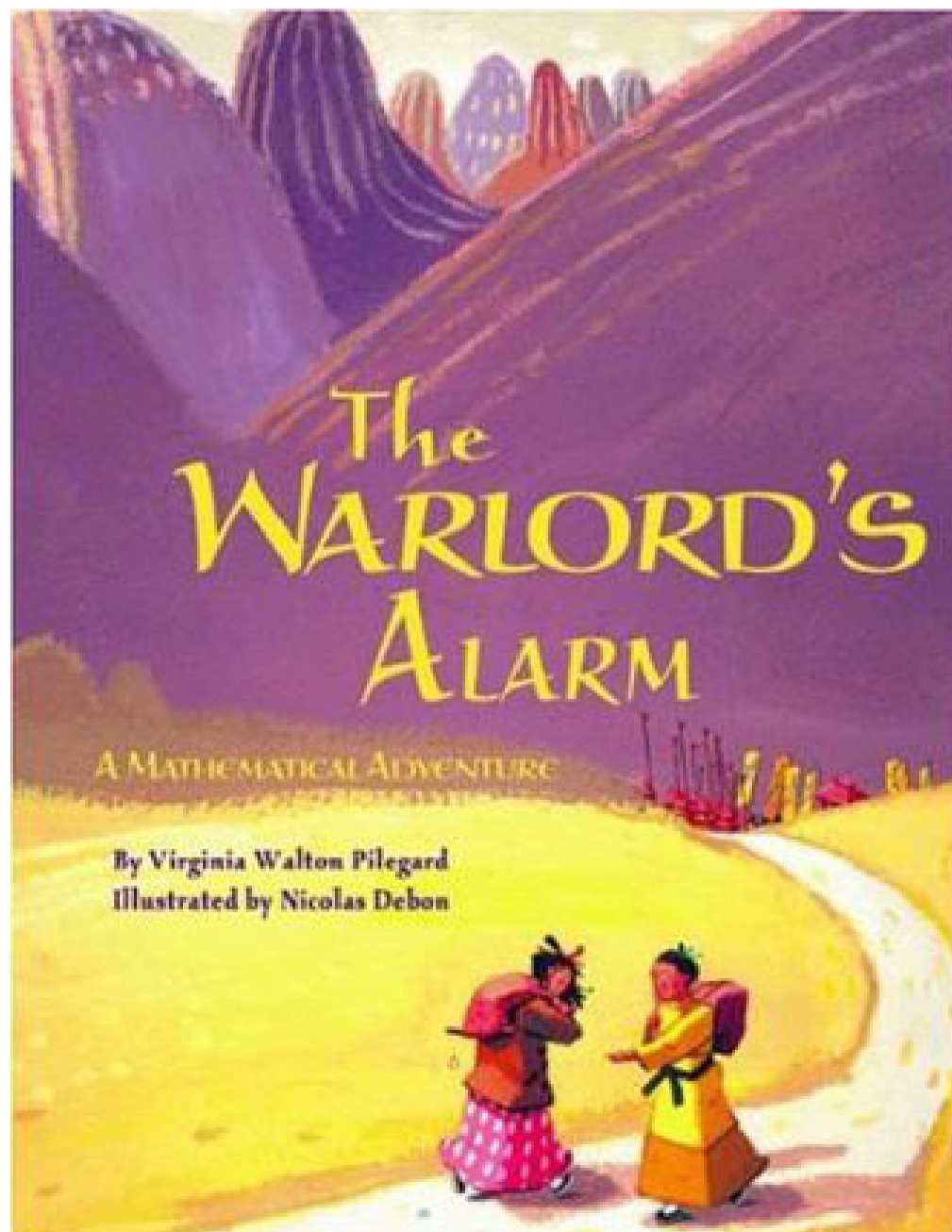
Introduce students to geometry and right triangles with this book interwoven with a fun story. Kids will have fun learning as they read the story, answer questions and do activities related to right triangles.



The Warlord's Alarm

By: Virginia Walton Pilegard

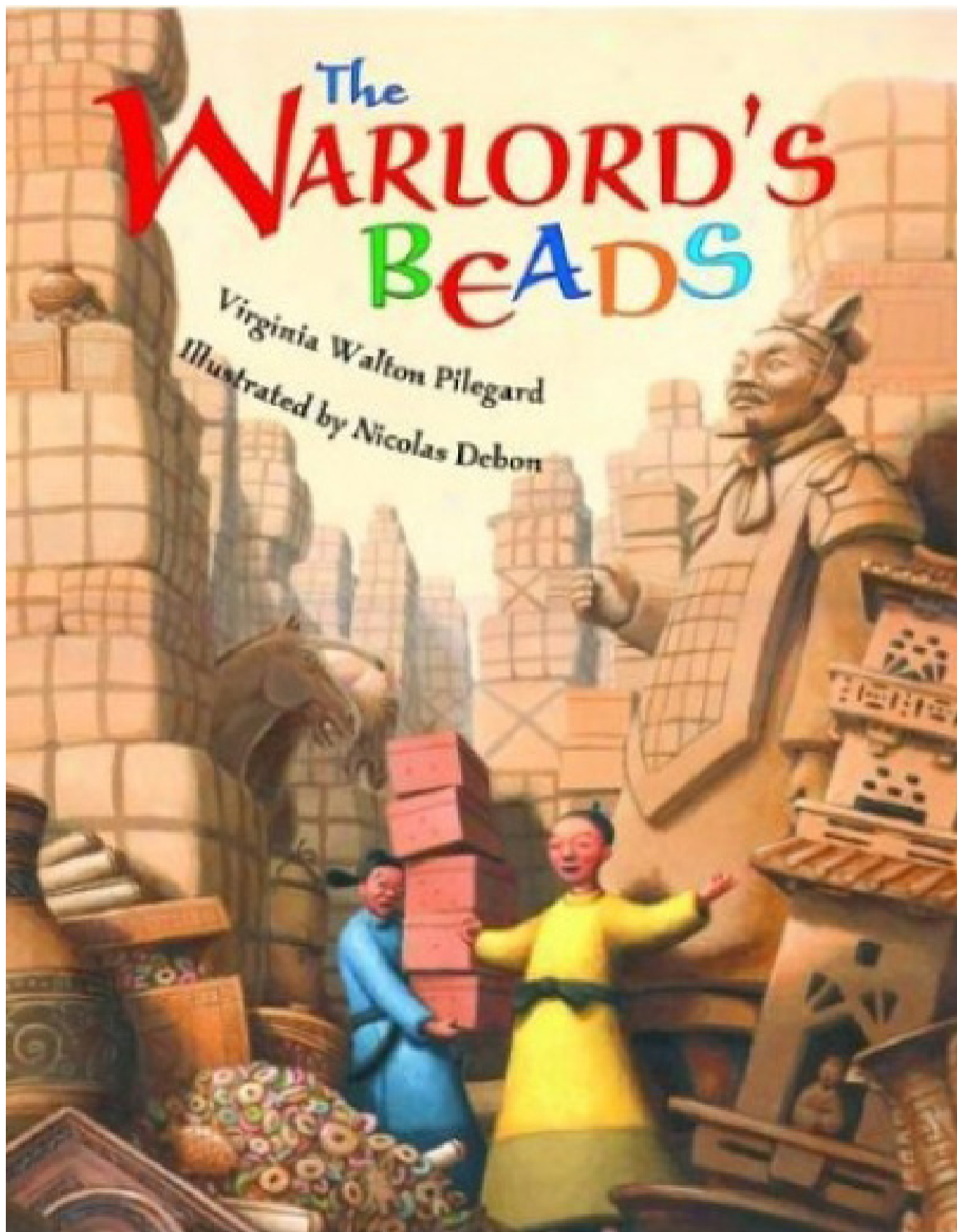
Chuan and Jing Jing use their mathematical skills to ensure that the warlord wakes up on time. They are traveling to the emperor's palace, and they can only sleep for four hours before resuming their journey in order to arrive as the emperor's gates open. How will they wake up? There are no clocks at the inn where they are staying, so they must create their own alarm clock. Chuan and Jing Jing create a simplified Chinese water clock and awaken in time to rouse the warlord.



The Warlord's Beads

By: Virginia Walton Pilegard

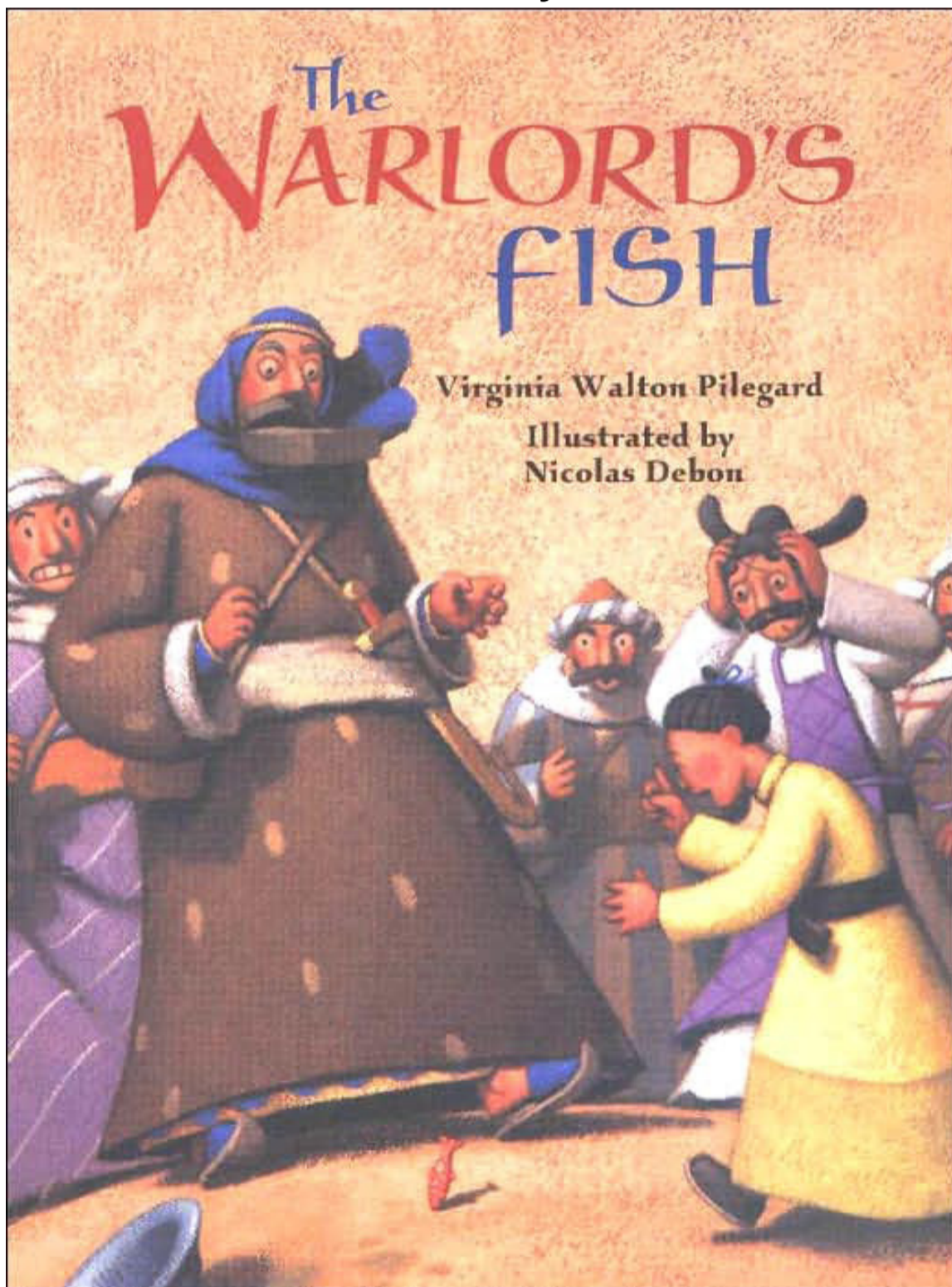
Clever Chuan devises a simple way for his father to quickly and accurately count all the warlord's treasure.



The Warlord's Fish

By: Virginia Walton Pilegard

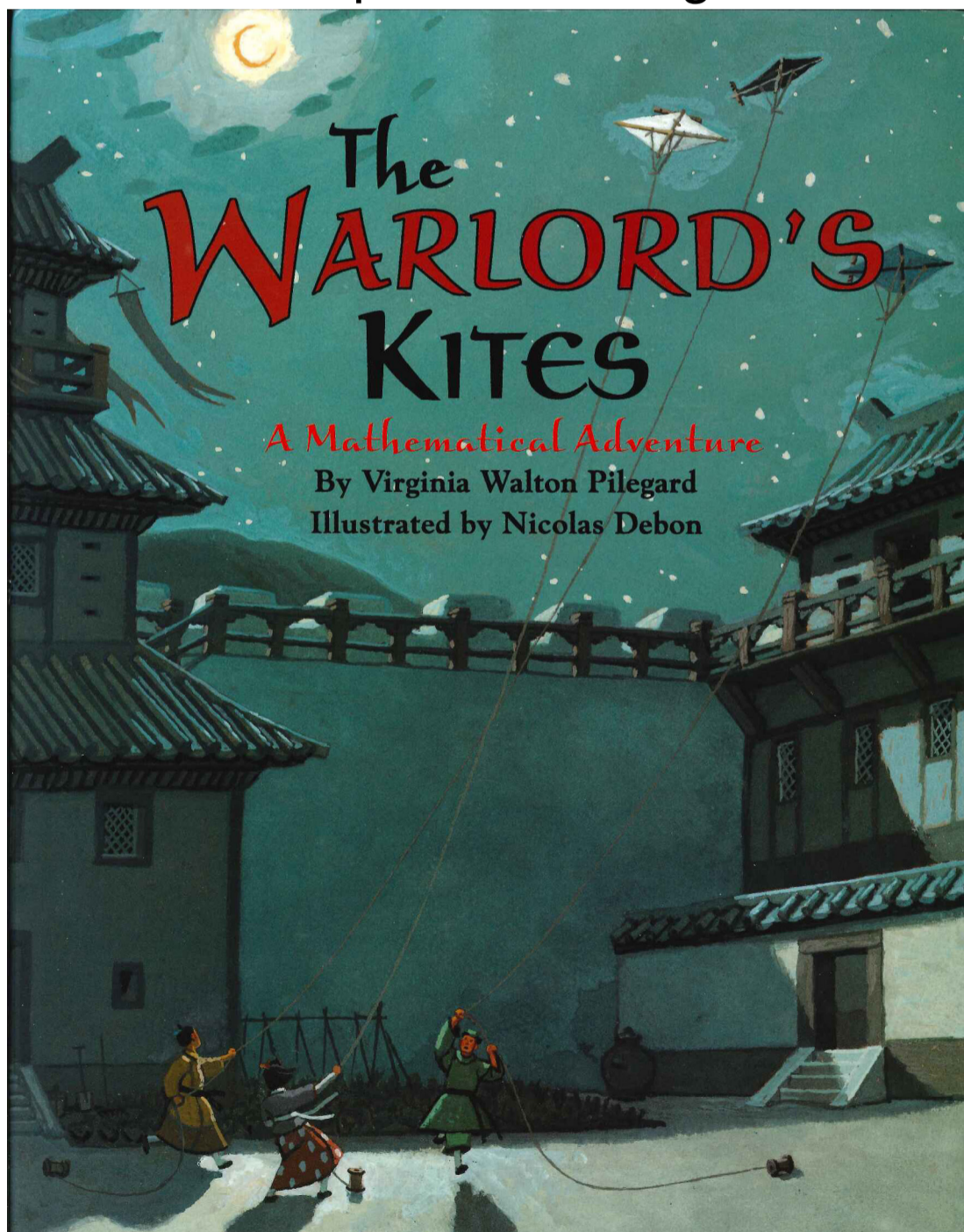
One day when the warlord is away, traders come and take Chuan from the palace, only to become lost in the desert. Chuan's carved wooden fish works as a compass and saves the day.



The Warlord's Kites

By: Virginia Walton Pilegard

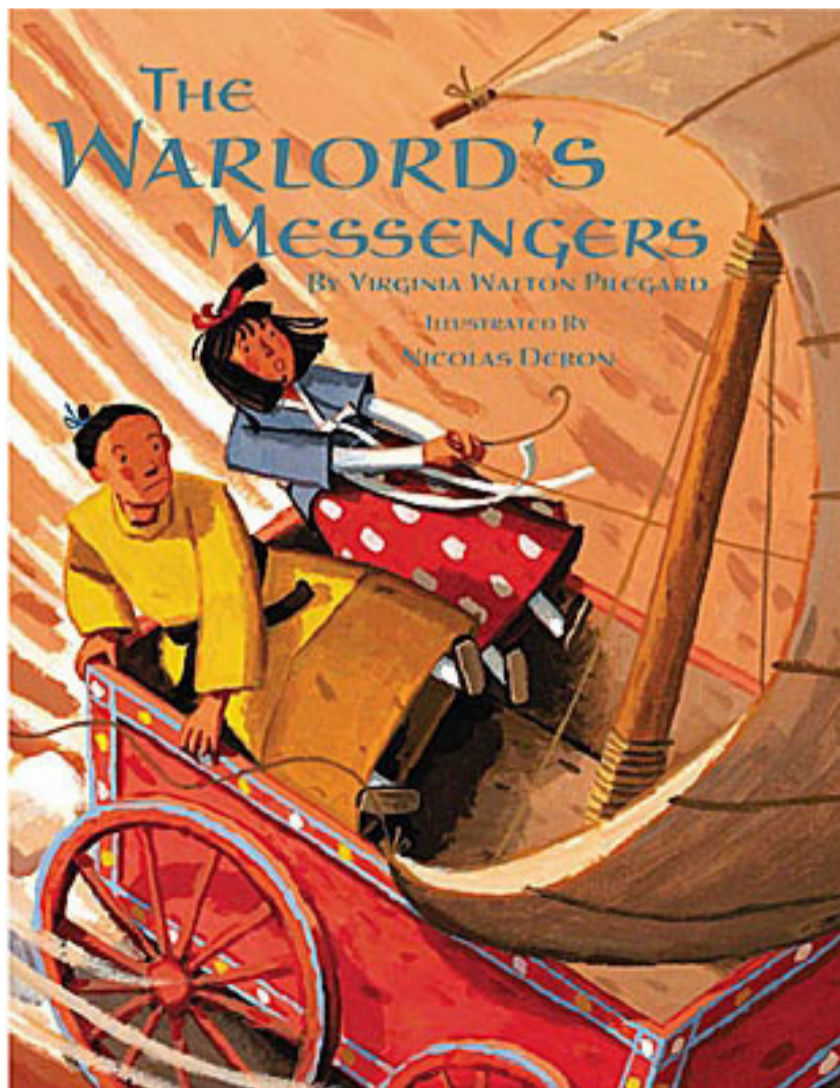
All is calm in the warlord's palace, and the artist's apprentice Chuan sits with his friend Jing Jing, watching the sunset, when an invading army approaches. Jing Jing comes up with an ingenious solution using Chuan's knowledge of calculating area as well as his handmade paper and ink to frighten the troops into leaving.



The Warlord's Messengers

By: Virginia Walton Pilegard

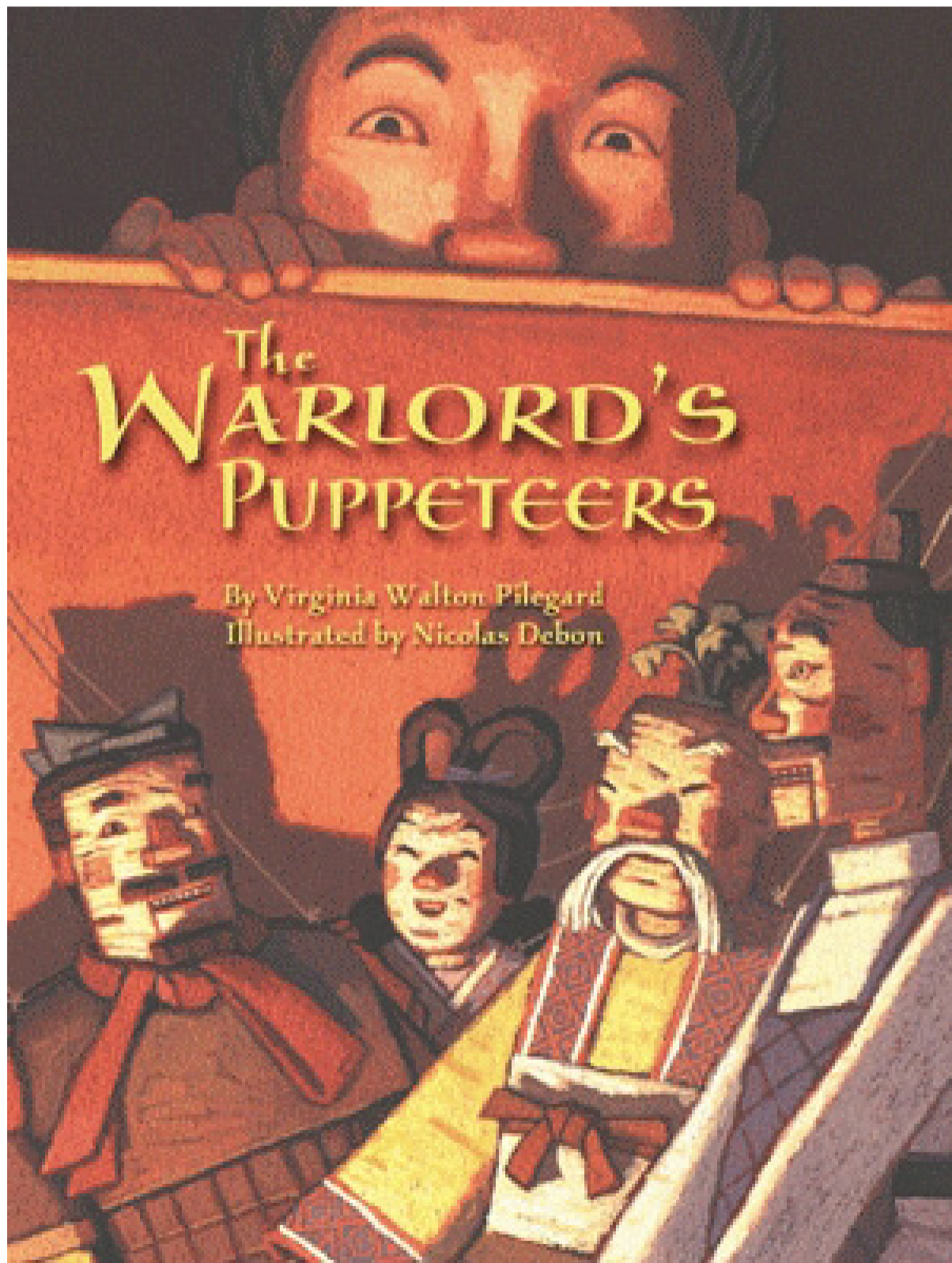
The warlord's presence is requested at the emperor's banquet in two weeks, but he is sixteen days away by horseback. Using their math skills, ingenuity, and the wind, Chuan and Jing Jing reach the warlord's camp and encourage him to use their sailing cart to travel to the feast. The Warlord's Messengers is the sixth book in the acclaimed Warlord's Series, and includes directions for making your own windsock as well as suggestions for velocity-related math activities.



The Warlord's Puppeteers

By: Virginia Walton Pilegard

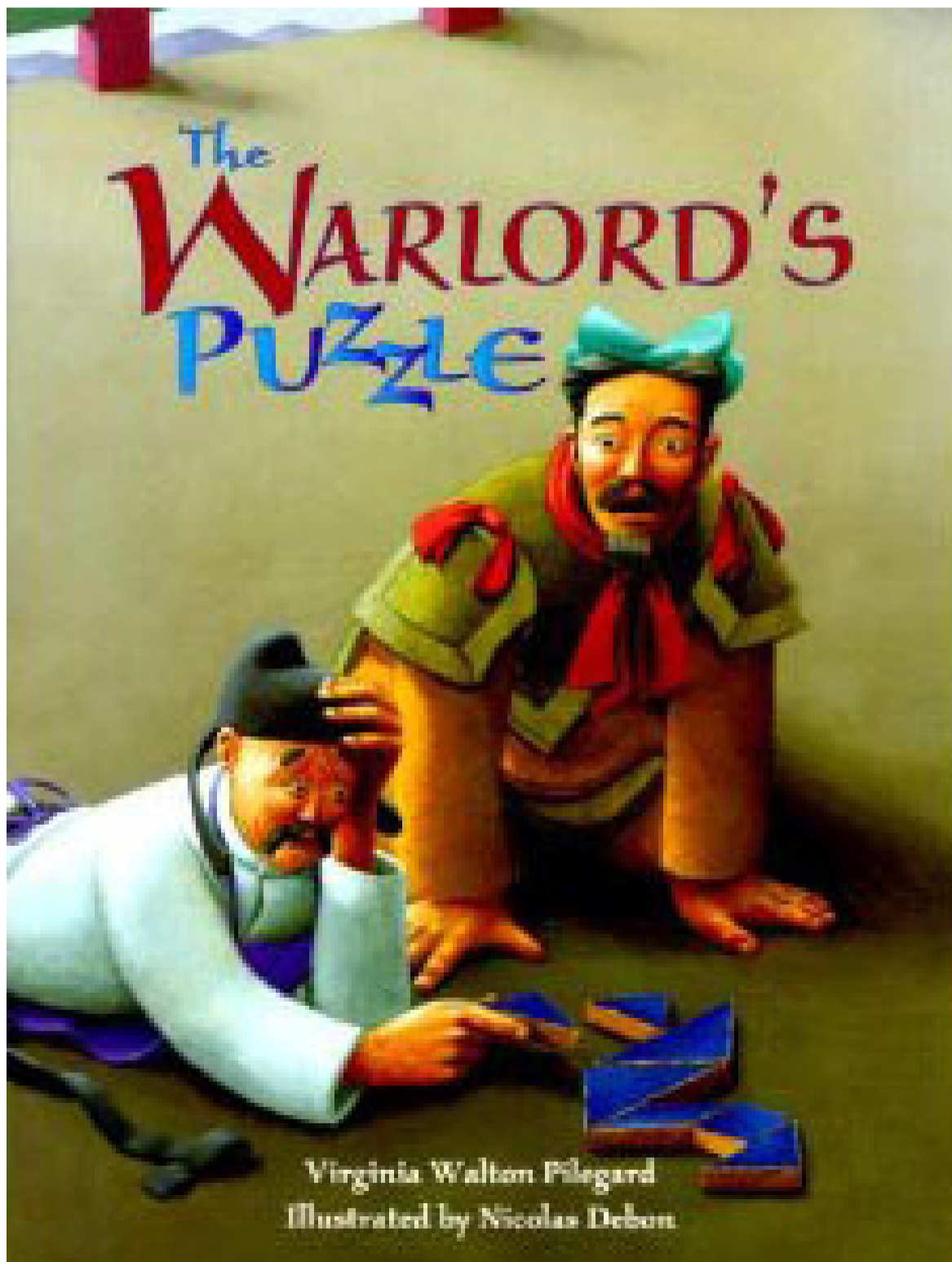
Chuan helps readers learn about ratios to craft puppets.



The Warlord's Puzzle

By: Virginia Walton Pilegard

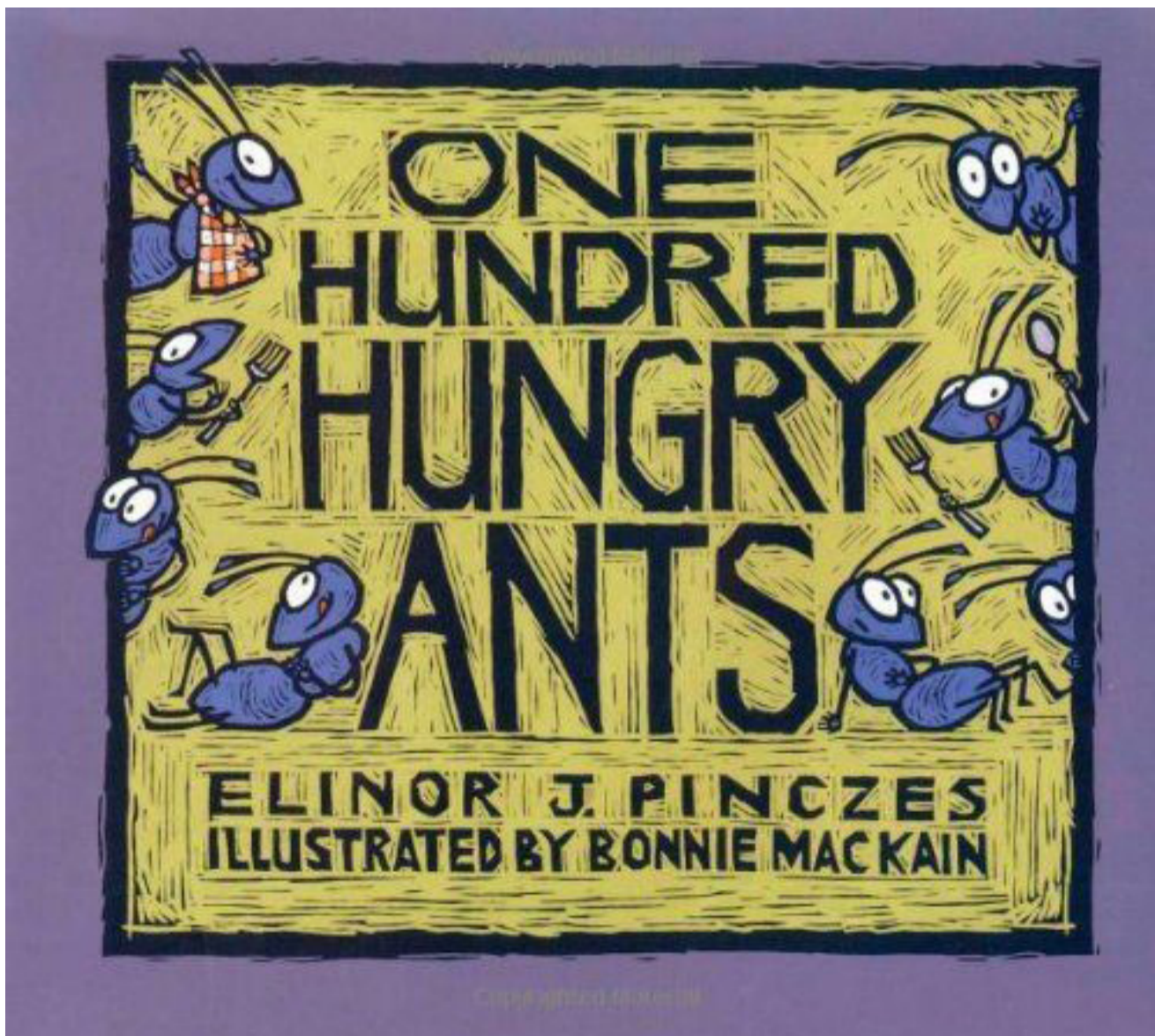
A young peasant boy convinces his poor but wise father to enter a contest to solve the warlord's puzzle, which is actually the original tangram. Recommended by the California Department of Education.



One Hundred Hungry Ants

By: Elinor J. Pinczes

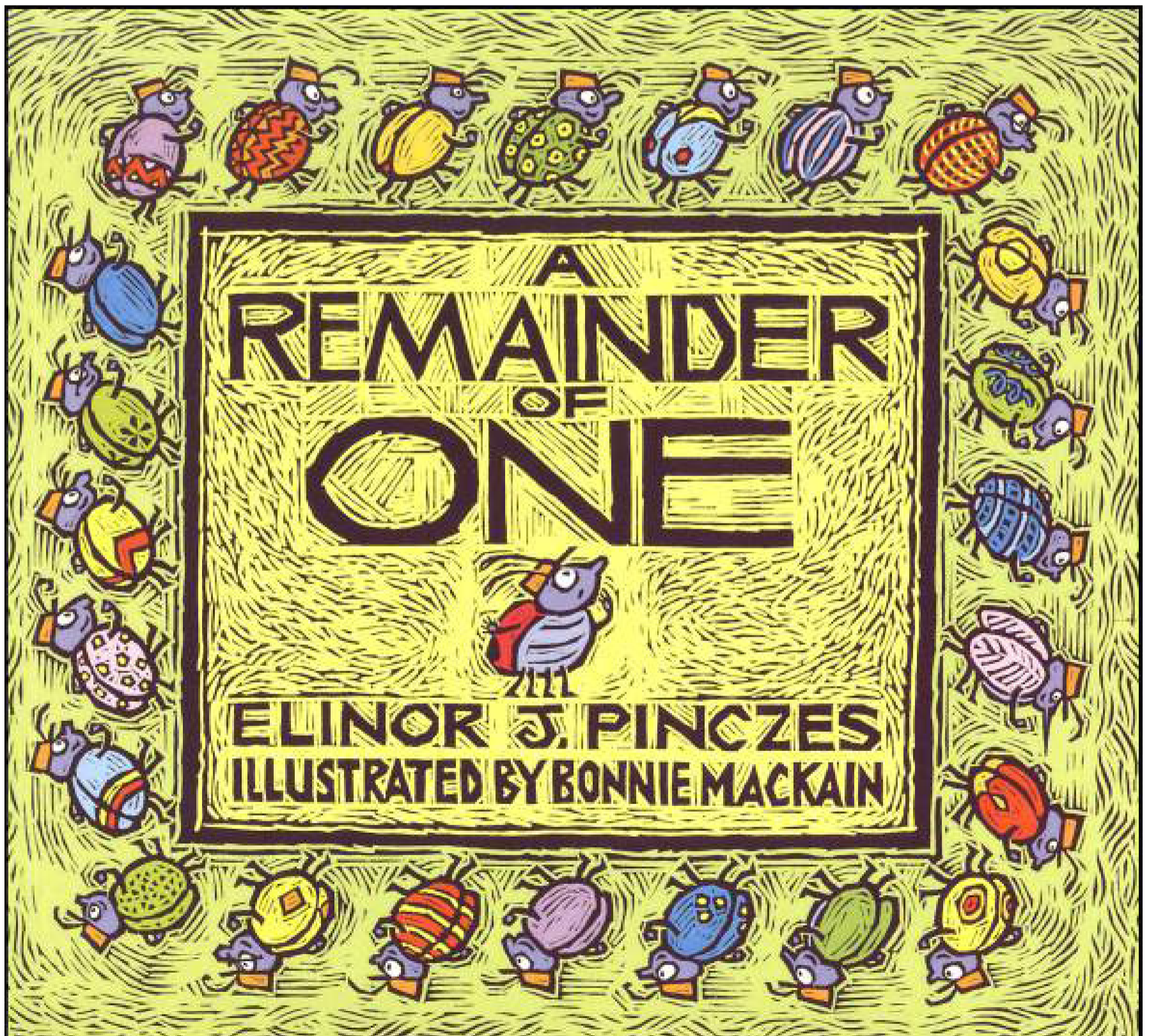
Hi dee ho! It's off to a picnic we go! One hundred very hungry ants hurry to sample the delights of a picnic, but marching in single file seems too slow for 100 empty tummies. The smallest ant of all suggests they travel in 2 rows of 50, four rows of 25... and the division begins. One Hundred Hungry Ants is not only a spirited and whimsical story, but also serves as an enjoyable visual introduction to math.



A Remainder of One

By: Elinor J. Pinczes

When the queen of her bugs demands that her army march in even lines, Private Joe divides the marchers into more and more lines so that he will not be left out of the parade.

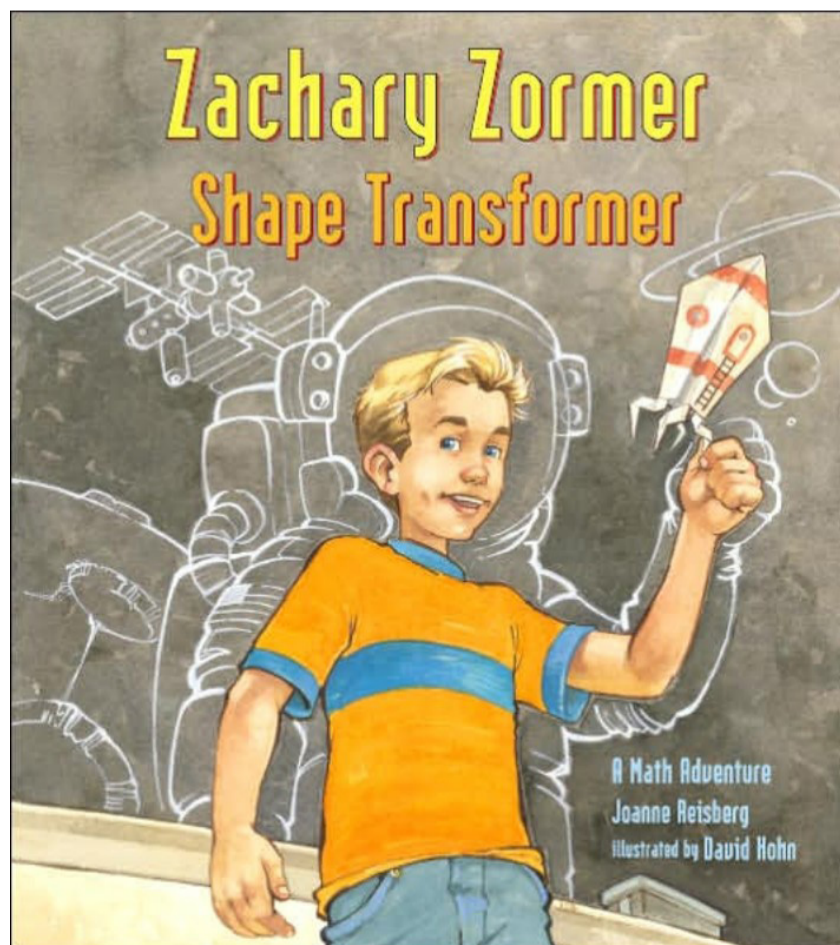


Zachary Zormer

Shape Transformer

By: Joanne Reisberg

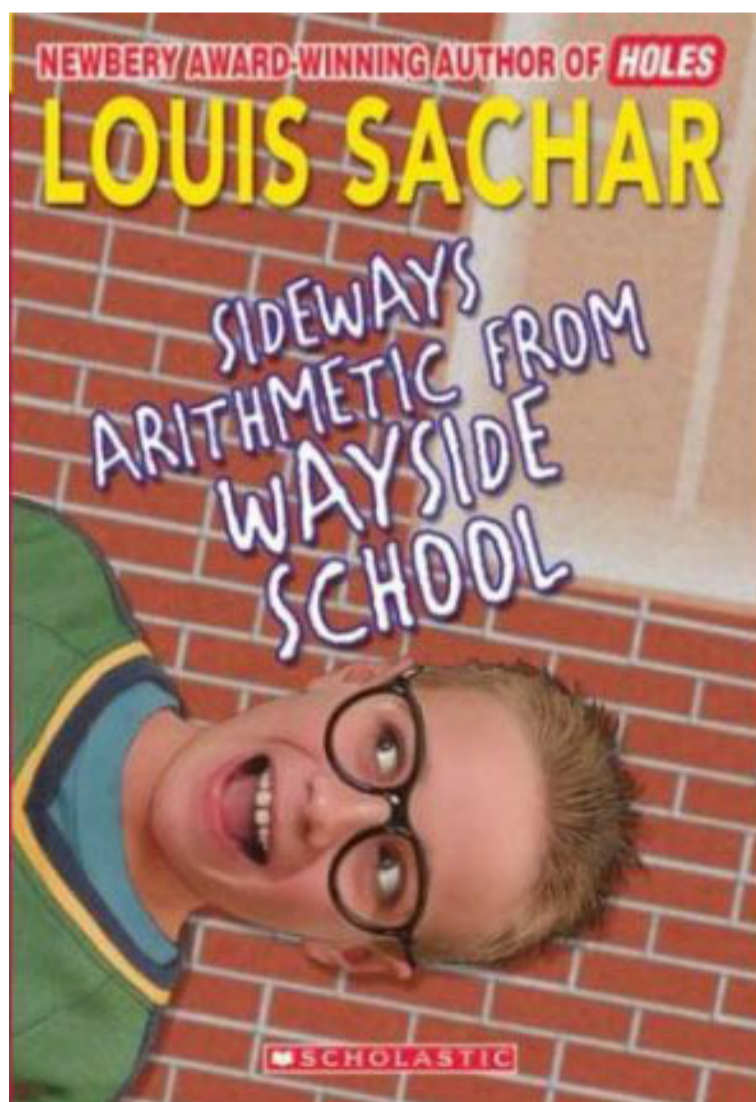
Friday is Zachary Zormer's favorite day of the week. At least it is until he realizes he forgot this week's assignment, "Bring in something fun to measure." Tyler, the class show-off, brings a picture of himself from the newspaper. How can Zack top that when all he has to work with is a piece of paper he finds in his pocket? Week after week Zack takes on a different math concept (length, width, area, perimeter) with surprising projects including a mobius strip, a paper frame large enough to step through, and a light show that demonstrates how the sun heats the earth.



Sideways Arithmetic from Wayside School

By: Louis Sachar

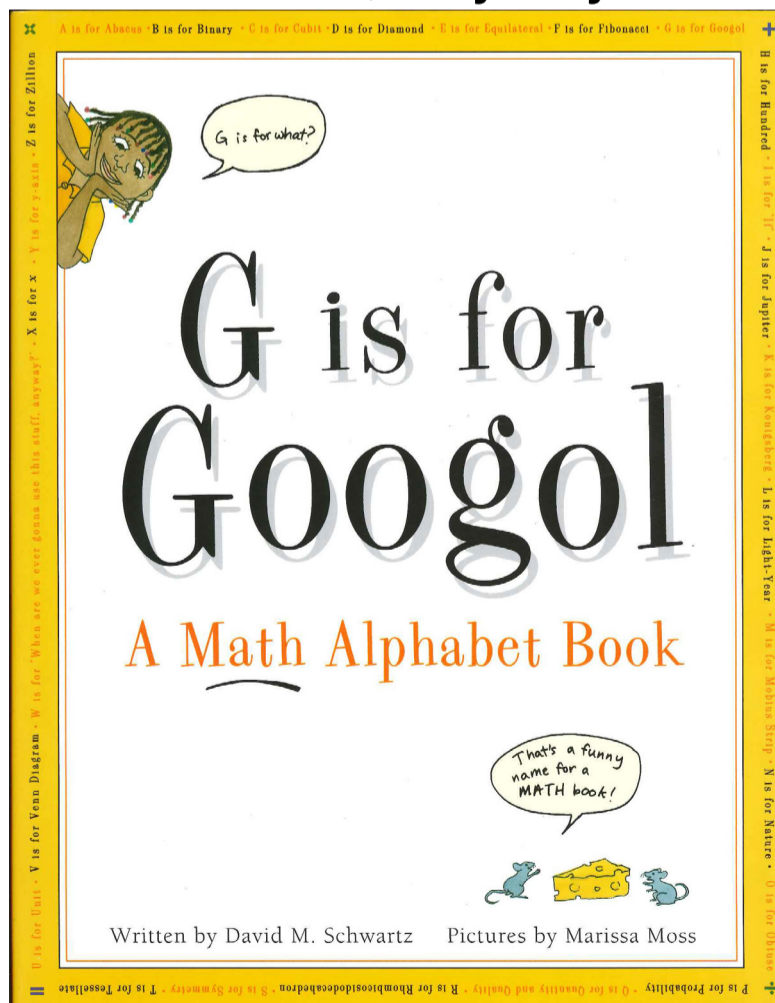
From the Newbery-award winning author of Holes. “Everyone take out your spelling books,” said Mrs. Jewls. “It’s time for arithmetic.” Sue is so excited for her first day at Wayside School. But things at Wayside are far from normal-and Sue’s teacher, Mrs. Jewls, is completely wacky. She expects the students to add and subtract words! Sue has never heard of anything so ridiculous. She knows adding apples plus oranges is impossible... or is it? Anything can happen at Wayside School.



G is for Googol: A Math Alphabet Book

By: David M. Schwartz

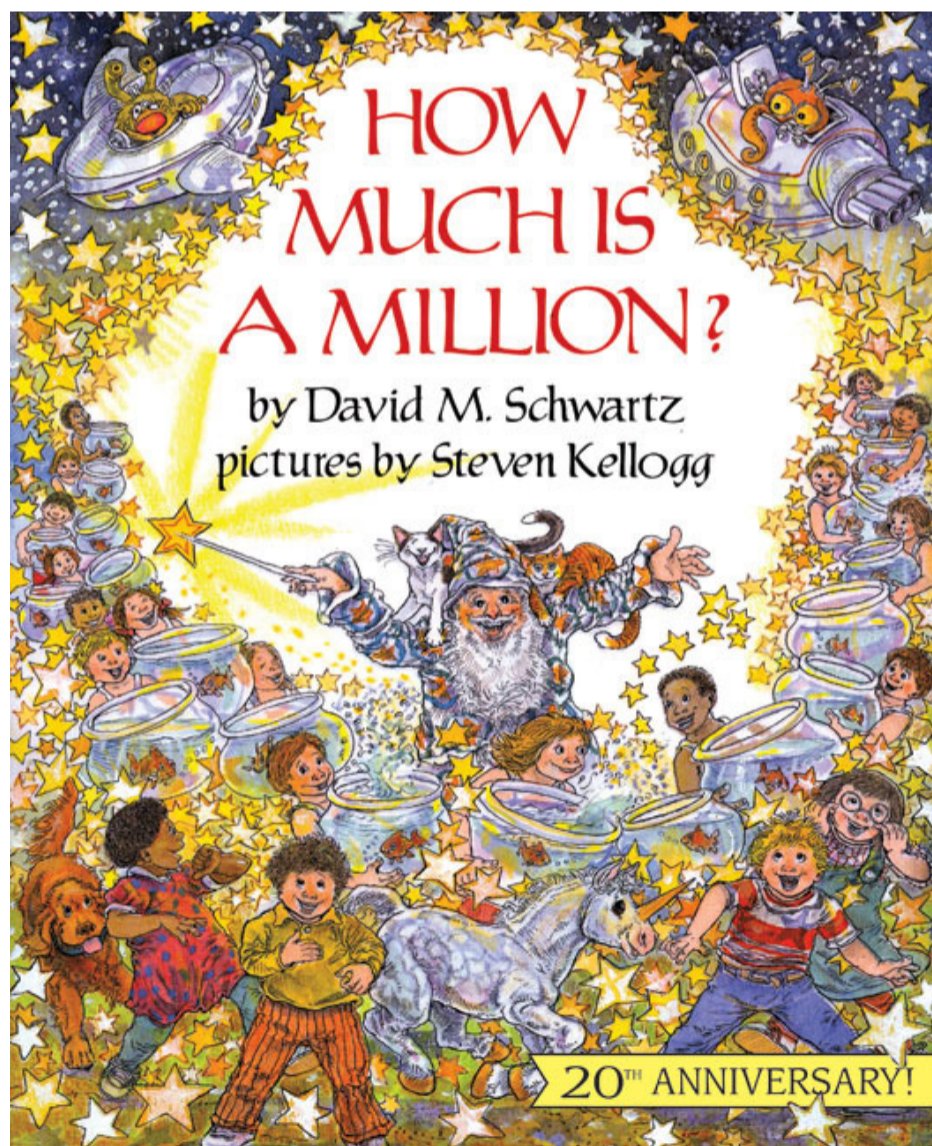
B is for Binary, F is for Fibonacci, P is for Probability... even a small sample begins to give you the idea that this is a math book unlike any other. Ranging freely from exponents to light-years to numbers found in nature, this smorgasbord of math concepts and trivia makes a perfect classroom companion or gift book for the budding young mathematician at home. Even the most reluctant math student will be drawn in by the author's trademark wit, Marissa Moss's quirky illustrations and funny captions, and the answers revealed in W is for "When are we ever gonna use this stuff, anyway?"



How Much is a Million?

By: David M. Schwartz

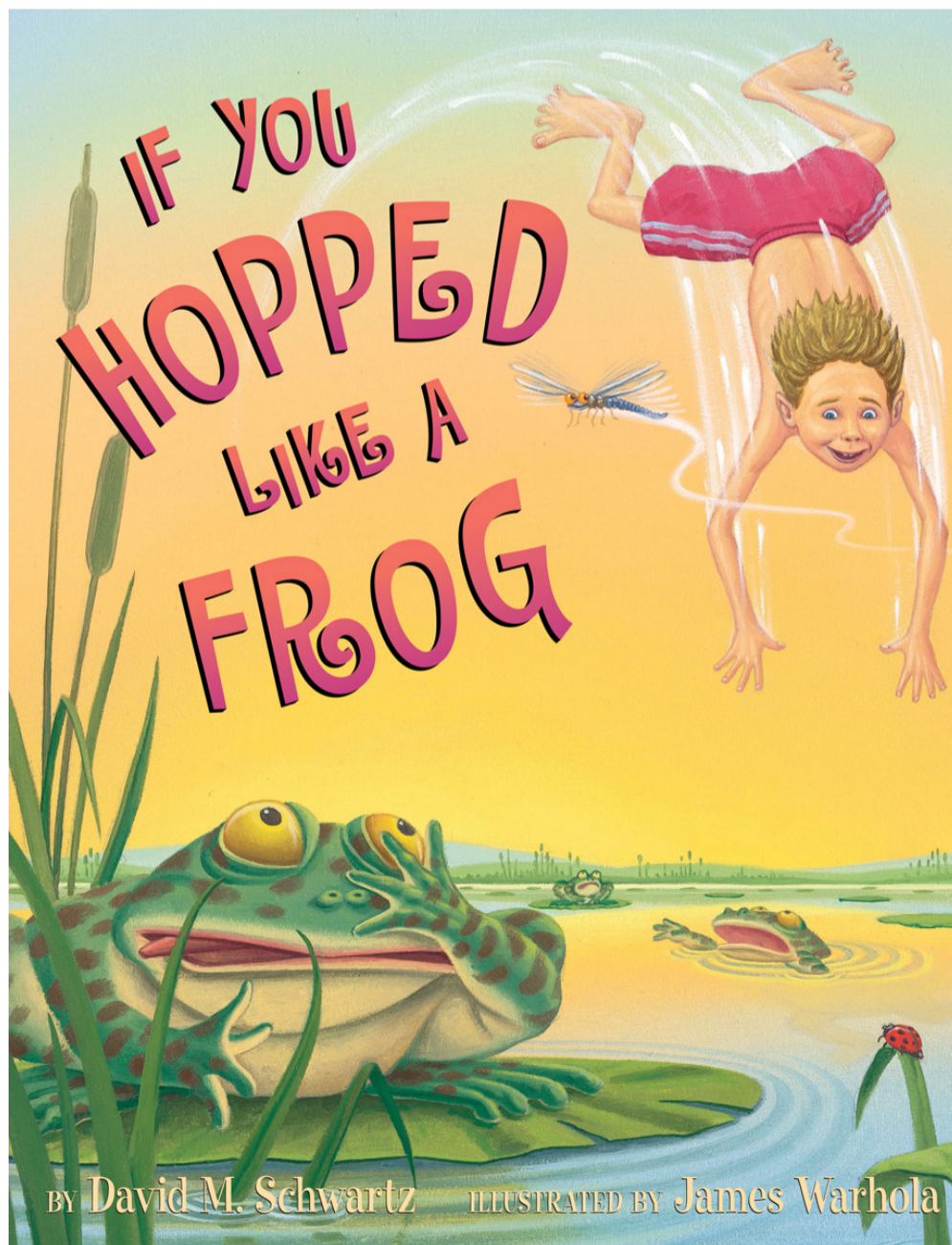
Ever wonder just what a million of something means? How about a billion? Or a trillion? Marvelosissimo the mathematical magician can teach you! How Much is a Million? knocks complex numbers down to size in a fun, humorous way, helping children conceptualize a difficult mathematical concept. This classic picture book is an ALA Notable Book, a Reading Rainbow Feature Selection, and a Boston Globe/Horn Book Honor Book for Illustration. Supports the Common Core State Standards.



If You Hopped Like a Frog

By: David M. Schwartz

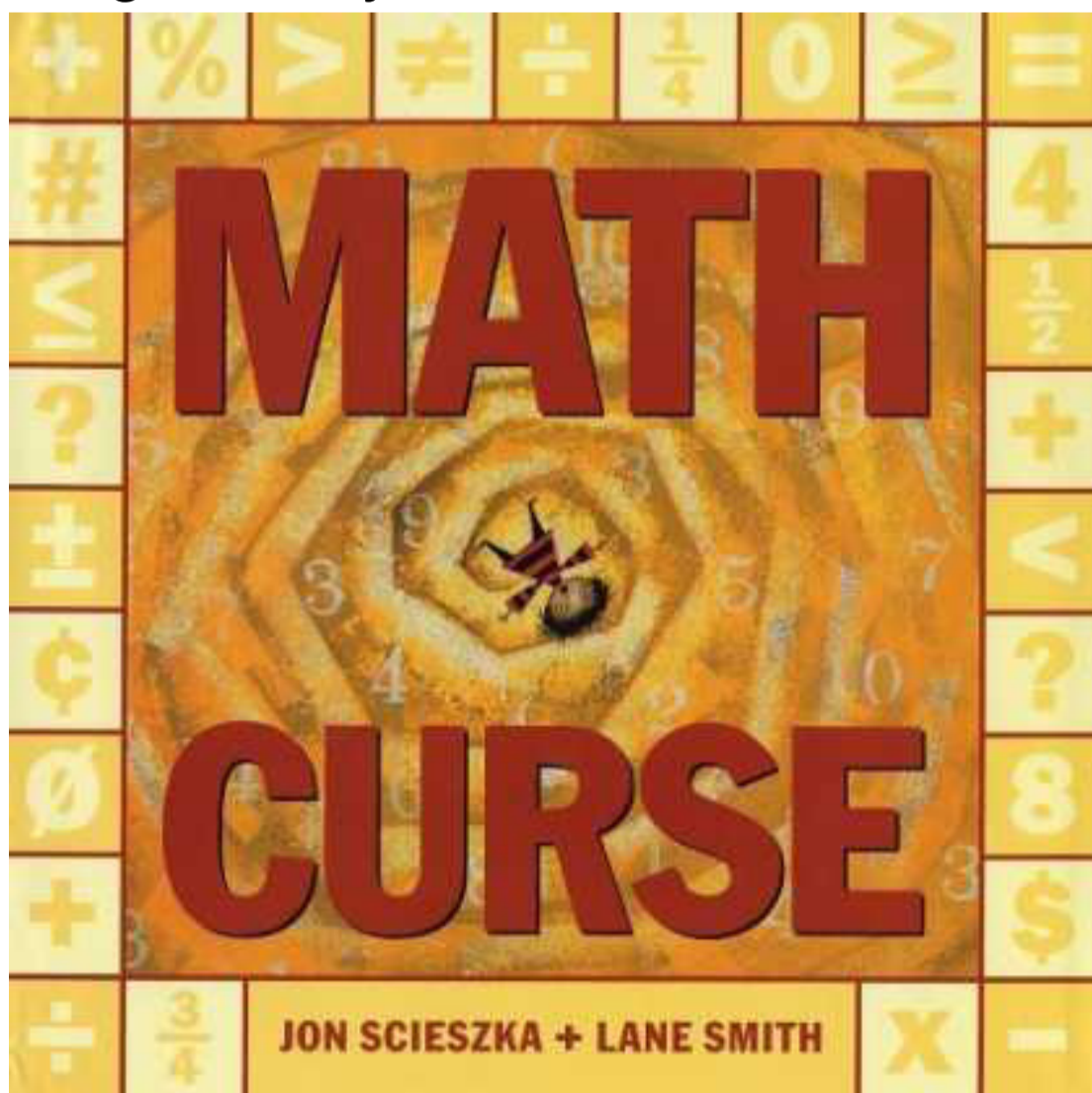
Did you know that a frog can jump 20 times its body weight?
Or that an ant can lift an object 50 times its weight? By
applying these ratios and proportions to their own bodies,
readers will discover what they could do if they had the
amazing abilities of animals.



Math Curse

By: Jon Scieszka and Lane Smith

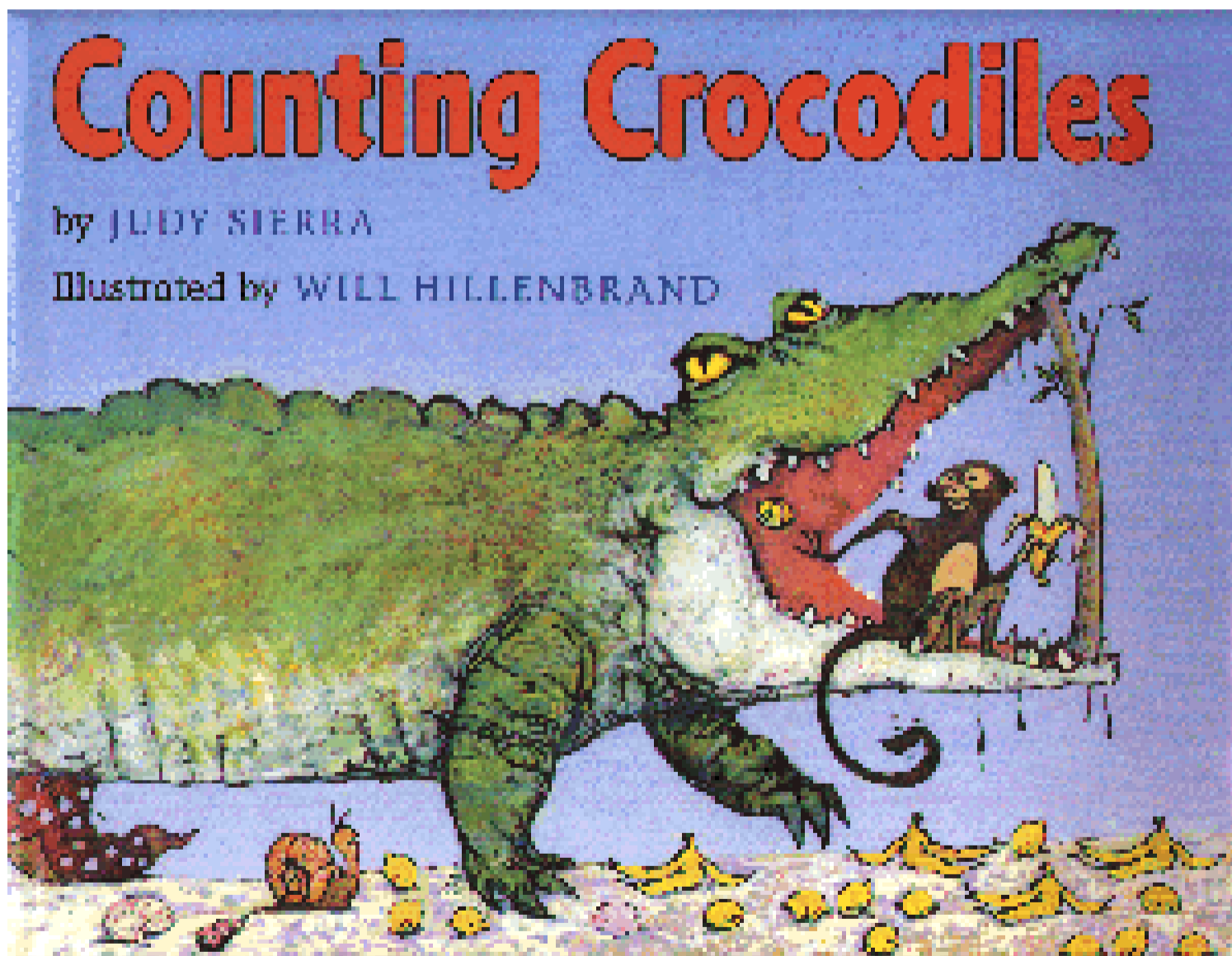
Did you ever wake up to one of those days where everything is a problem? You have 10 things to do, but only 30 minutes until your bus leaves. Is there enough time? You have 3 shirts and 2 pairs of pants. Can you make 1 good outfit? Then you start to wonder: Why does everything have to be such a problem? Why do 2 apples always have to be added to 5 oranges? Why do 4 kids always have to divide 12 marbles? Why can't you just keep 10 cookies without someone taking 3 away? Why? Because you're the victim of a Math Curse. That's why. But don't despair. This is one girl's story of how that curse can be broken.



Counting Crocodiles

By: Judy Sierra

Poor Monkey. All she has to eat are sour lemons. One day she spies a banana tree on a faraway island, but the only way to get there is to navigate the crocodile-infested waters of the Sillabobble Sea. That's no problem when you're a brave and clever monkey who can count to ten and back!



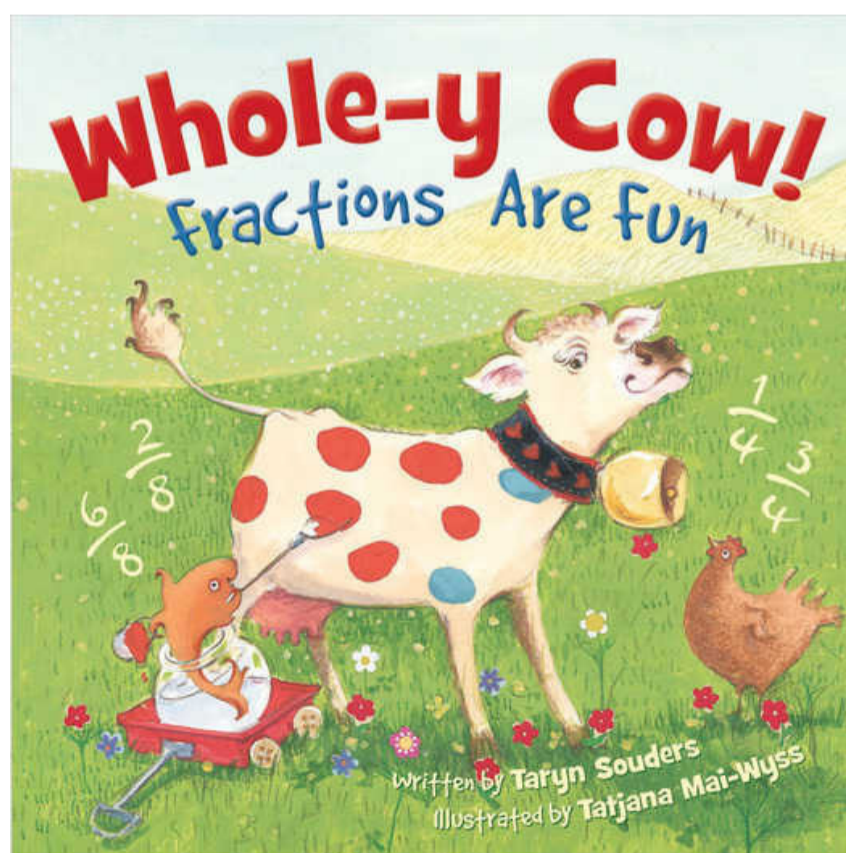
Whole-y Cow!

Fractions are Fun

By: Taryn Sounders

Learning about fractions isn't always easy, but who says it can't be fun? Using one very entertaining cow, math teacher Taryn Souders has devised a very clever (and fun) way of explaining fractions to beginning learners. One whole cow, calmly eating hay, decided to act differently on this particular day. One whole cow - what should we do? I know! Let's paint one half blue!

Prompted by a poem and a visual clue, students are asked to answer what fraction is illustrated in the cow's antics, starting with halves and progressing into thirds, fourths, eighths, and tenths. What fraction of the cow is blue? Answer: $\frac{1}{2}$ What fraction of the cow is white? Answer: $\frac{1}{2}$ With the math problem featured as part of the artwork, students get an immediate sense of how to apply and understand the concept of fractions. How moo-velous!



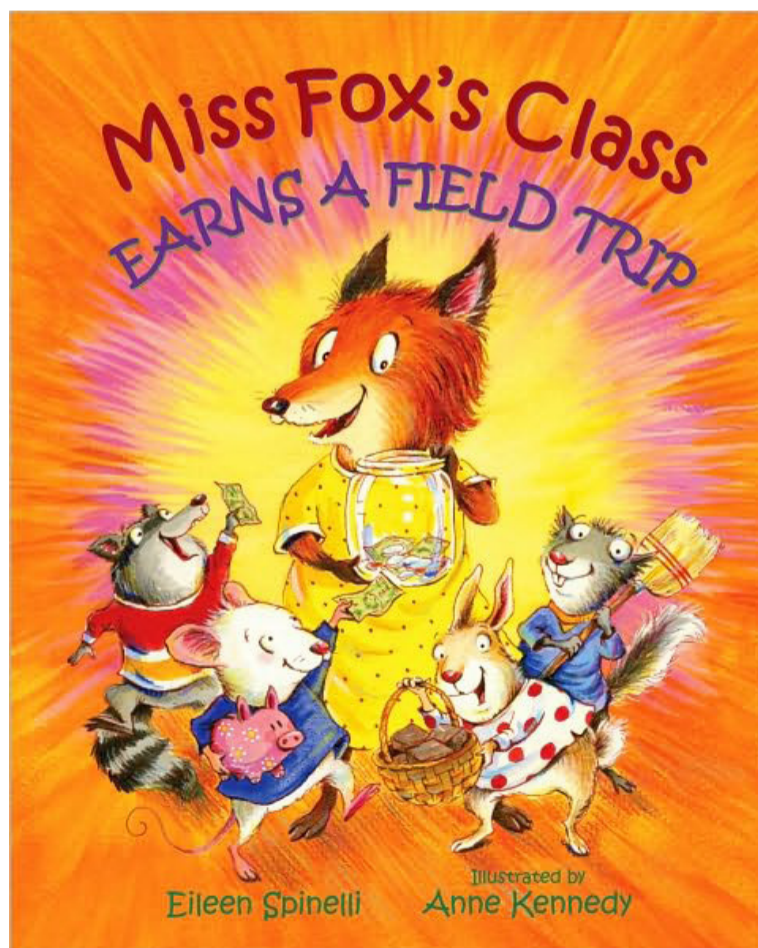
Miss Fox's Class Earns a Field Trip

By: Eileen Spinelli

Miss Fox's class is back! Now the students want to go to Roller Coaster Planet-and they are determined to earn the money for their trip. But each fund-raising attempt ends in disaster involving Percy P. Possum, the school's visiting author.

As the class pays to repair the various mishaps they cause, soon their earnings are going down, not up! How will they ever get to Roller Coaster Planet? Young readers will enjoy Eileen

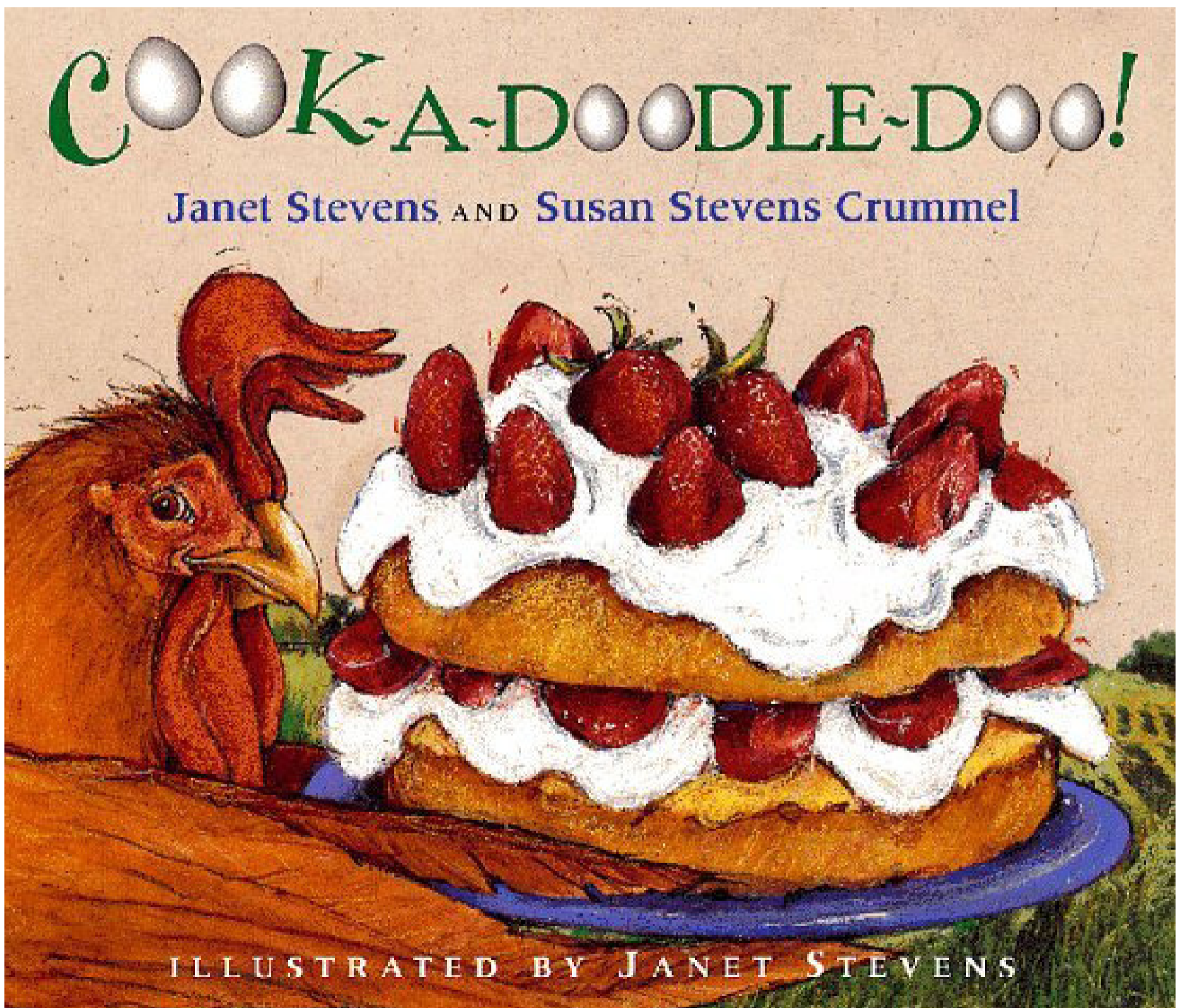
Spinelli's appealing animals and Anne Kennedy's hilarious paintings-and learn a little math into the bargain! Eileen and Anne also teamed up to produce Peace Week in Miss Fox's Class and Miss Fox's Class Goes Green.



Cook-A-Doodle-Do!

By: Janet Stevens and Susan Stevens Crummel

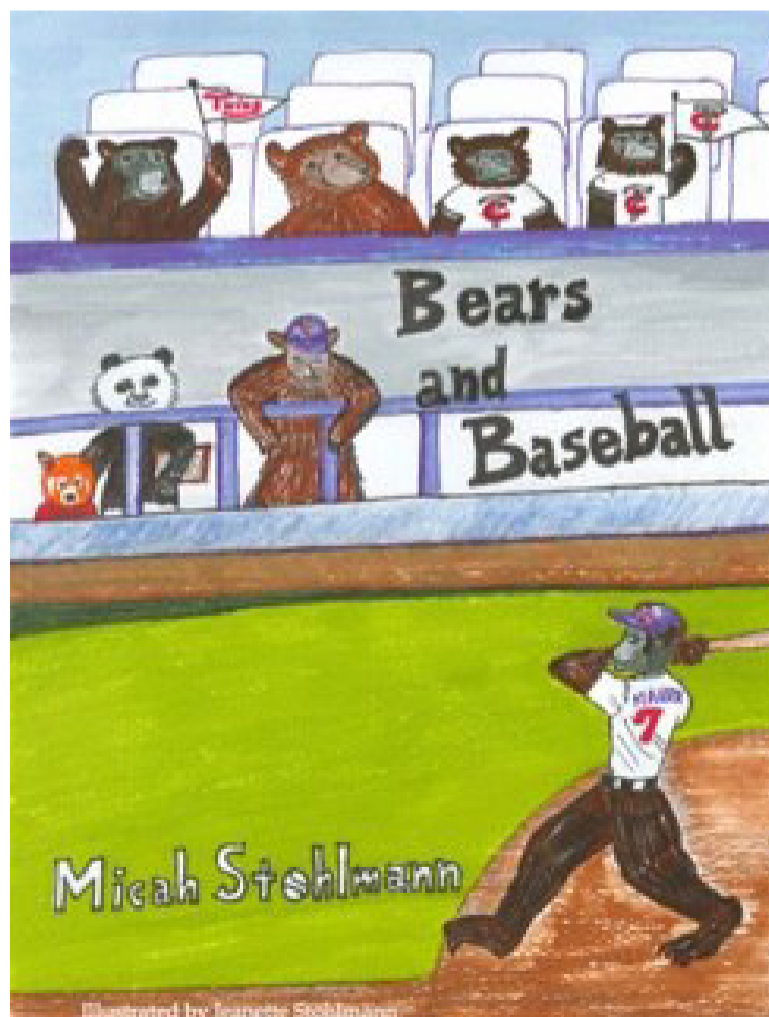
Take an old family recipe, add four funny friends, mix in some hilarious cooking confusion, and you have a delicious picture-book treat for children of all ages!



Bears and Baseball

By: Dr. Micah Stohlmann

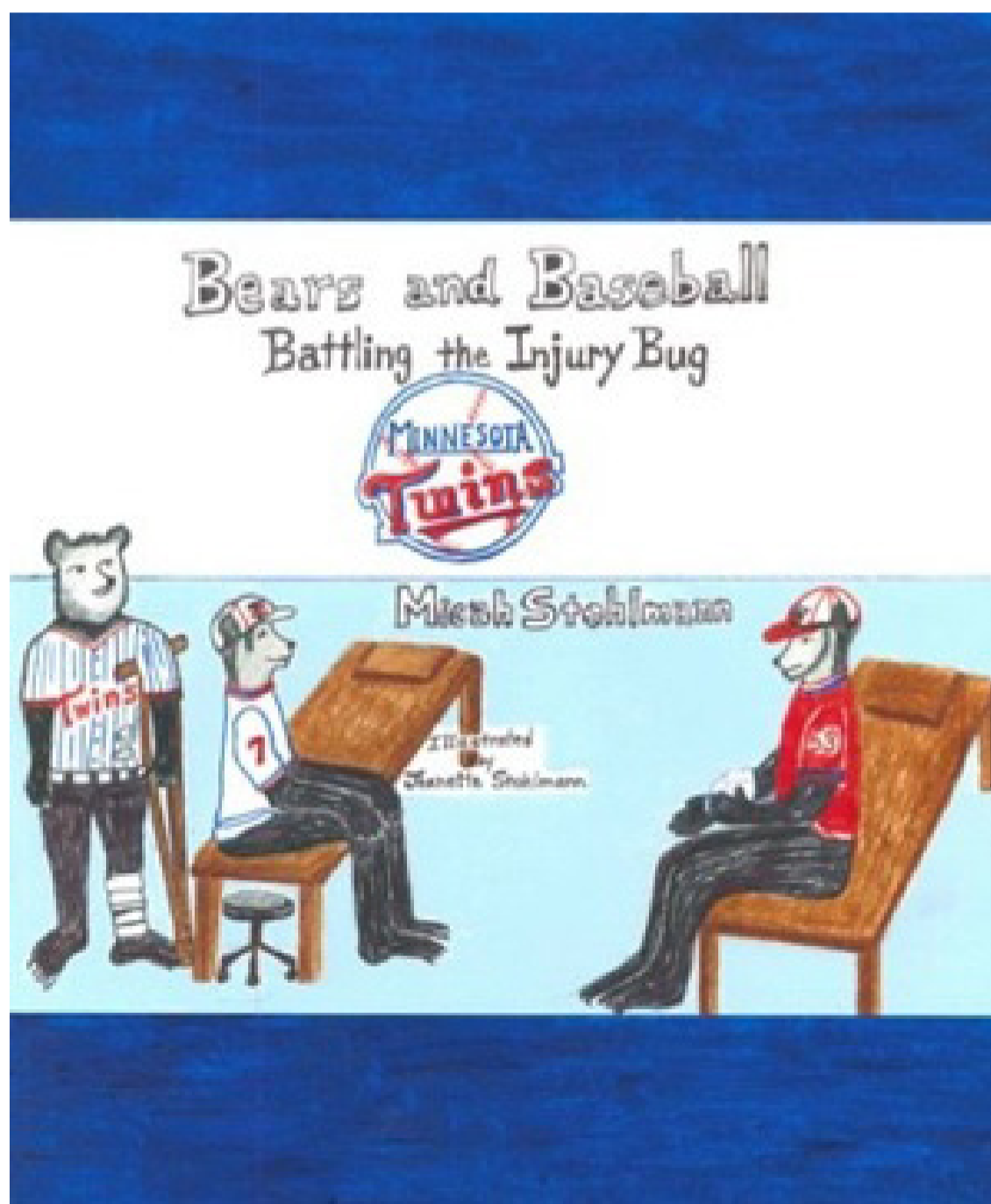
Like bears? Like baseball? Like the Minnesota Twins? If you answered yes to one of these questions you will love Bears and Baseball. Can two panda bears, Red and Pandy, help the Minnesota Twins win the World Series? Red and Pandy came to Minnesota from China for their love of baseball. They relied on each other for support in their new country. Find out how Red and Pandy go from selling merchandise for the Minnesota Twins to helping manager Ron Gardenhire make important game decisions. How did Red and Pandy use statistics to help the Twins? With Red and Pandy's help will the Minnesota Twins win the World Series?



Bears and Baseball: Battling the Injury Bug

By: Dr. Micah Stohlmann

Red and Pandy are back! Follow along as Red and Pandy investigate baseball injuries, the disabled list, and the Twins' Hall of Famers. What recommendations will Red and Pandy give the Minnesota Twins to get back to the playoffs.

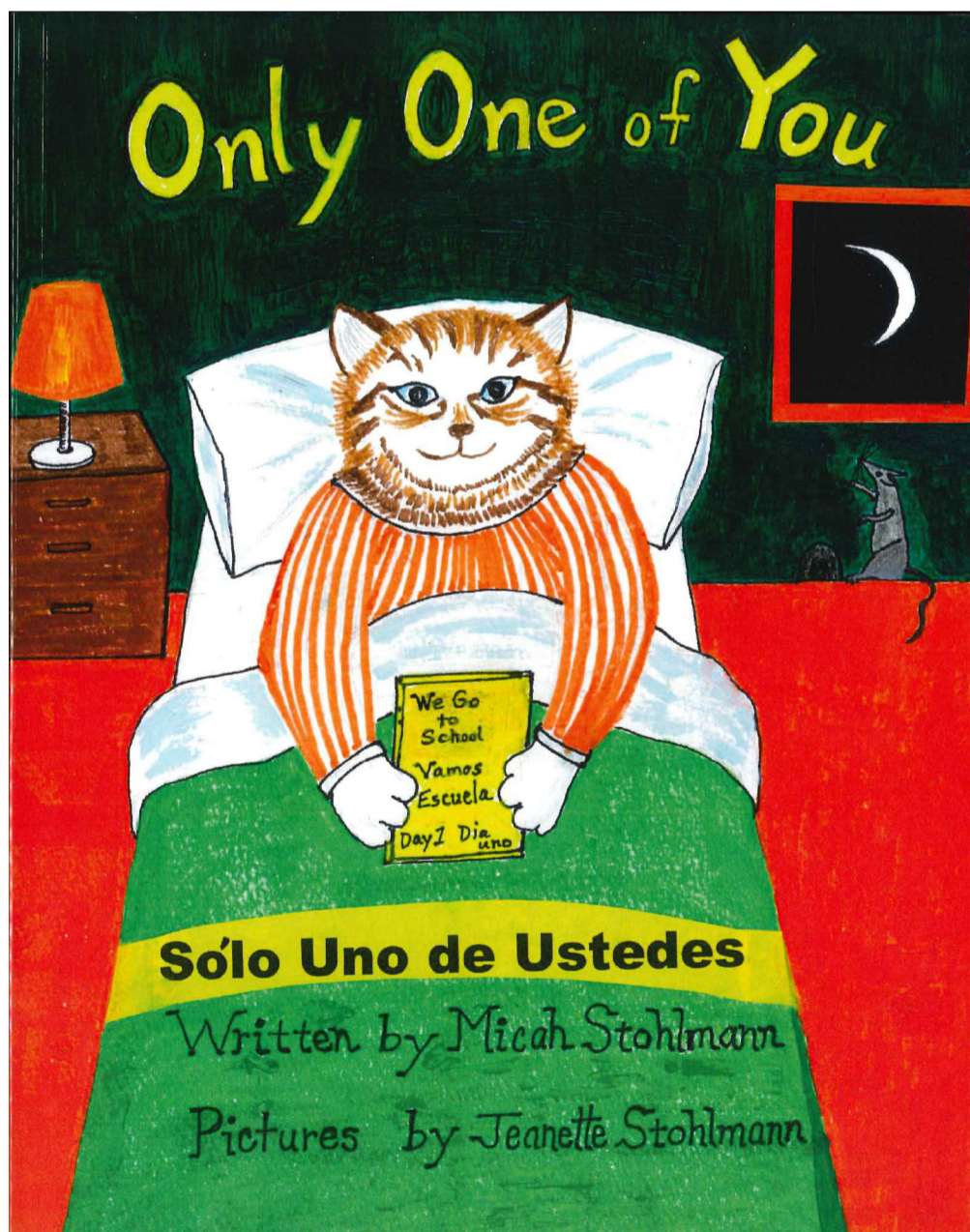


Only One of You

By: Dr. Micah Stohlmann

Will Isabela get over the fear of her first day of school?

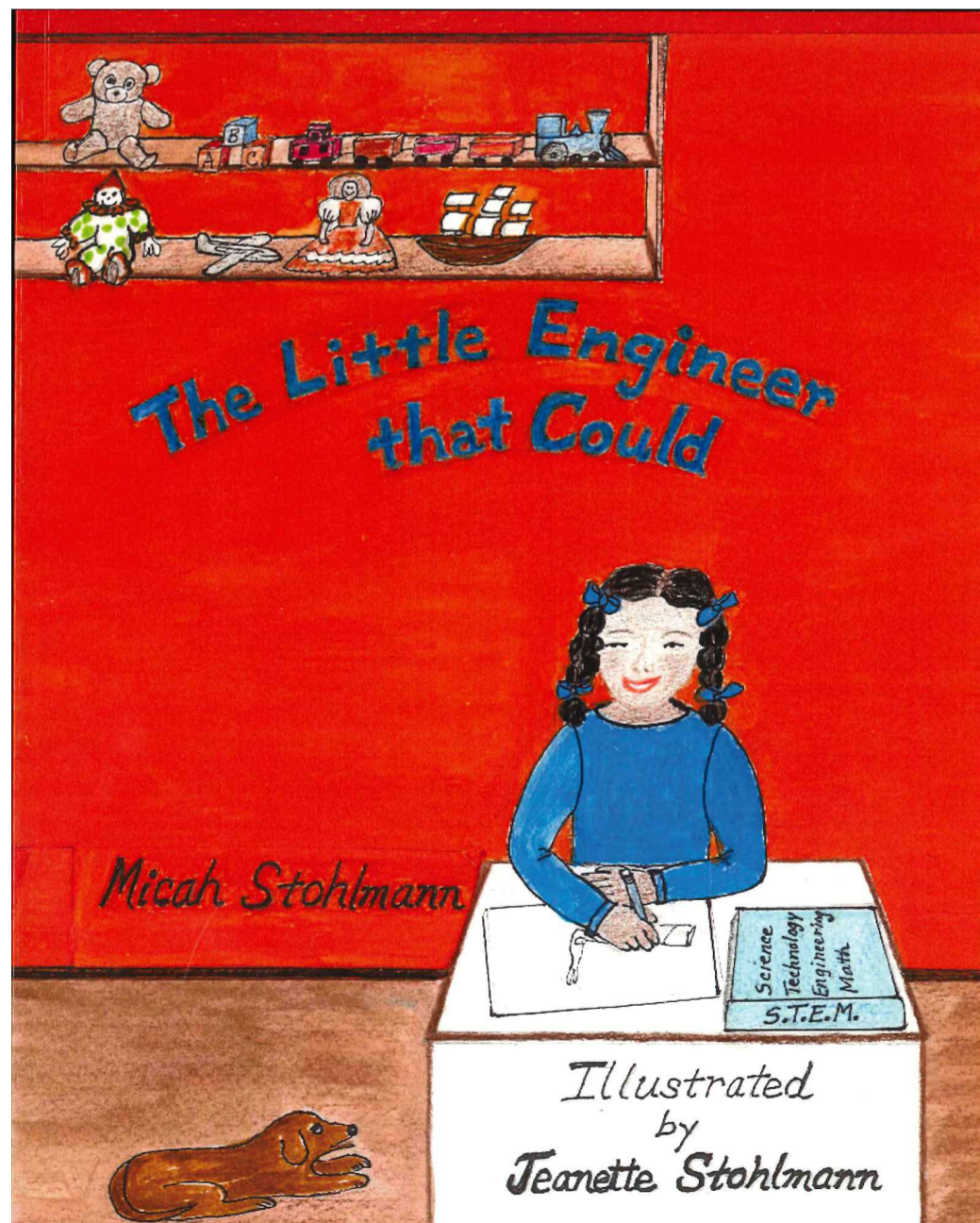
This delightful bilingual (English and Spanish) book incorporates the themes of body parts, sports, music, money, games, geography, and food. Enrichment exercises in the back of the book will help children to learn multiplication and division through the real world themes. A great book to read with your child!



The Little Engineer that Could

By: Dr. Micah Stohlmann

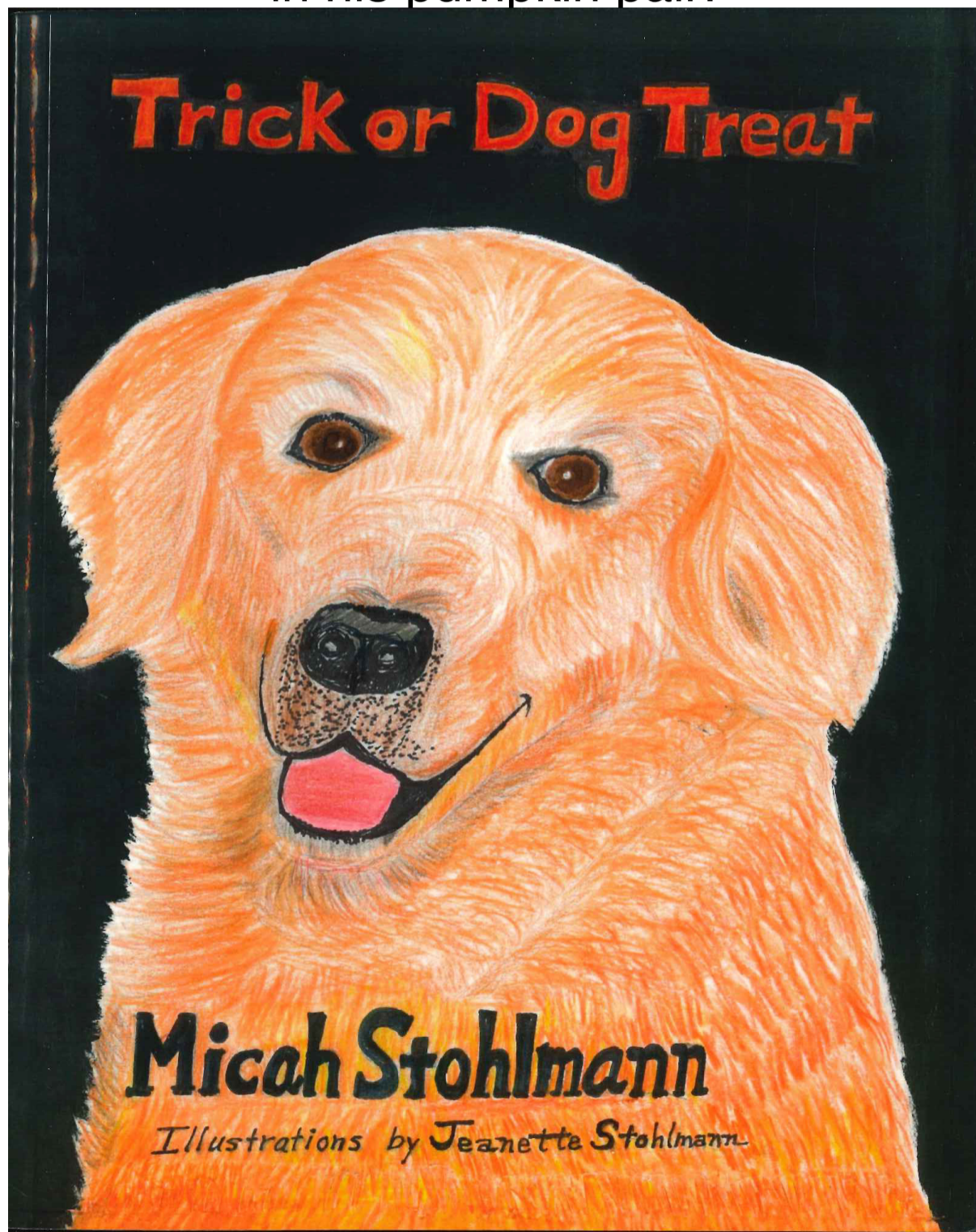
Can one child make a difference? “I think I can,” said 11 year old Cadence. Find out how Cadence uses engineering to help her neighbor, an army veteran, who recently returned from the war in Afghanistan.



Trick or Dog Treat

By: Dr. Micah Stohlmann

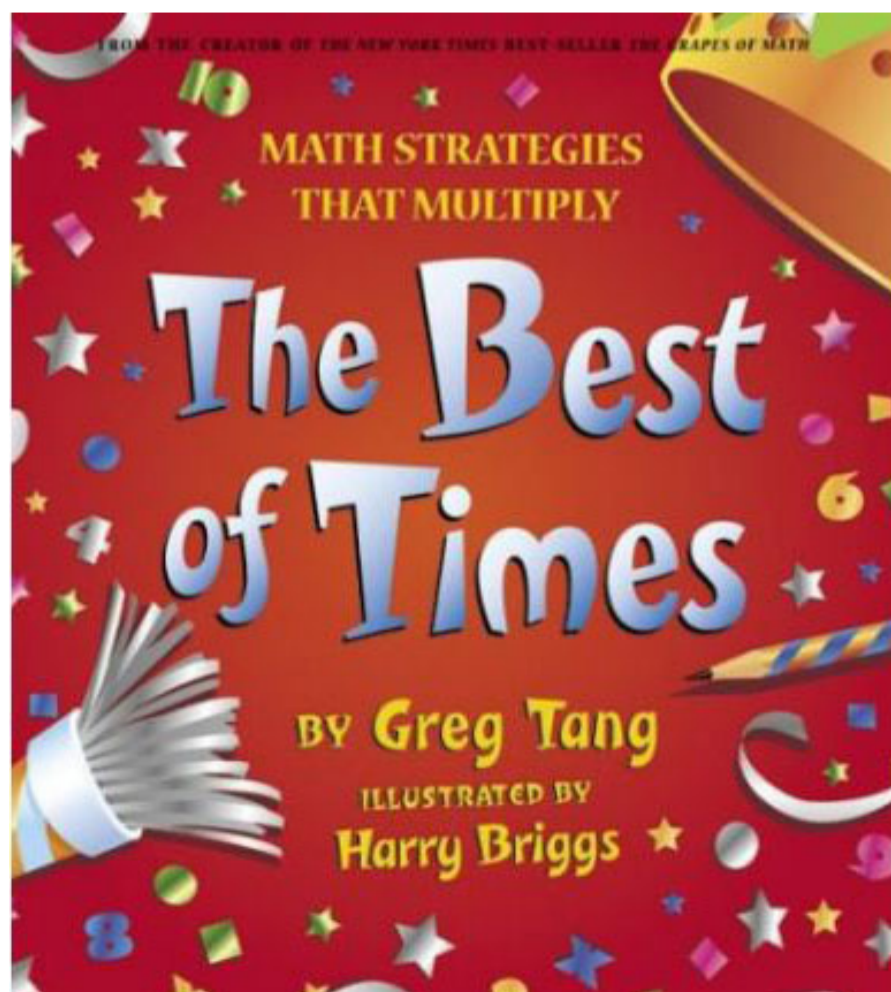
Goldy is a curious golden retriever that sees math all around him. Find out what happens when Goldy gets to go Trick-or-Treating for the first time. Will Goldy get any treats in his pumpkin pail?



The Best of Times

By: Greg Tang

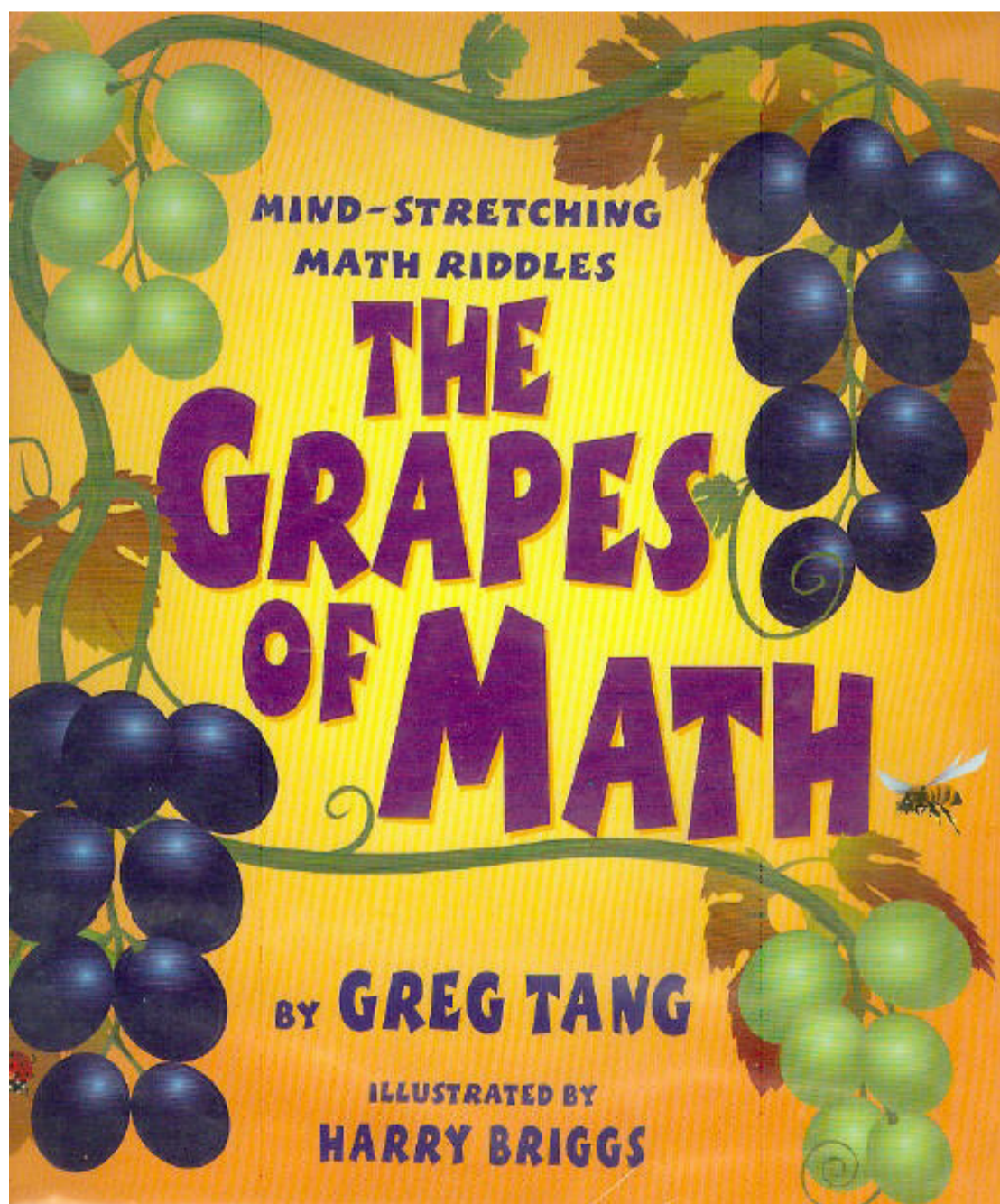
NEW YORK TIMES bestselling author Greg Tang takes on the times tables, teaching kids innovative ways to multiply numbers and derive answers WITHOUT memorization. Four is very fast to do when you multiply by 2. Here's a little good advice--please just always double twice! BEST OF TIMES gives kids an intuitive understanding of multiplication, encouraging them to arrive at answers on their own rather than memorizing the times tables. A child who can multiply by two, for instance, can multiply by four and even eight! Likewise, times six builds on times two and times three. With his common-sense approach, Greg Tang encourages kids to solve problems creatively, building both their skills and their confidence.



The Grapes of Math

By: Greg Tang

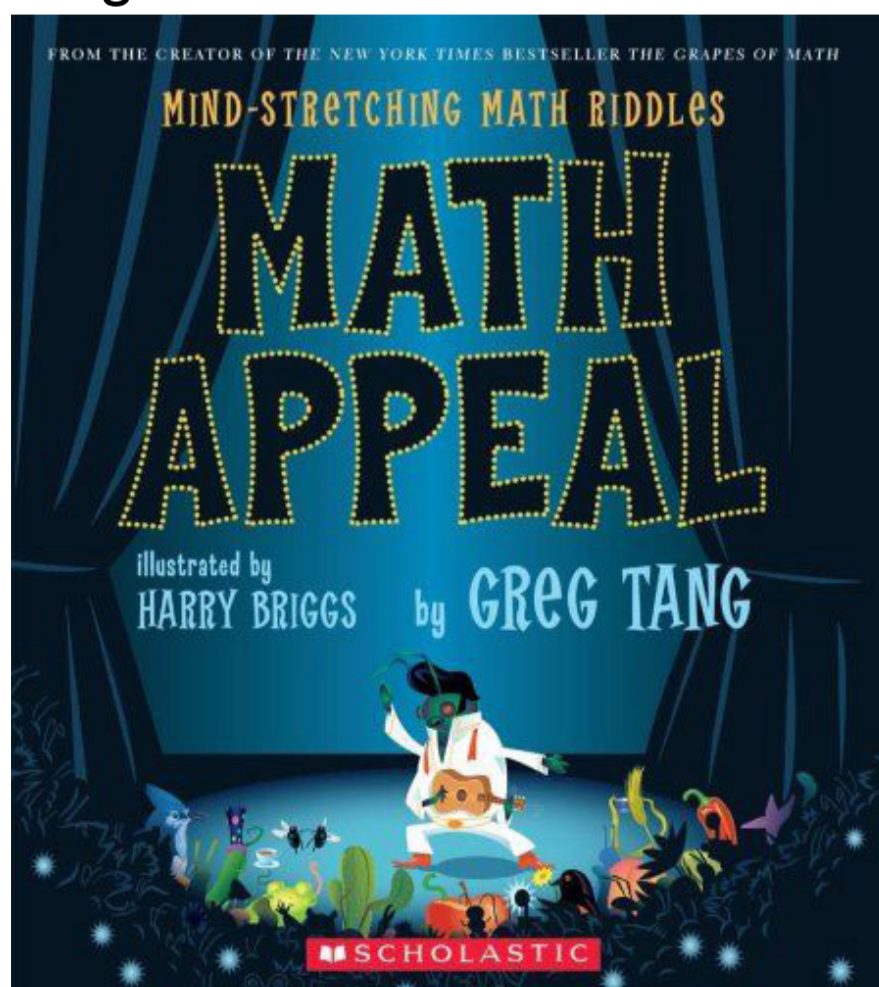
“How many grapes are on the vine? / Counting each takes too much time. / Never Fear, I have a hunch / There is a match for every bunch!” Greg Tang, a lifelong lover of math, shares the techniques that have helped him solve problems in the most creative ways! Harry Briggs’s vibrant & inviting illustrations create a perfect environment for these innovative games. So open your mind-and have fun!



Math Appeal

By: Greg Tang

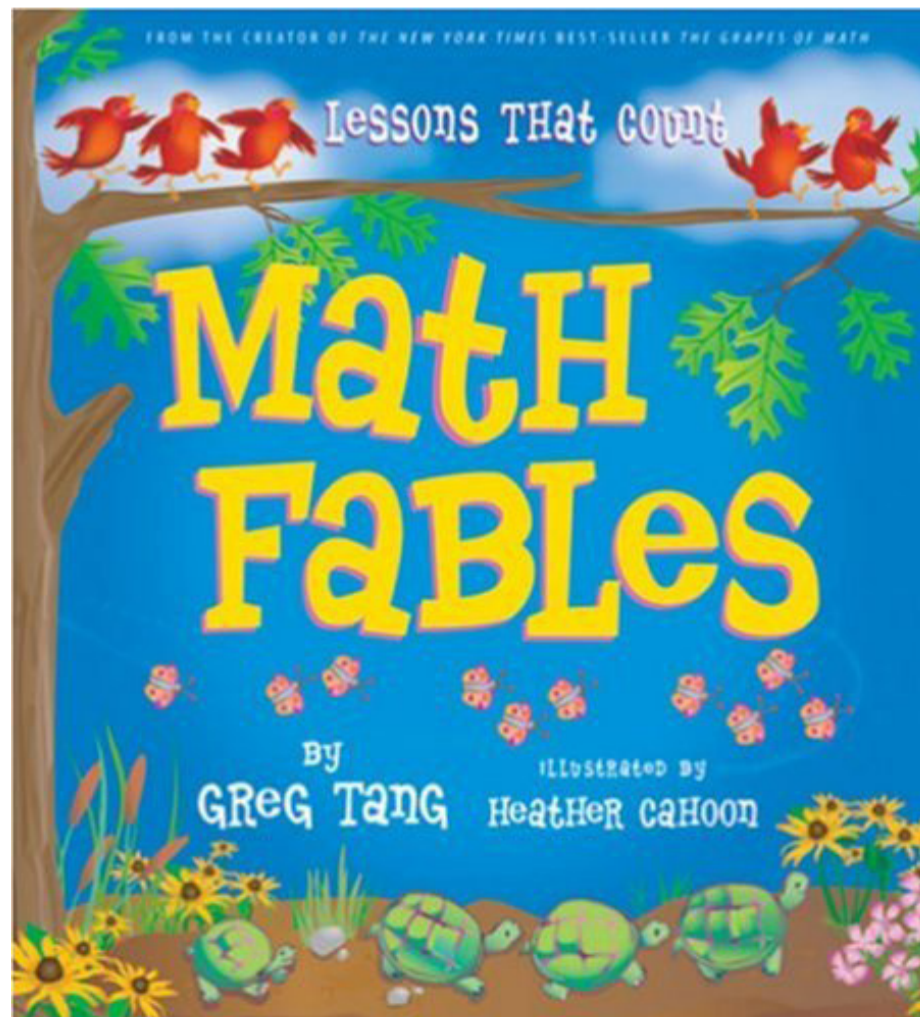
NEW YORK TIMES bestselling author Greg Tang challenges kids to solve problems creatively in this follow-up to MATH FOR ALL SEASONS. “In this book you’ll learn to see / How very clever you can be. / We’ll teach you tricks to help you add, / Some day in math class you’ll be glad!” In this follow-up to MATH FOR ALL SEASONS, Greg Tang underscores the importance of four basic rules in problem-solving. Keeping an open mind, looking for unusual number combinations, using multiple skills (like subtracting to add) and looking for patterns will guarantee any child success in math. In MATH APPEAL, Tang continues to challenge kids with his innovative approach to math.



Math Fables: Lessons that Count

By: Greg Tang

From 1 to 10, these “lessons that count” are math magic for learning addition and subtraction. Greg Tang has built his career as an author and math missionary on the power of creative problem solving. Now, through winsome “fables” about concepts that are relevant to the very youngest math learners-- sharing, teamwork, etc.-- Greg encourages kids to see the basics of addition and subtraction in entirely new ways. Fresh, fun, and most of all, inspiring, MATH FABLES is perfect for launching young readers on the road to math success!

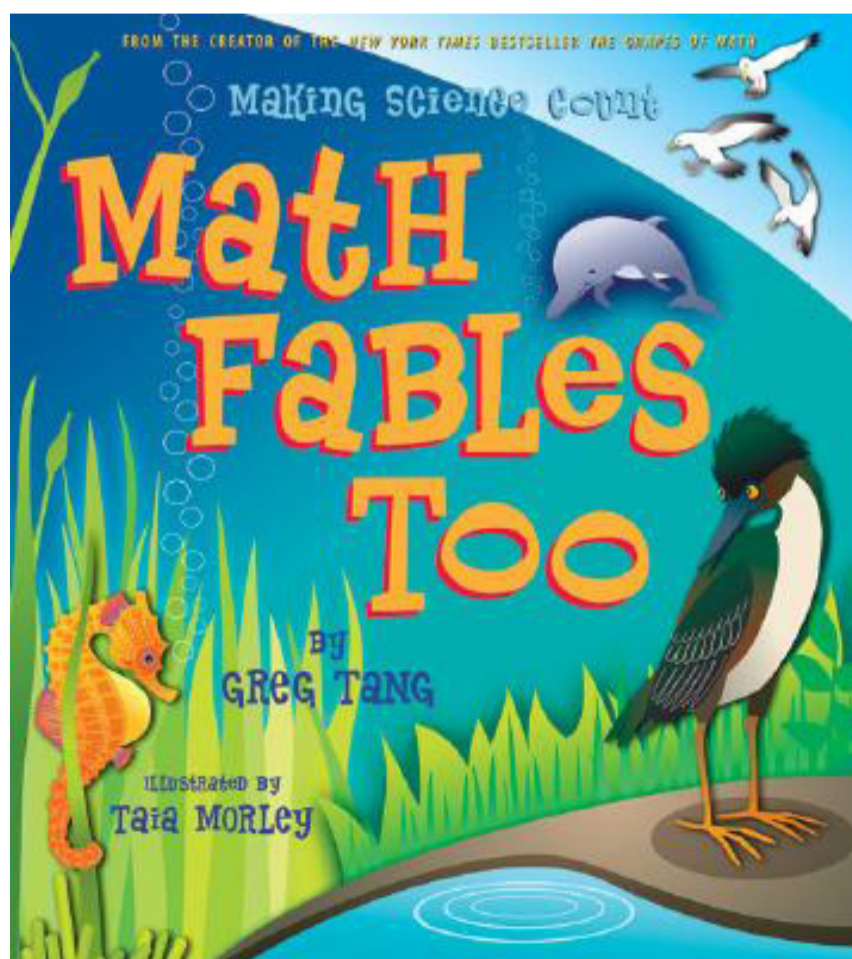


Math Fables Too: Making Science Count

By: Greg Tang

From 1 to 10, these “lessons that count” are math magic for learning addition. For children who have graduated from MATH FABLES, MATH FABLES TOO will help kids learn to count and, more important, lay the groundwork for addition.

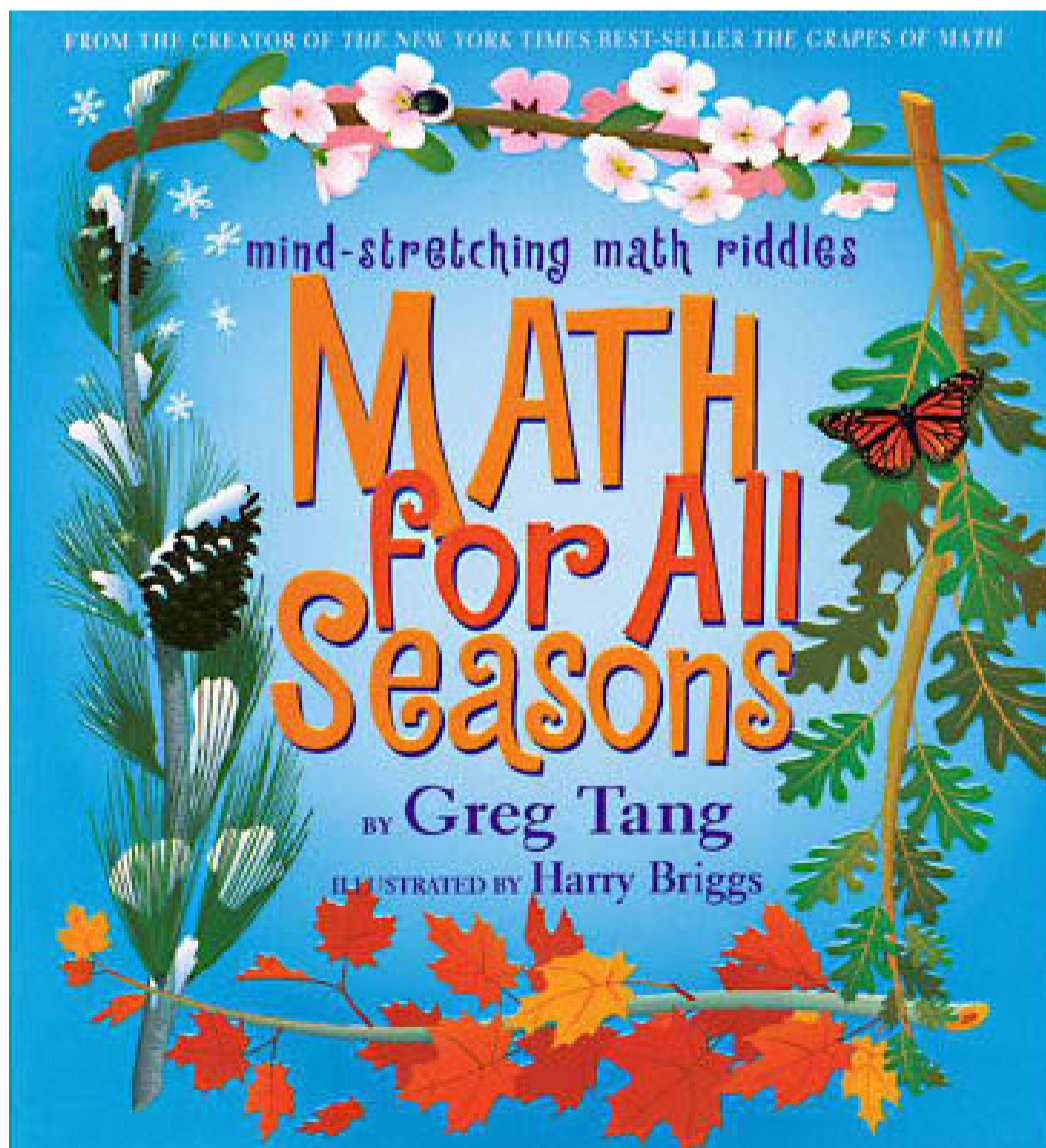
When children learn to group numbers at an early age, everything else--place value, arithmetic, problem-solving--flows naturally. These animal fables will also encourage kids to become more interested in science by building on their natural fascination with animals of the oceans, jungles, deserts, lakes, and backyards. Math and science -- a winning combination!



Math for All Seasons

By: Greg Tang

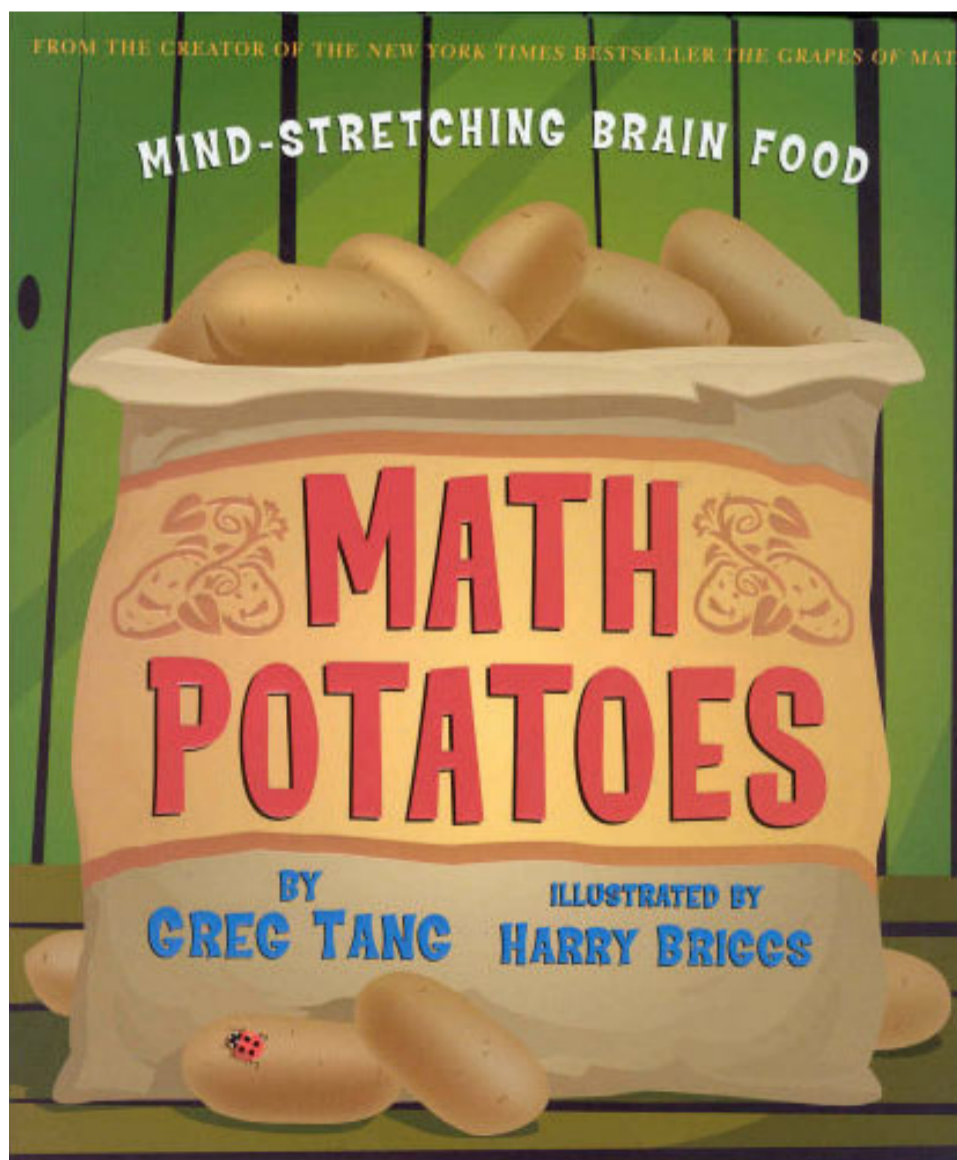
“Your challenge is to find the sum / Without counting one by one / Why not count? It’s much too slow -- / Adding is the way to go! / Make clever groups before you start -- / Then add them in a way that’s smart!” MATH FOR ALL SEASONS will challenge every kid -- and every parent -- to open their minds and solve problems in new and unexpected ways. By looking for patterns, symmetries, and familiar number combinations within eye-catching pictures, math will become easier, quicker, and more fun than anyone could have imagined!



Math Potatoes

By: Greg Tang

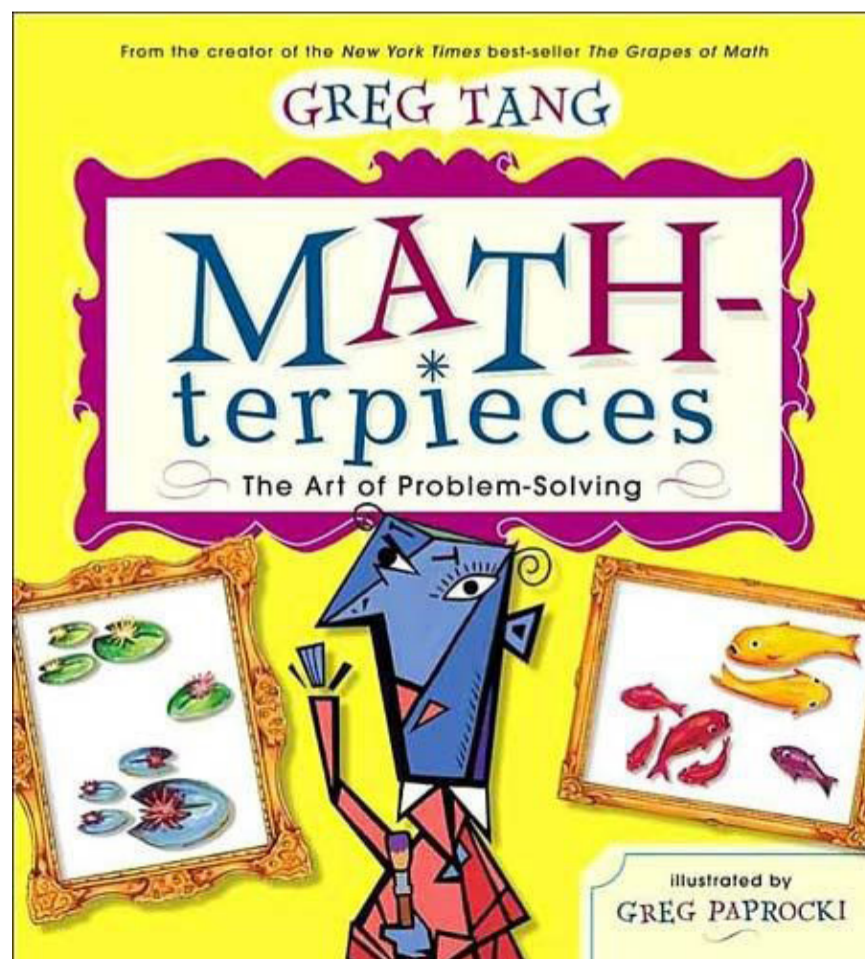
Readers who have graduated from THE GRAPES OF MATH will find new, more advanced math challenges. Greg Tang is back with his bestselling approach to addition and subtraction: problem solving. By solving challenges that encourage kids to “group” numbers rather than memorize formulas, even the most reluctant math learners are inspired to see math in a whole new way! Math Potatoes is full of Tang and Briggs’ trademark humor, wit, and extraordinary creativity. Tang has proven over and over that math can be fun, and this new addition to his acclaimed series of mind-stretching math riddles is sure to be another hit.



Math-terpieces: The Art of Problem-Solving

By: Greg Tang

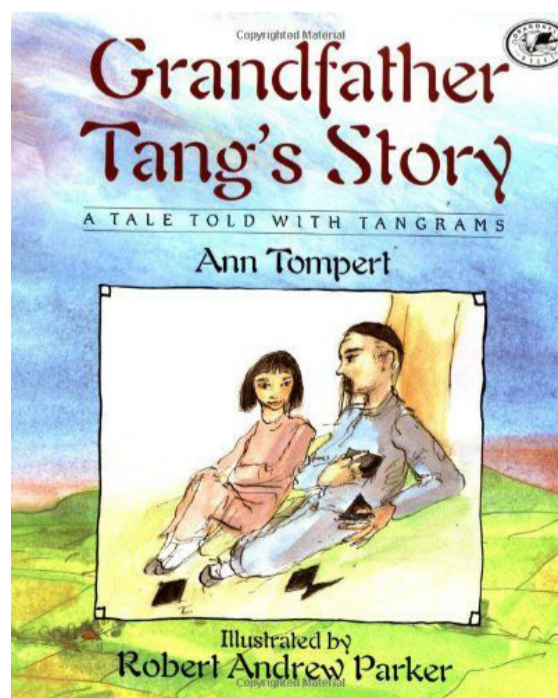
NEW YORK TIMES bestselling author Greg Tang challenges kids to solve problems creatively while introducing art history. In his most ground-breaking book since THE BEST OF TIMES (Fall 2002), Greg Tang underscores the importance of four basic rules in problem-solving. Keeping an open mind, looking for unusual number combinations, using multiple skills (like subtracting to add) and looking for patterns, will guarantee any child success in math. In MATH-TERPIECES, Tang continues to challenge kids with his innovative approach to math, and uses art history to expand his vision for creative problem-solving.



Grandfather Tang's Story: A Tale Told with Tangrams

By: Ann Tompert

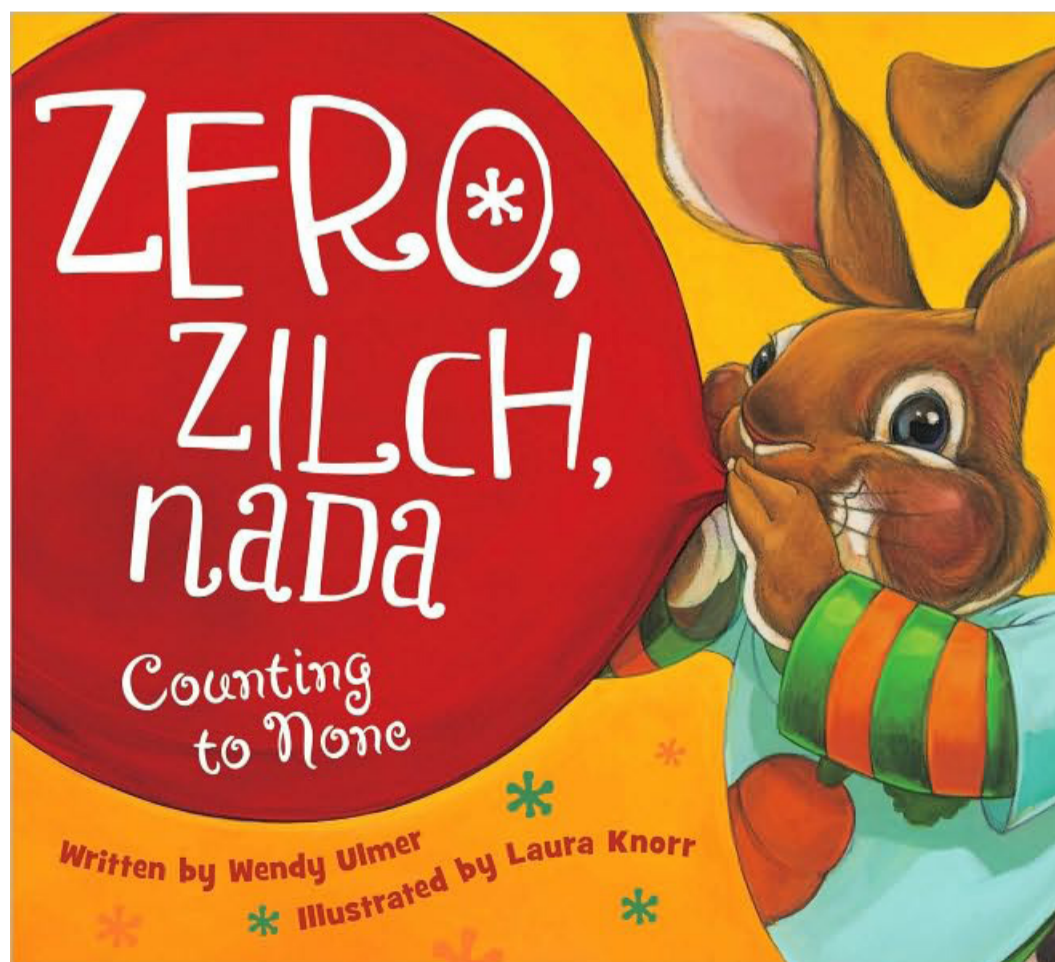
Here's a folktale with a twist: Tompert uses tangrams, a traditional "visual aid" employed by Chinese storytellers, to spin a tale about two shape-changing fox fairies. Seven "tans" (standard-sized pieces of a square) are arranged and rearranged to represent various characters in the story. The fox fairies vie to outdo each other--the first one becomes a rabbit, the other a dog who chases him, and so on--but when the two chase each other right into danger, they finally have to set their competition aside and pull together. Parker's graceful, impressionistic illustrations have a gentle Oriental flavor, and the constantly changing tangram configurations add a novel touch. A traceable tangram is provided at the end for do-it-yourselfers.



Zero, Zilch, Nada: Counting to None

By: Wendy Ulmer

Harry is excited! Today is the first day at his new job at the Four Color Balloon Factory. Harry loves balloons almost more than anything! When Mr. Huffy, his new boss, tells him to blow up 100 balloons for Mrs. Doopido's birthday party, Harry can't wait to get started. But when Harry wants to make sure he has the correct number of balloons for the birthday party, counting the balloons gets confusing. And no matter what he does, the number still comes out wrong. What is the best way to count to 100? Colorful illustrations and a clever storyline will help young readers figure out what Harry needs to do to solve his math dilemma.

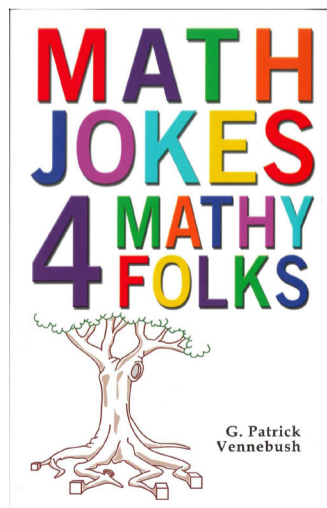


Math Jokes

4 Mathy Folks

By: G. Patrick Vennebush

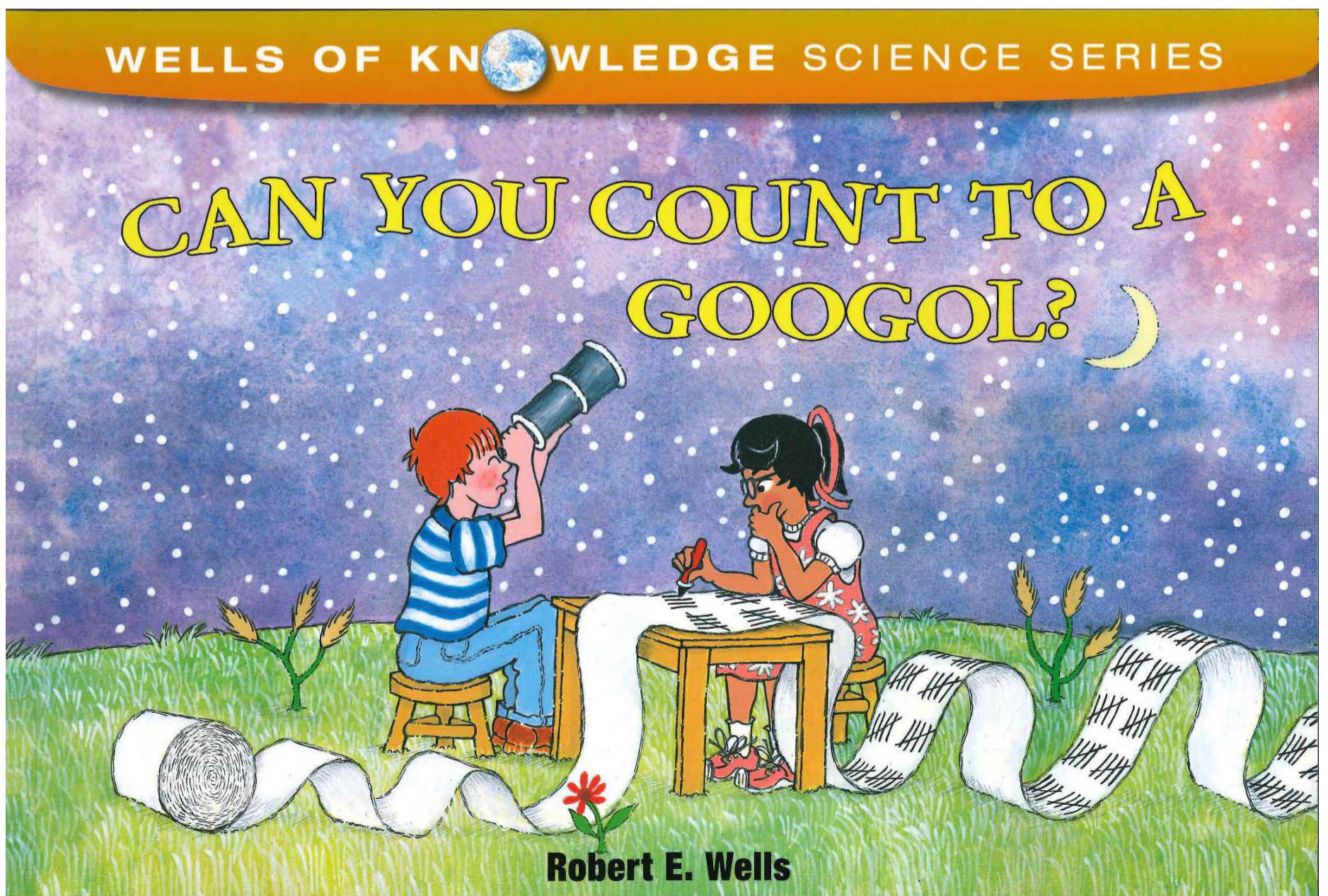
Who says math can't be funny? In *Math Jokes 4 Mathy Folks*, Patrick Vennebush dispels the myth of the humorless mathematician. His quick wit comes through in this incredible compilation of jokes and stories. Intended for all math types, *Math Jokes 4 Mathy Folks* provides a comprehensive collection of math humor, containing over 400 jokes. It's a book that all teachers from elementary school through college should have in their library. But the humor isn't just for the classroom-it also appeals to engineers, statisticians, and other math professionals searching for some good, clean, numerical fun. From basic facts ("Why is 6 afraid of 7?") to trigonometry ("Mathematical puns are the first sine of dementia") and algebra ("Graphing rational functions is a pain in the asymptote"), no topic is safe. As Professor Jim Rubillo notes, "Math Jokes 4 Math Folks is an absolute gem for anyone dedicated to seeing mathematical ideas through puns, double meanings, and blatant "bad" jokes. Such perspectives help to see concepts and ideas in different and creative ways."



Can You Count To a Googol?

By: Robert E. Wells

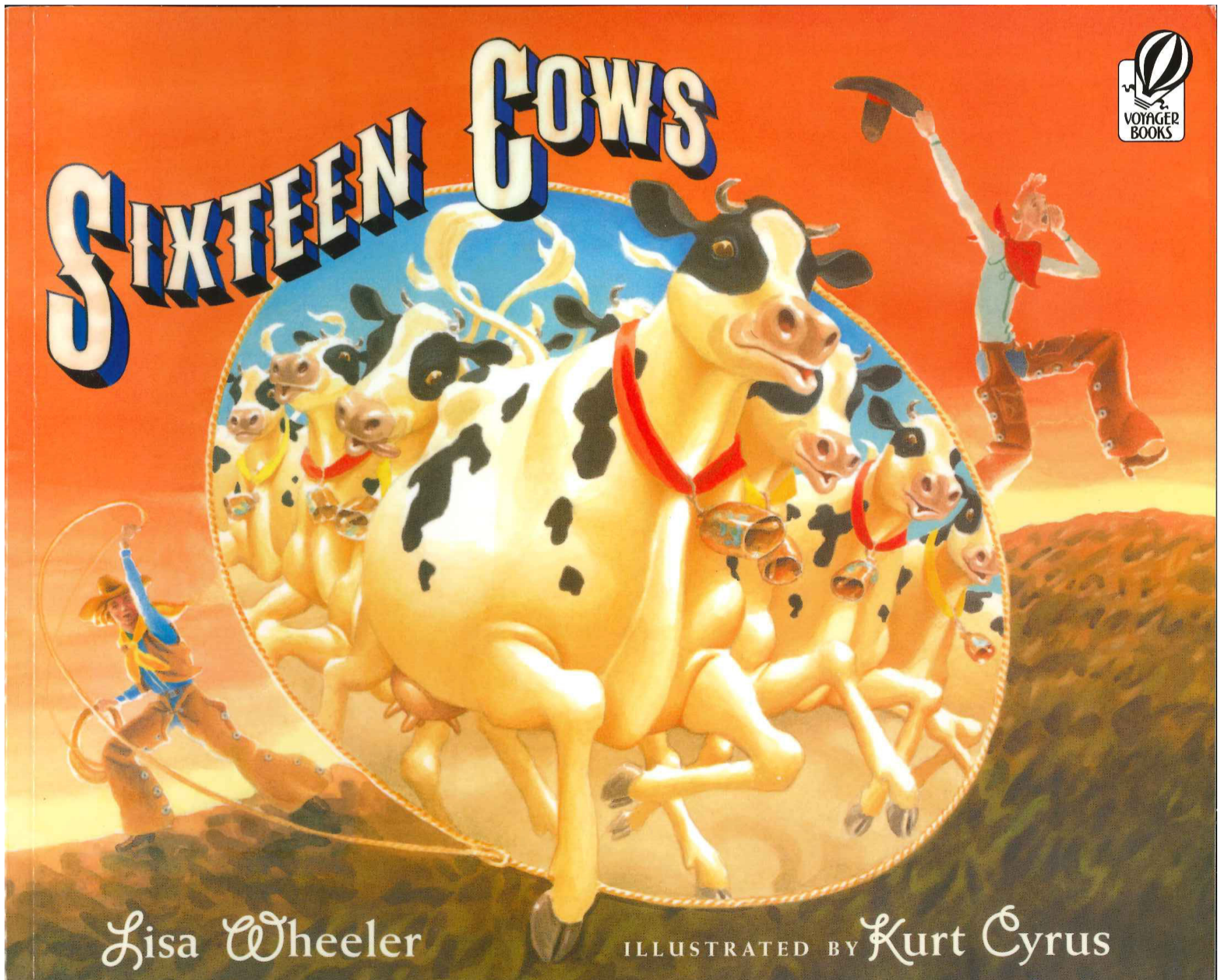
You may be able to count all the way to one hundred, but have you ever counted to a googol? It's impossible! In this fun book of numbers, Robert E. Wells explores the wonderful world of zeros and tells how the googol came to be named.



Sixteen Cows

By: Lisa Wheeler

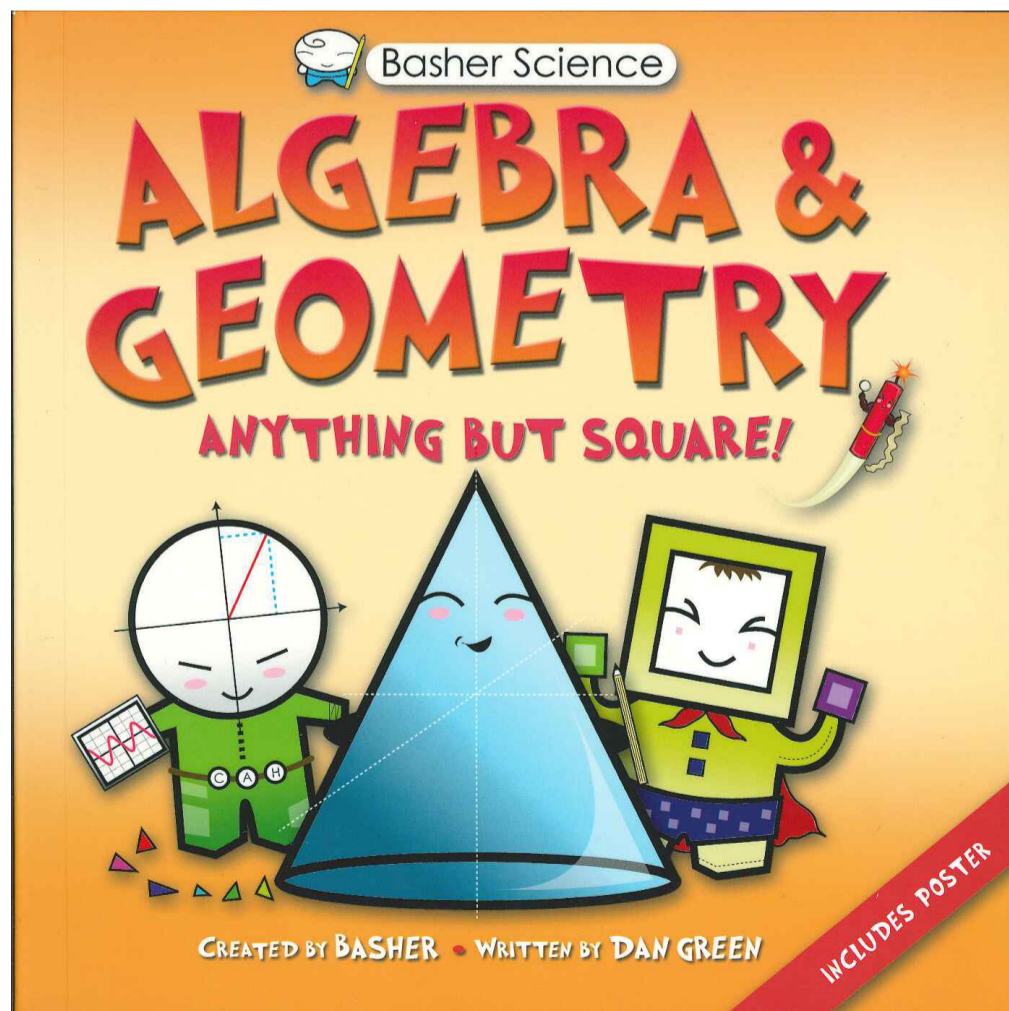
Cowboy Gene loves his eight cows, and Cowgirl Sue loves her eight cows, and both of them like the fence that keeps their pastures--and cows--apart. But then a tornado blows through and takes the fence with it. Will they ever be able to figure out whose cows are whose?



Algebra & Geometry: Anything But Square!

By: Basher Science Series

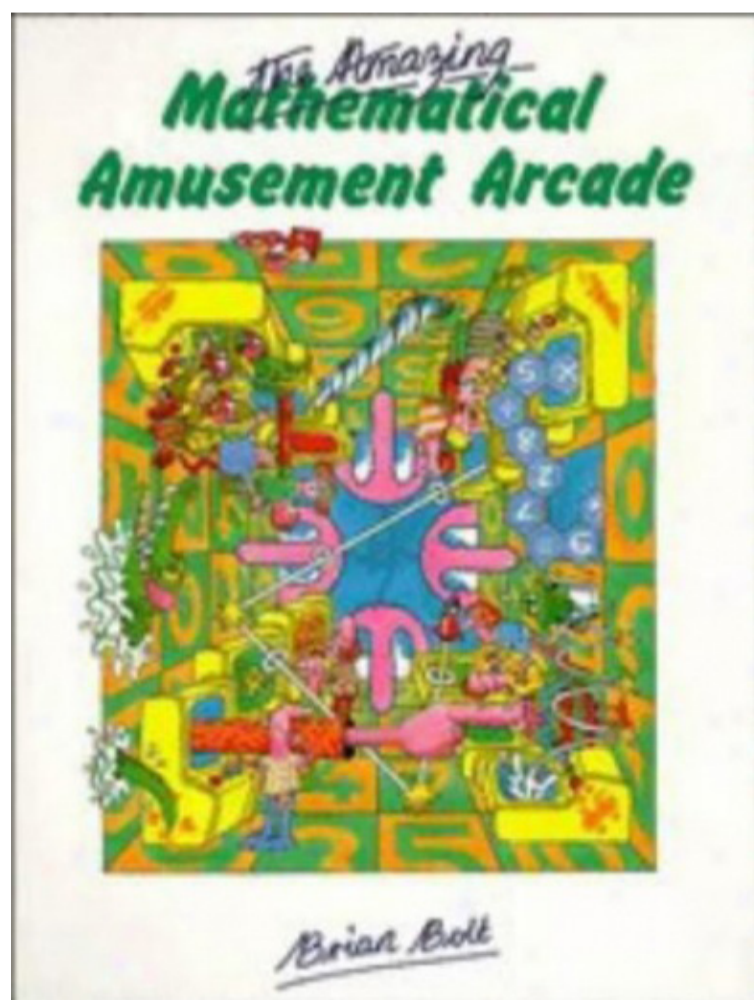
The best-selling author of Math and Punctuation now turns his attention to the fun and funky characters in Geometry and Algebra. Meet Polygon and Plane, Reflection and Rotation, Odd Number and his buddy Even Number and the three amigos Sine, Cosine and Tangent. Discover the secrets of their world and how they like to throw their numbers about. Bringing his charming manga-style artwork and tongue-and-cheek approach to explaining the basics, Basher brings a whole new spin to the world of higher math.



The Amazing Mathematical Amusement Arcade

By: Brian Bolt

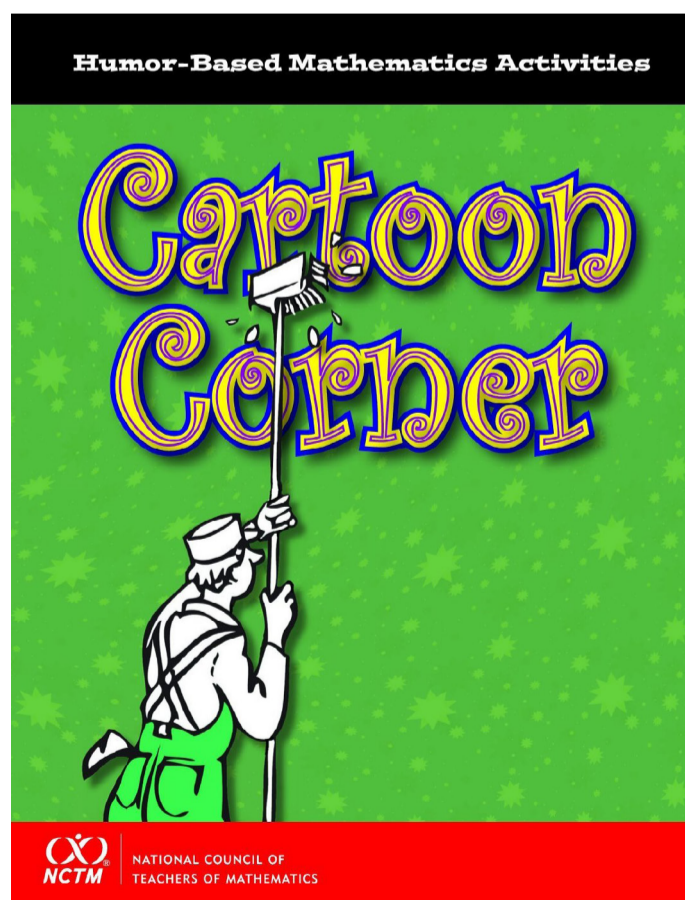
This collection of puzzles, games and activities is designed to stimulate and challenge people of all ages who enjoy puzzles with a mathematical flavour. Many of the puzzles have a long history, while others are original. The subjects vary from matchsticks to magic squares, train shunting to river crossing, and chess to calculators. The second part of the book contains a commentary giving hints and solutions.



Cartoon Corner: Humor-Based Mathematics Activities

By: Andy Reeves

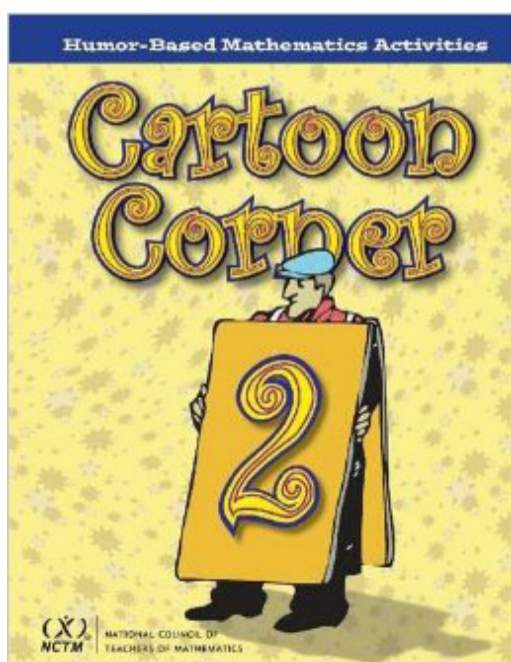
What better way to capture your students' imagination and bring it into the world of mathematics than cartoons? Cartoon Corner provides the resources to do just that, with cartoons collected and adapted from the popular "Cartoon Corner" in *Mathematics Teaching in the Middle School*, adding notes from teachers who field-tested the questions and solutions with their students. The activities are organized by topic, and the opening chapter includes suggestions on the many ways to integrate cartoons into your classroom.



Cartoon Corner 2: Humor-Based Mathematics Activities

By: Peggy House

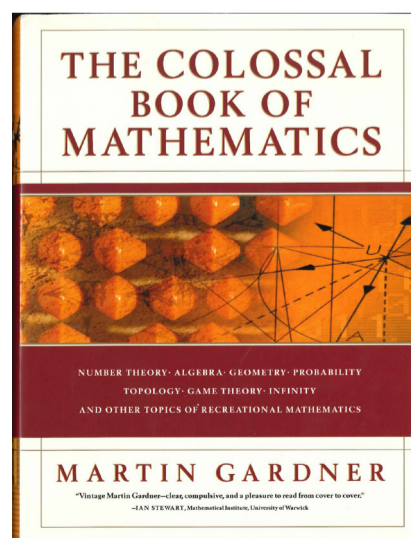
What's So Funny about Math? Mathematics teachers are always looking for ways to engage students, and humor can be an effective way to get their attention while encouraging their thinking skills. Each of the cartoons has a mathematical dimension, and the cartoons and activities developed around them are field-tested by middle school teachers before publication. Along with the cartoons, related problems as well as teacher comments and suggestions, are included in each lesson. The activities are organized by topic, and the opening chapter includes suggestions on the many ways to incorporate the lessons into classroom curricula. Following on the format of the first edition, this book provides even more classroom problems and field-test comments.



The Colossal Book of Mathematics: Classic Puzzles, Paradoxes, and Problems

By: Martin Gardner

In its twelve sections, The Colossal Book of Math explores a wide range of areas, each startlingly illuminated by Gardner's incisive expertise. Beginning with seemingly simple topics, Gardner expertly guides us through complicated and wondrous worlds: by way of basic algebra we contemplate the mesmerizing, often hilarious, linguistic and numerical possibilities of palindromes; using simple geometry, he dissects the principles of symmetry upon which the renowned mathematical artist M. C. Escher constructs his unique, dizzying universe. Gardner, like few thinkers today, melds a rigorous scientific skepticism with a profound artistic and imaginative impulse. His stunning exploration of "The Church of the Fourth Dimension," for example, bridges the disparate worlds of religion and science by brilliantly imagining the spatial possibility of God's presence in the world as a fourth dimension, at once "everywhere and nowhere."

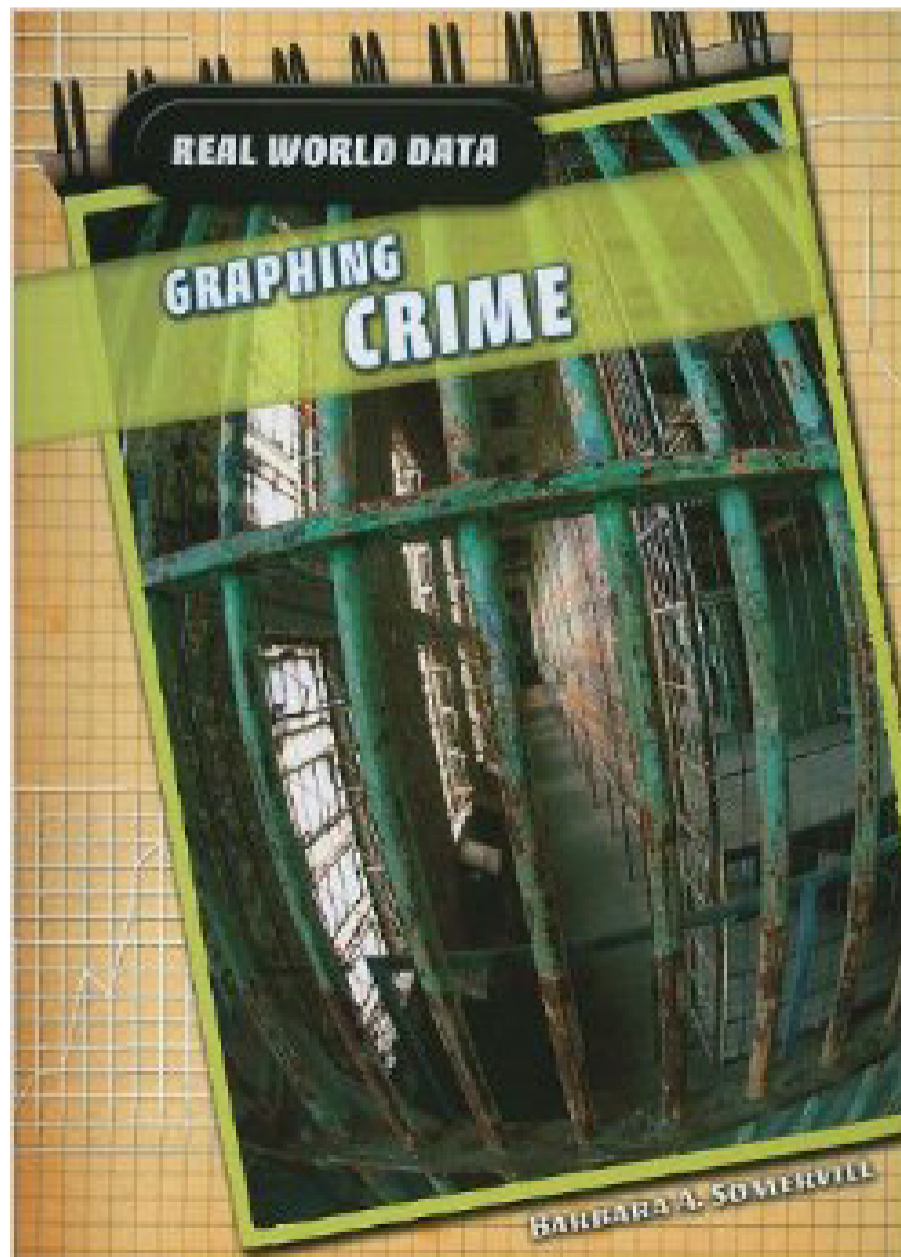


Graphing Crime (Real World Data)

By: Barbara A. Somervill

What is INTERPOL? Which country has the largest number of prisoners? Which crime involves printing and using fake money?

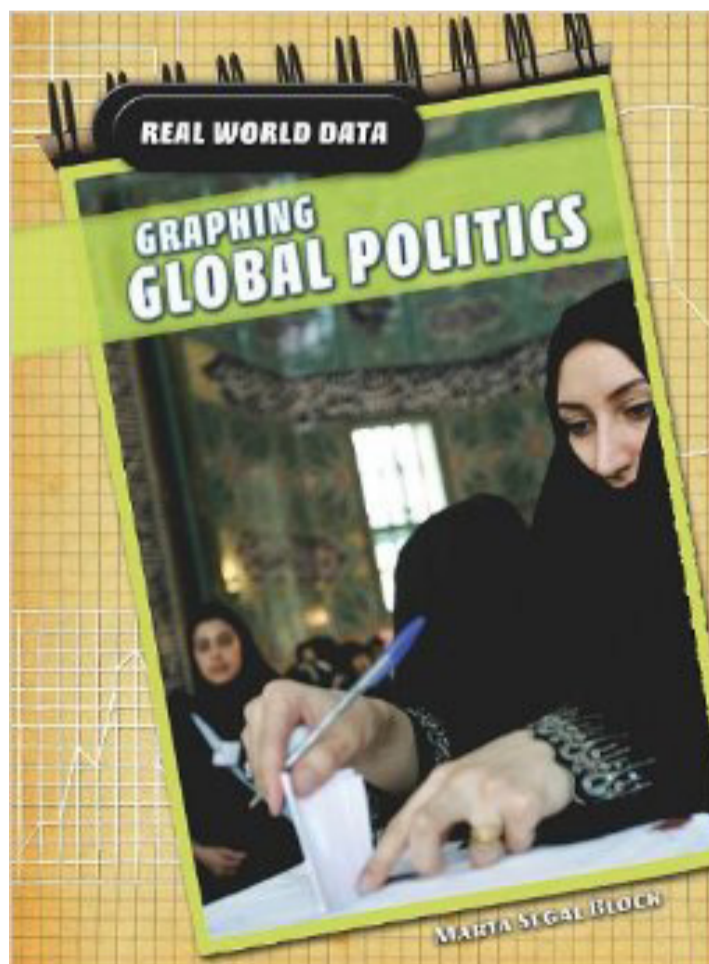
Real World Data presents information about familiar curricular topics through charts and graphs. Each title shows how to organize data in different visual forms, and how to interpret and create tables, line graphs, bar graphs, and pie charts.



Graphing Global Politics (Real World Data)

By: Marta Segal Block

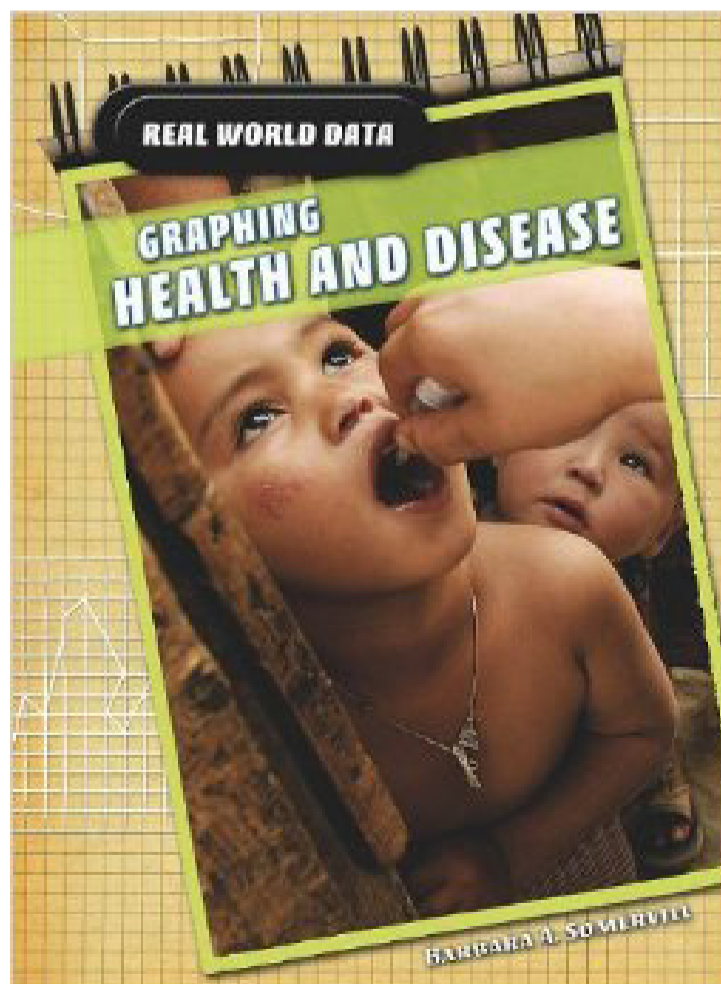
What is the Security Council? Which international organizational helps people around the world earn a decent living? How does a direct democracy differ from a representational democracy? Real World Data presents information about familiar curricular topics through charts and graphs. Each title shows how to organize data in different visual forms, and how to interpret and create tables, line graphs, bar graphs, and pie charts.



Graphing Health and Disease (Real World Data)

By: Barbara A. Somervill

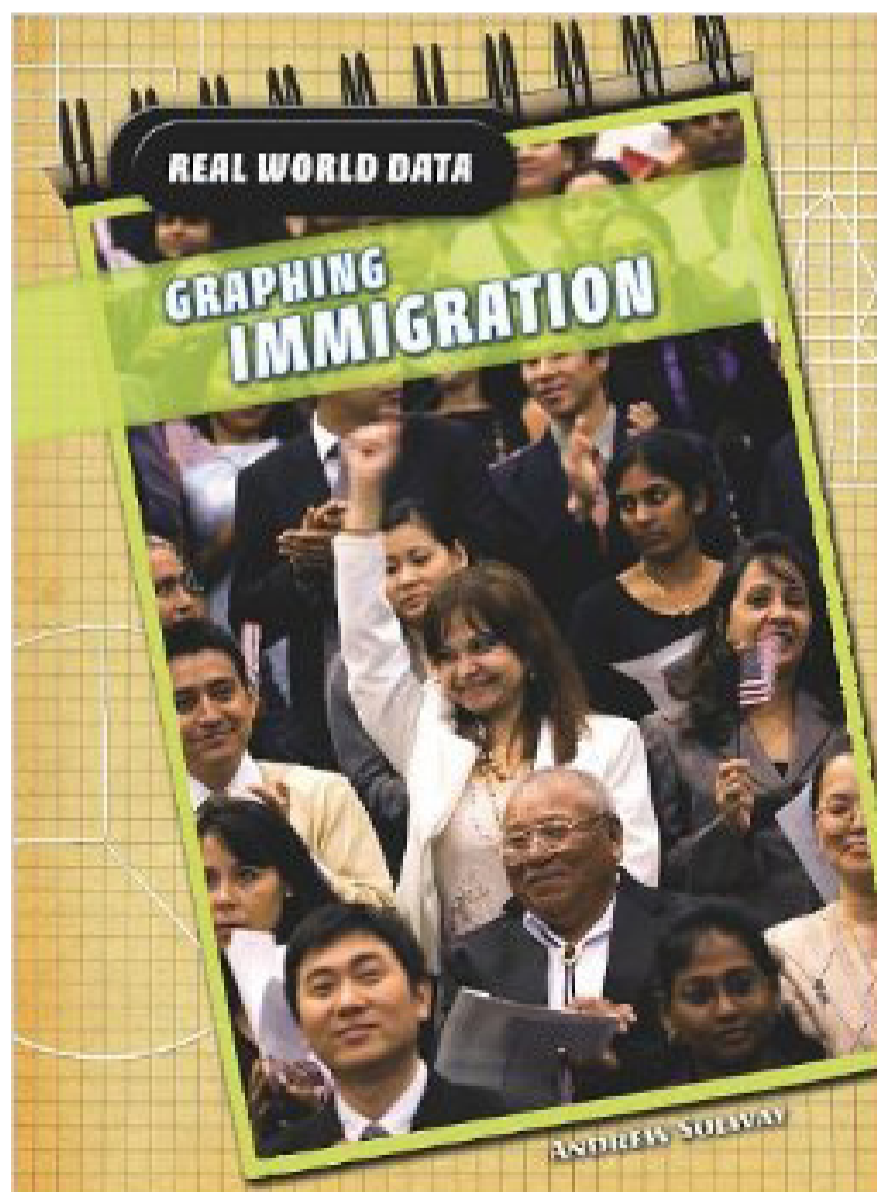
Which communicable disease killed more than 100 million people over 200 years? What is a congenital disease? How is diabetes treated? Real World Data presents information about familiar curricular topics through charts and graphs. Each title shows how to organize data in different visual forms, and how to interpret and create tables, line graphs, bar graphs, and pie charts.



Graphing Immigration (Real World Data)

By: Andrew Solway

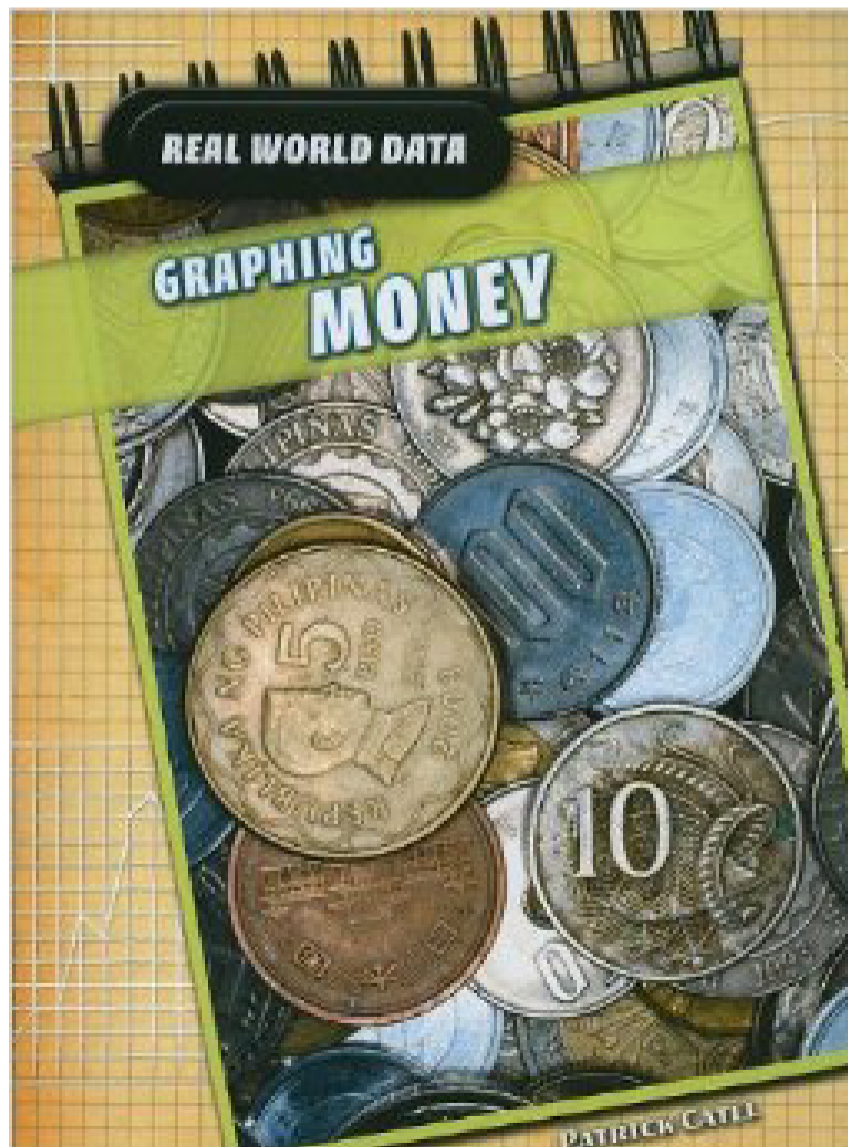
How will global warming affect future immigration? Why do refugees leave their countries? What is a visa? Real World Data presents information about familiar curricular topics through charts and graphs. Each title shows how to organize data in different visual forms, and how to interpret and create tables, line graphs, bar graphs, and pie charts.



Graphing Money (Real World Data)

By: Patrick Catell

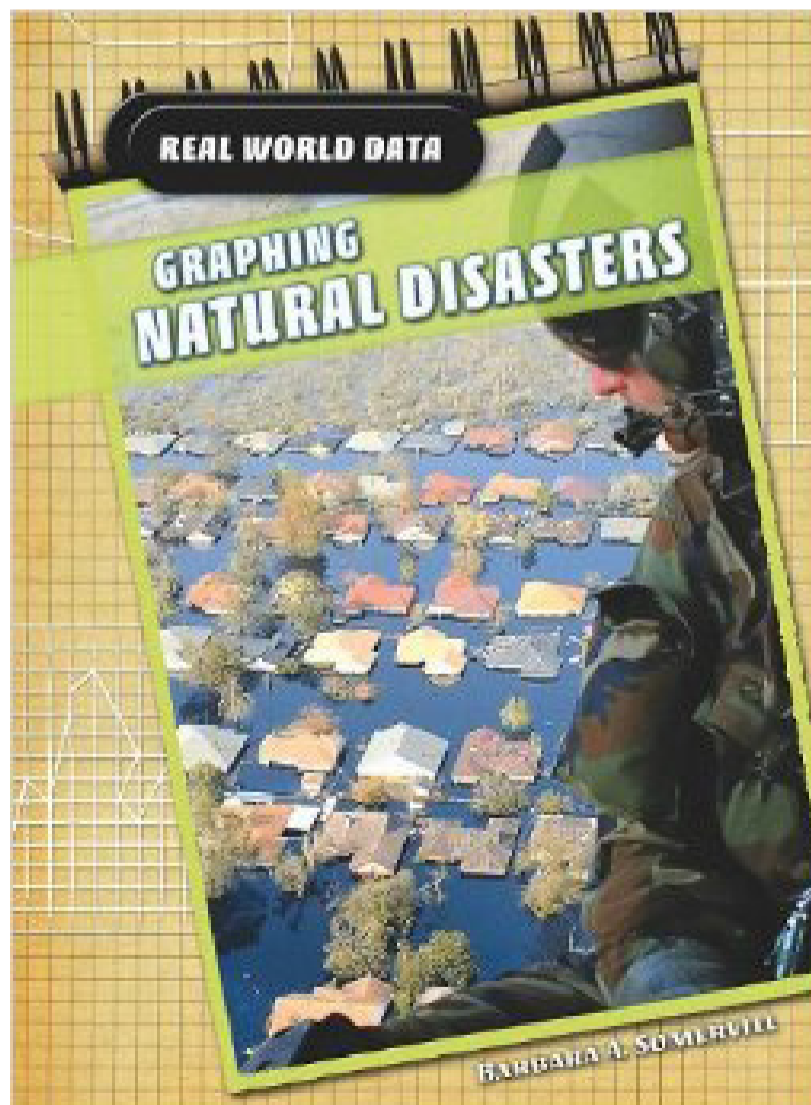
What is mercantilism? How does the free-enterprise system work? What happens when a country spends more than it takes in during a year? Real World Data presents information about familiar curricular topics through charts and graphs. Each title shows how to organize data in different visual forms, and how to interpret and create tables, line graphs, bar graphs, and pie charts.



Graphing Natural Disasters (Real World Data)

By: Barbara A. Somervill

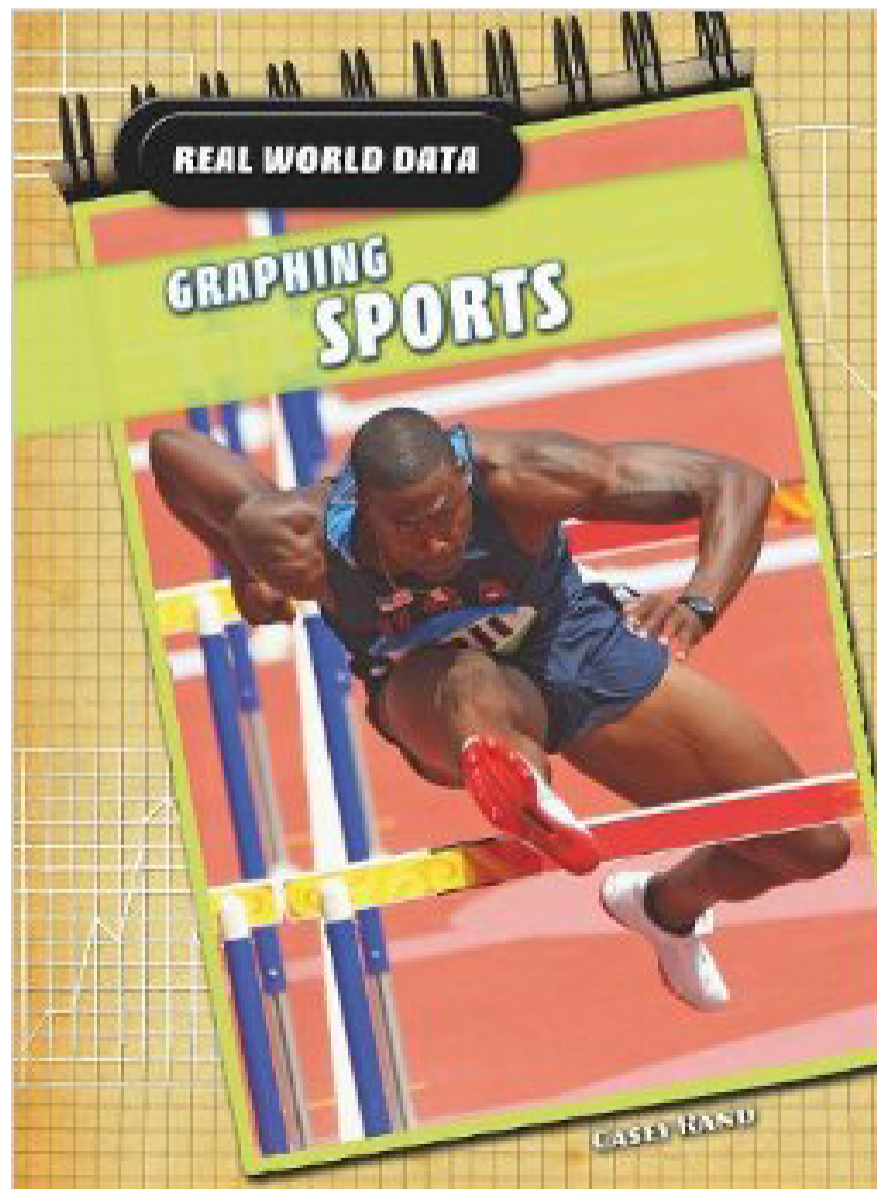
Which volcanic eruption caused the “year without a summer?”
What is a seismograph? How are tornadoes measured? Real World Data presents information about familiar curricular topics through charts and graphs. Each title shows how to organize data in different visual forms, and how to interpret and create tables, line graphs, bar graphs, and pie charts.



Graphing Sports (Real World Data)

By: Casey Rand

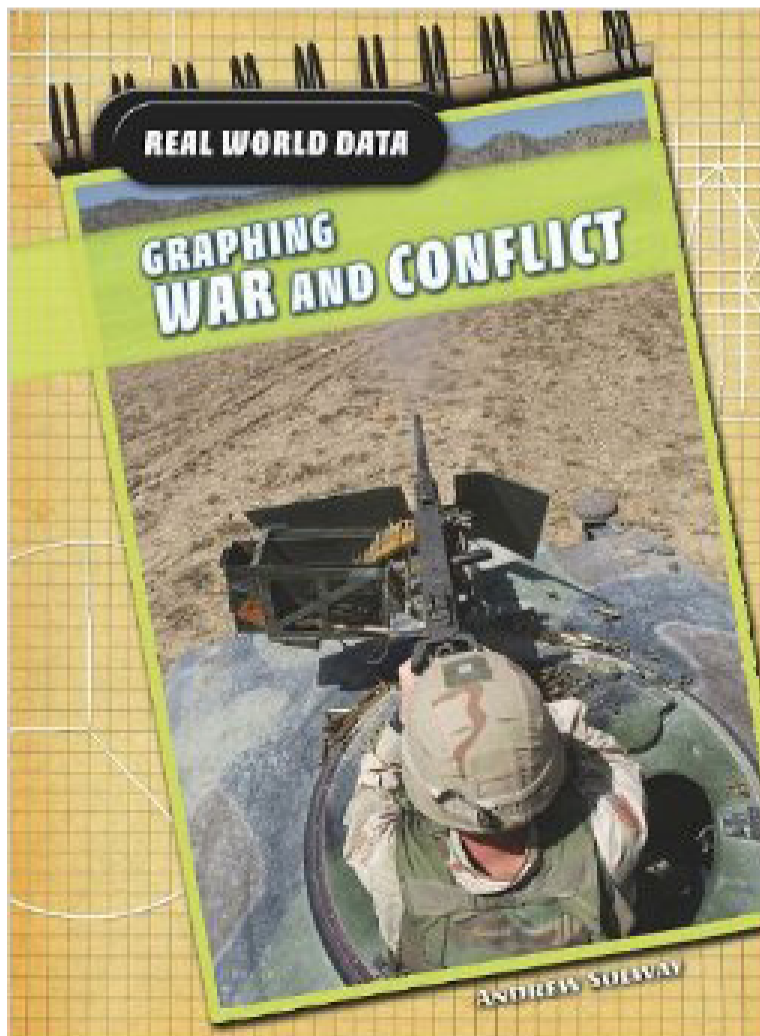
How do stadiums make their money? How is water polo played? When did basketball become an official Olympic Sport? Real World Data presents information about familiar curricular topics through charts and graphs. Each title shows how to organize data in different visual forms, and how to interpret and create tables, line graphs, bar graphs, and pie charts.



Graphing War and Conflict (Real World Data)

By: Andrew Solway

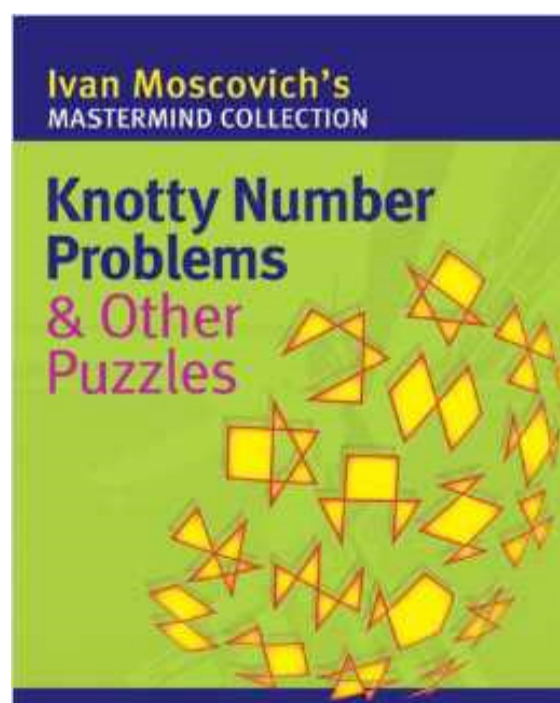
What are Q-ships? Which country holds the largest number of nuclear weapons? What are some of the tactics used by guerilla fighters? Real World Data presents information about familiar curricular topics through charts and graphs. Each title shows how to organize data in different visual forms, and how to interpret and create tables, line graphs, bar graphs, and pie charts.



Knotty Number Problems & Other Puzzles

By: Ivan Moscovich

Take an appealingly illustrated fun test of your perceptual ability, math smarts, and knowledge combinations and probabilities. See how fast your eyes can discern the one sulking face nearly hidden in a large group of smiling “Spikeheads.” Figure out how many different shapes went into creating two tessellation patterns. It takes mental gymnastics to rearrange a human tower of 36 red and blue acrobats so that they fulfill a set of rules about where they stand and who they stand next to. Calculate how many different ways the eight Knights of the Round Table can be seated without anyone having the same two neighbors more than once. There’s also fascinating background on the theoretical principles that underlie the solutions.

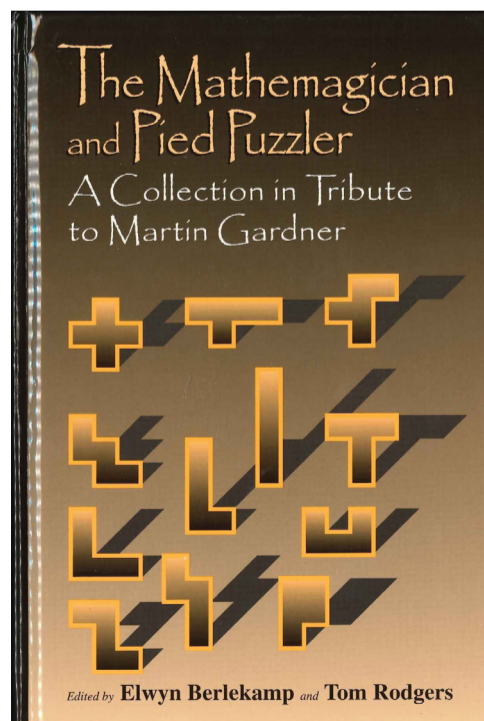


The Mathemagician and Pied Puzzler

By: Elwyn R. Berlekamp and Tom Rodgers

This volume comprises an imaginative collection of pieces created in tribute to Martin Gardner. Perhaps best known for writing *Scientific American's* "Mathematical Games" column for years, Gardner used his personal exuberance and fascination with puzzles and magic to entice a wide range of readers into a world of mathematical discovery. This tribute therefore contains pieces as widely varied as Gardner's own interests, ranging from limericks to lengthy treatises, from mathematical journal articles to personal stories. This book makes a charming and unusual addition to any personal library. Selected papers:

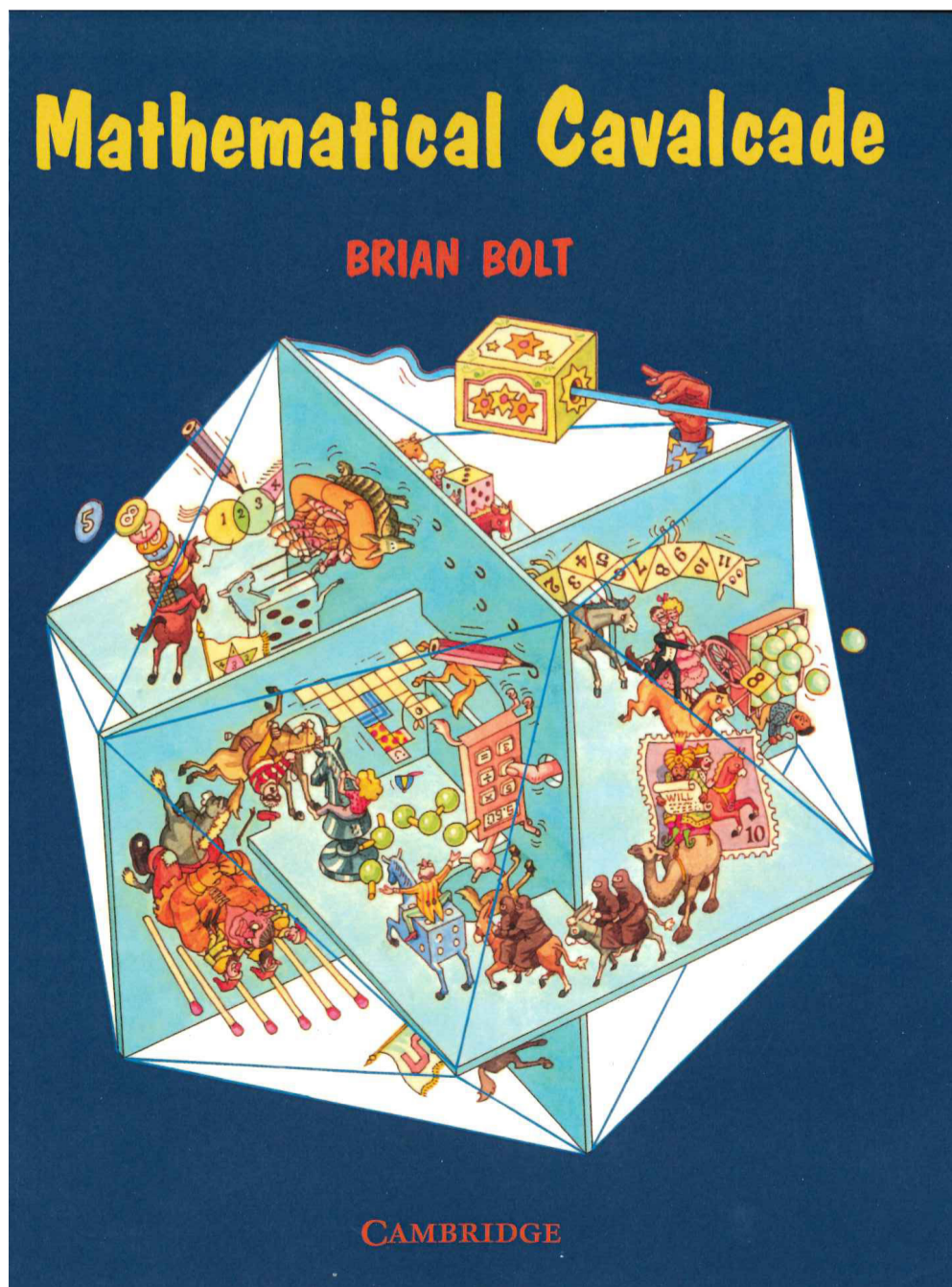
- The Odyssey of the Figure Eight Puzzle by Stewart Coffin
- Block-Packing Jambalaya by Bill Cutler
- O'Beirne's Hexiamond by Richard K. Guy
- Biblical Ladders by Donald E. Knuth
- Three Limericks: On Space, Time and Speed by Tim Rowett.



Mathematical Cavalcade

By: Brian Bolt

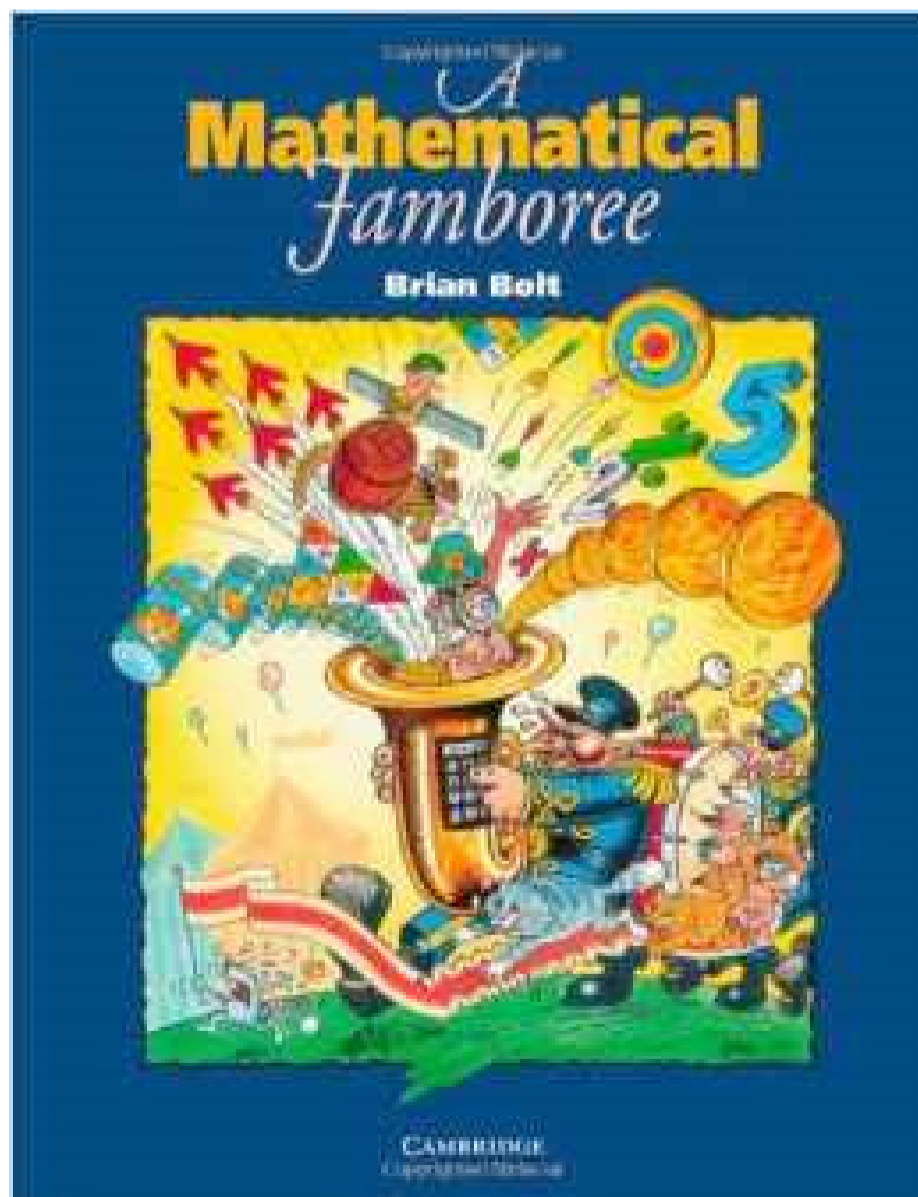
Mathematical Cavalcade follows the very successful Amazing Mathematical Amusement Arcade and The Mathematical Funfair by the same author. It contains a further 131 puzzles to challenge people of all ages. Hints and solutions are given in a commentary at the back of the book.



Mathematical Jamboree

By: Brian Bolt

A Mathematical Jamboree follows the very successful puzzle books by the same author. It contains 114 puzzles and activities to challenge people of all ages. There is a detailed commentary at the end of the book, giving solutions and explanations, together with the occasional follow-up problem.

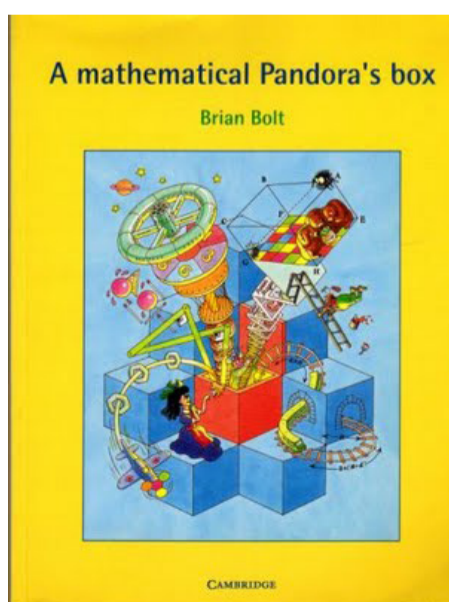


Mathematical Pandora's Box

By: Brian Bolt

A Mathematical Pandora's Box has been written in response to the success of Brian Bolt's earlier mathematical puzzle books.

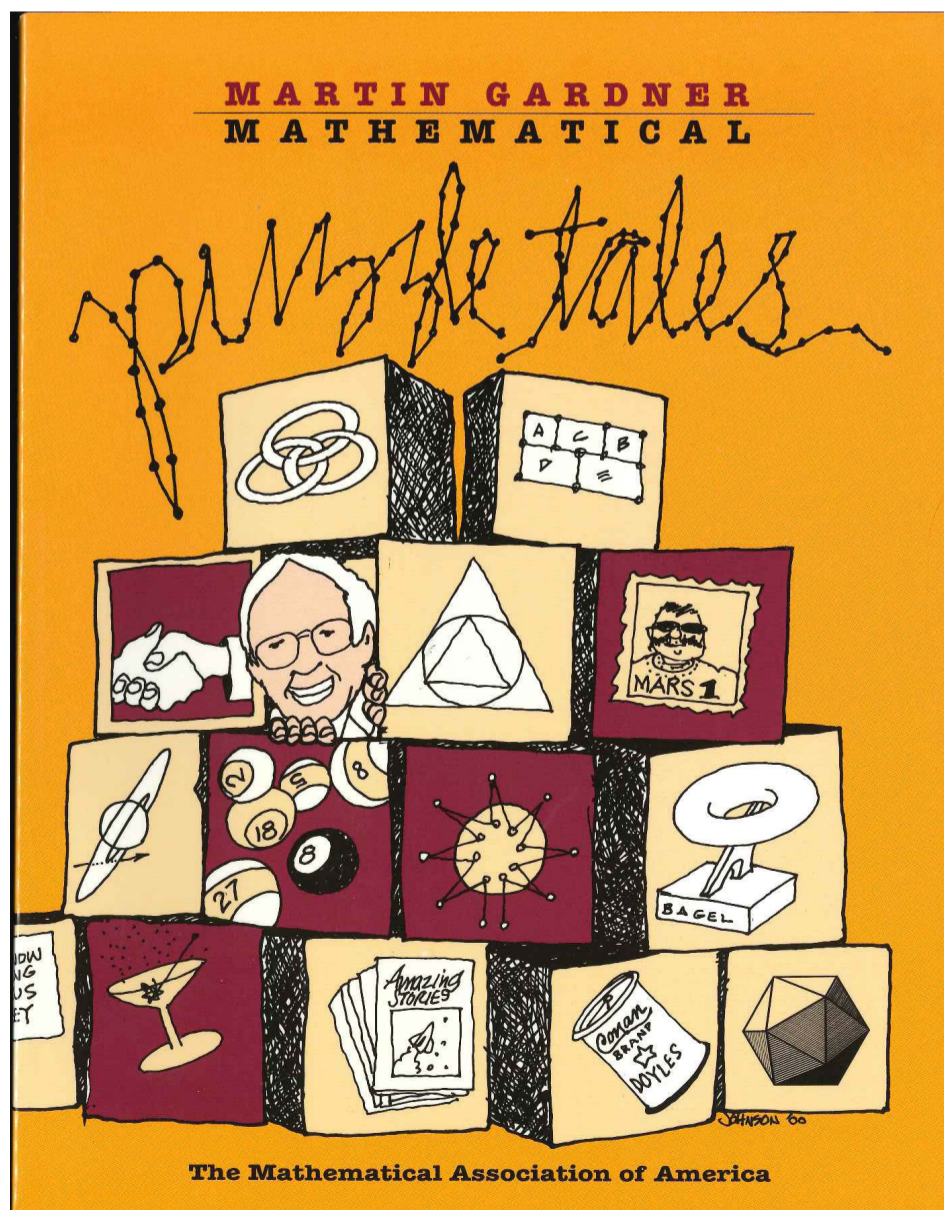
Through his own experience, the author has discovered a worldwide interest in these and similar puzzles. Not only do they stimulate creative thinking but they can also open up new areas of mathematics to the reader. This book contains 142 activities: in addition to puzzles, there are games, tricks, models and explanations of various phenomena. They range from number manipulation, through happy and amicable numbers, coin puzzles, picnicking bears and pentominoes, to building shapes with cubes. Some of the puzzles date from hundreds of years ago while many others are original, giving everyone something to think about. There is a detailed commentary at the end of the book, giving solutions and explanations, together with the occasional follow-up problem.



Mathematical Puzzle Tales

By: Martin Gardner and Issac Asimov

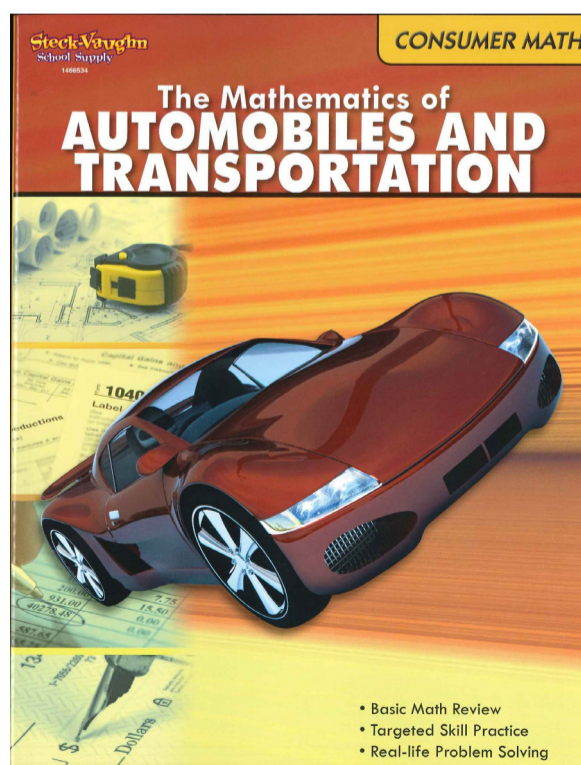
Martin Gardner is widely known for his writing on recreational mathematics and this book collects together 36 of his most cunning brainteasers, which serve to illustrate the art of the mathematician as problem solver. Fully worked answers are given, and these in turn lead to additional challenges for the reader.



The Mathematics of Automobiles and Transportation

By: Consumer Math Series

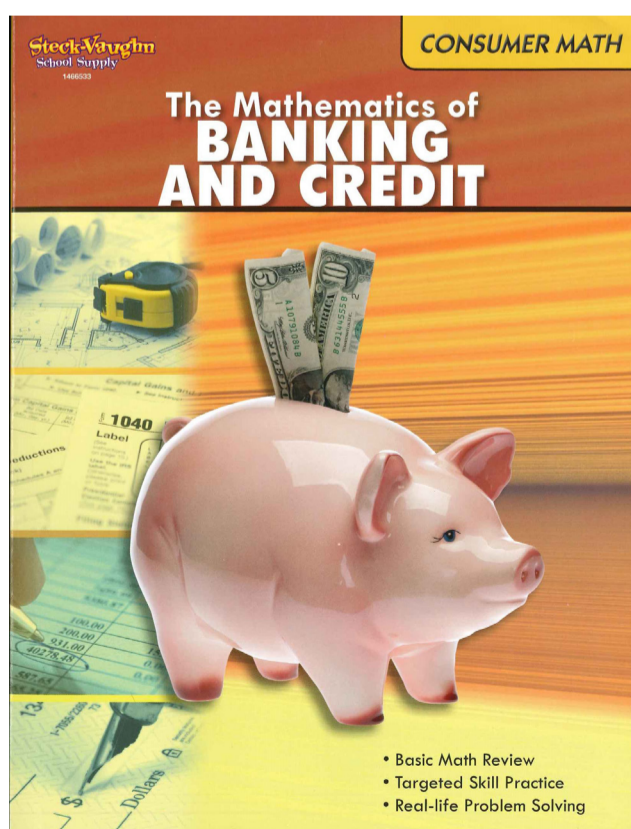
This very practical series will help adolescents and adults alike to understand mathematics as it relates to their everyday lives. Each book covers basic math concepts and skills before exploring the more specific topics. Clear explanations are followed by ample practice. Each section also has a pretest, a section review, and a posttest. This highly relevant series explores a wide range of topics, such as: Using a calculator, pencil and paper, or mental math; calculating wages; filing income tax returns; budgeting household expenses; renting and obtaining a mortgage; investing in stocks, bonds, and savings accounts; buying insurance; and many more.



The Mathematics of Banking and Credit

By: Consumer Math Series

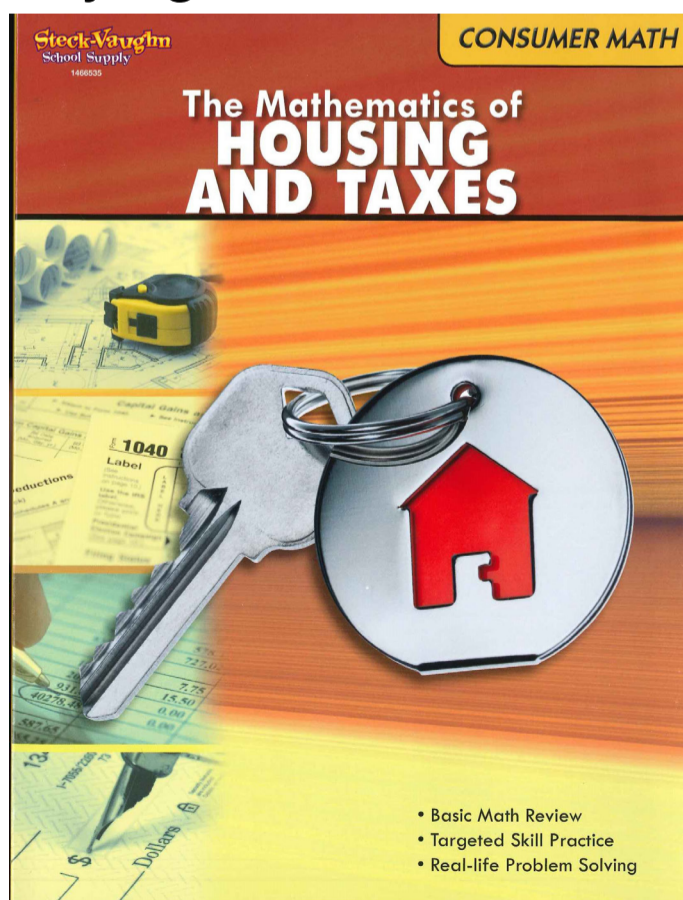
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The Mathematics of Housing and Taxes

By: Consumer Math Series

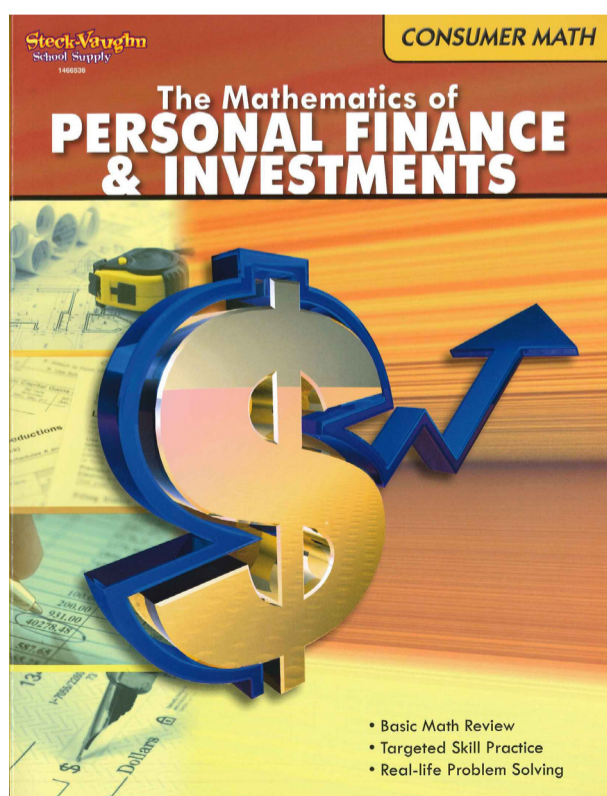
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The Mathematics of Personal Finance & Investments

By: Consumer Math Series

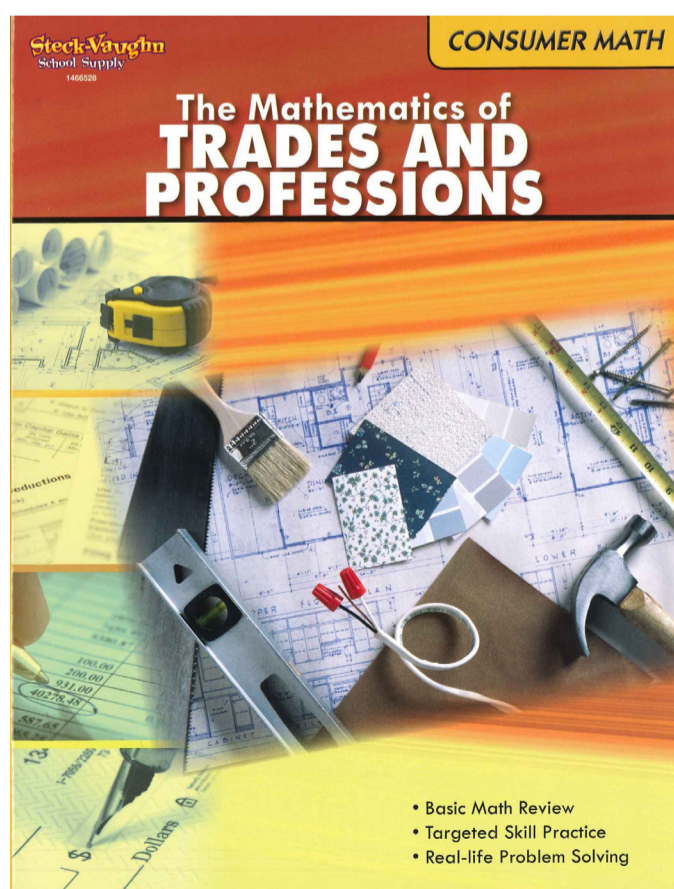
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The Mathematics of Trades and Professions

By: Consumer Math Series

This very practical series will help adolescents and adults alike to understand mathematics as it relates to their everyday lives. Each book covers basic math concepts and skills before exploring the more specific topics. Clear explanations are followed by ample practice. Each section also has a pretest, a section review, and a posttest. This highly relevant series explores a wide range of topics, such as: Using a calculator, pencil and paper, or mental math; calculating wages; filing income tax returns; budgeting household expenses; renting and obtaining a mortgage; investing in stocks, bonds, and savings accounts; buying insurance; and many more.



The Mathematics of Work

By: Consumer Math Series

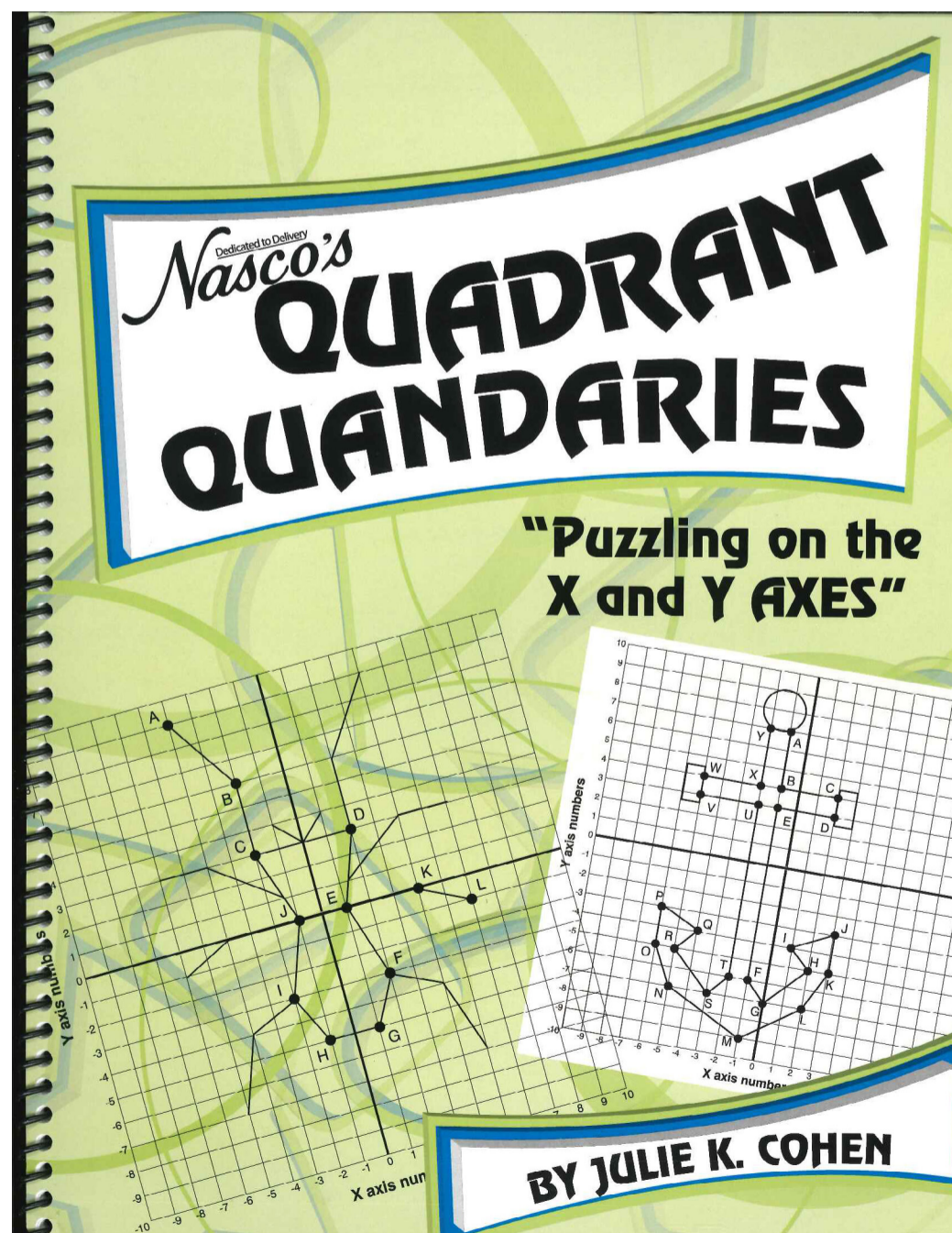
This very practical series will help adolescents and adults alike to understand mathematics as it relates to their everyday lives. Each book covers basic math concepts and skills before exploring the more specific topics. Clear explanations are followed by ample practice. Each section also has a pretest, a section review, and a posttest. This highly relevant series explores a wide range of topics, such as: Using a calculator, pencil and paper, or mental math; calculating wages; filing income tax returns; budgeting household expenses; renting and obtaining a mortgage; investing in stocks, bonds, and savings accounts; buying insurance; and many more.



Quadrant Quandaries: “Puzzling on the X and Y Axes”

By: Julie K. Cohen

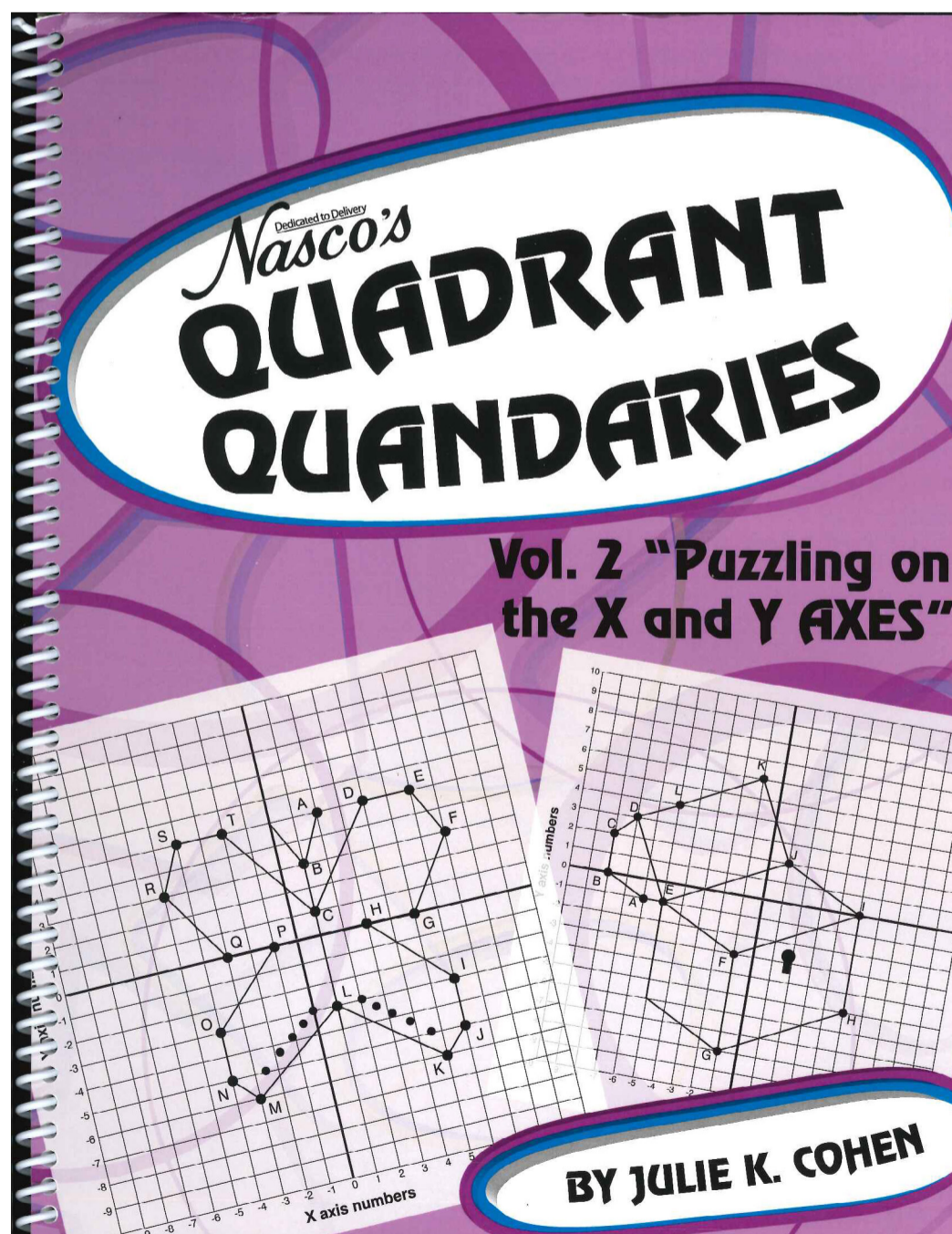
Make learning quadrants more interesting with puzzles. Students plot each set of coordinates on each puzzle. Then they connect the dots. The challenge question reveals the name of the picture.



Quadrant Quandaries: Vol. 2 “Puzzling on the X and Y Axes”

By: Julie K. Cohen

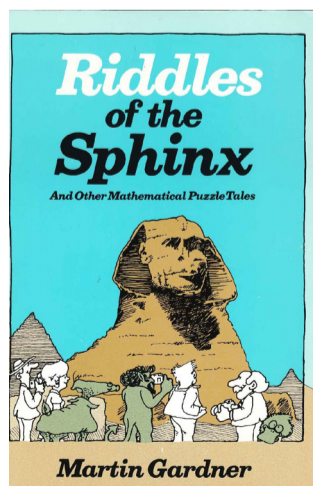
Make learning quadrants more interesting with puzzles. Students plot each set of coordinates on each puzzle. Then they connect the dots. The challenge question reveals the name of the picture.



Riddles of the Sphinx: And Other Mathematical Puzzle Tales

By: Martin Gardner

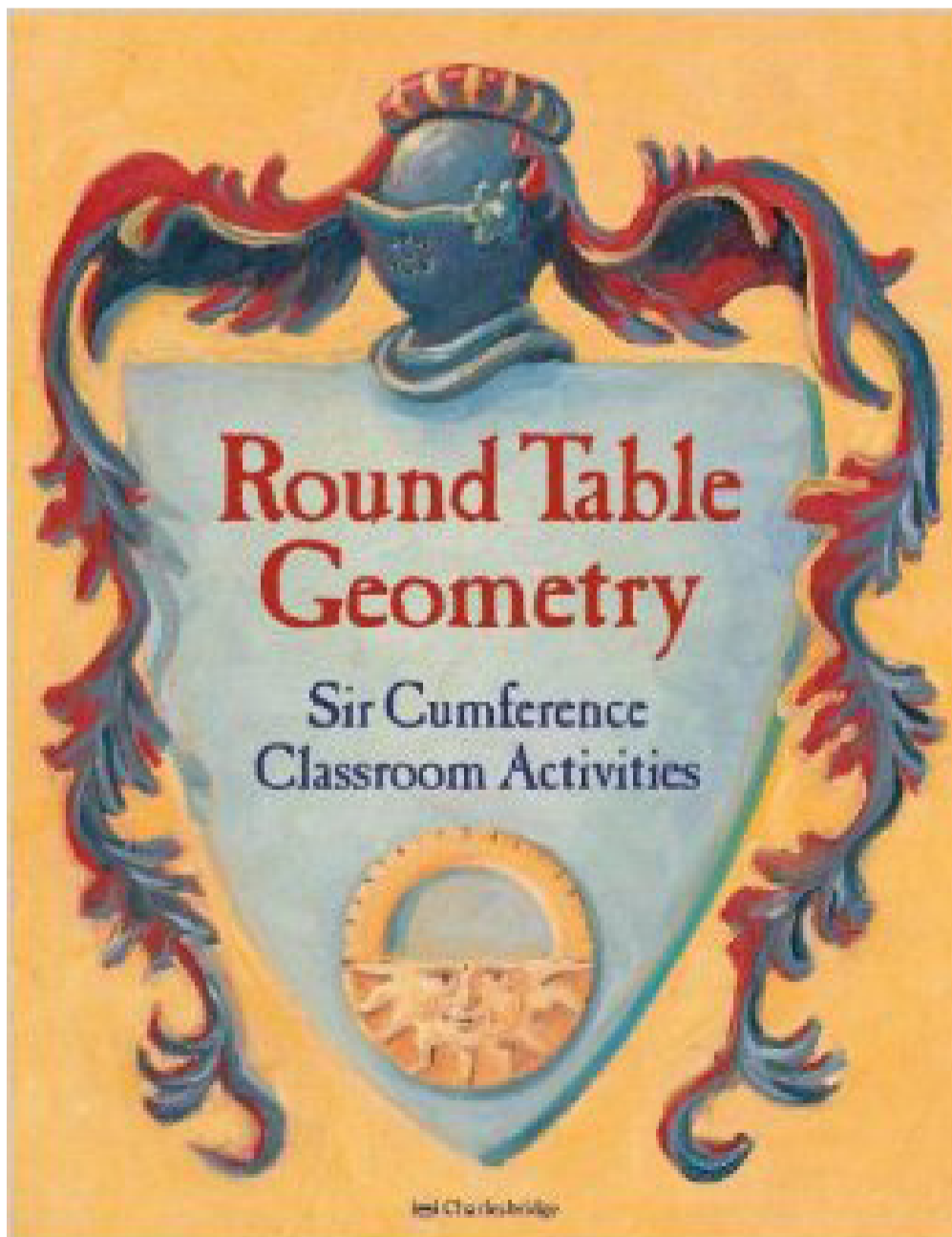
Martin Gardner begins Riddles with questions about splitting up polygons into prescribed shapes and he ends this book with an offer of a prize of \$100 for the first person to send him a 3X3 magic square consisting of consecutive primes. Only Gardner could fit so many diverse and tantalizing problems into one book. This material was drawn from Gardner's column in Issac Asimov's Science Fiction Magazine. His riddles presented here incorporate the responses of his initial readers, along with additions suggested by the editors of this series. In this book, Gardner draws us from questions to answers, always presenting us with new riddles—some as yet unanswered. Solving these riddles is not simply a matter of logic and calculation, though these play a role. Luck and inspiration are factors as well, so beginners and experts alike many profitably exercise their wits on Gardner's problems, whose subjects range from geometry to word play to questions relating to physics and geology. We guarantee that you will solve some of these riddles, be stumped by others, and be amused by almost all of the stories and settings that Gardner has devised to raise these questions.



Round Table Geometry: Sir Cumference Classroom Activities

By: Don Robb, Elena Dworkin Wright and Susan Shapero

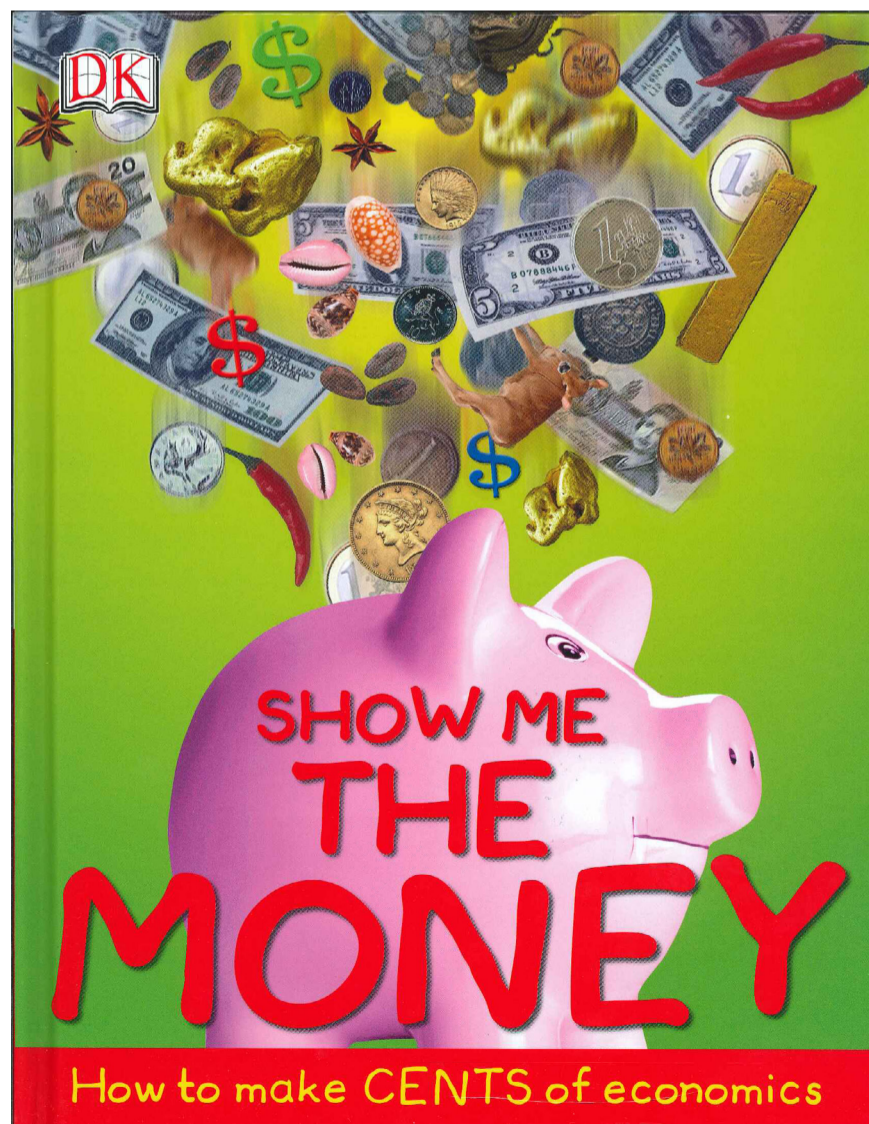
Reproducible activities develop medieval math connections as students use fractions, measure perimeter and area, and more. A companion activity guide to the Sir Cumference series of math adventures.



Show Me the Money: How to Make CENTS of Economics

By: Alvin D. Hall

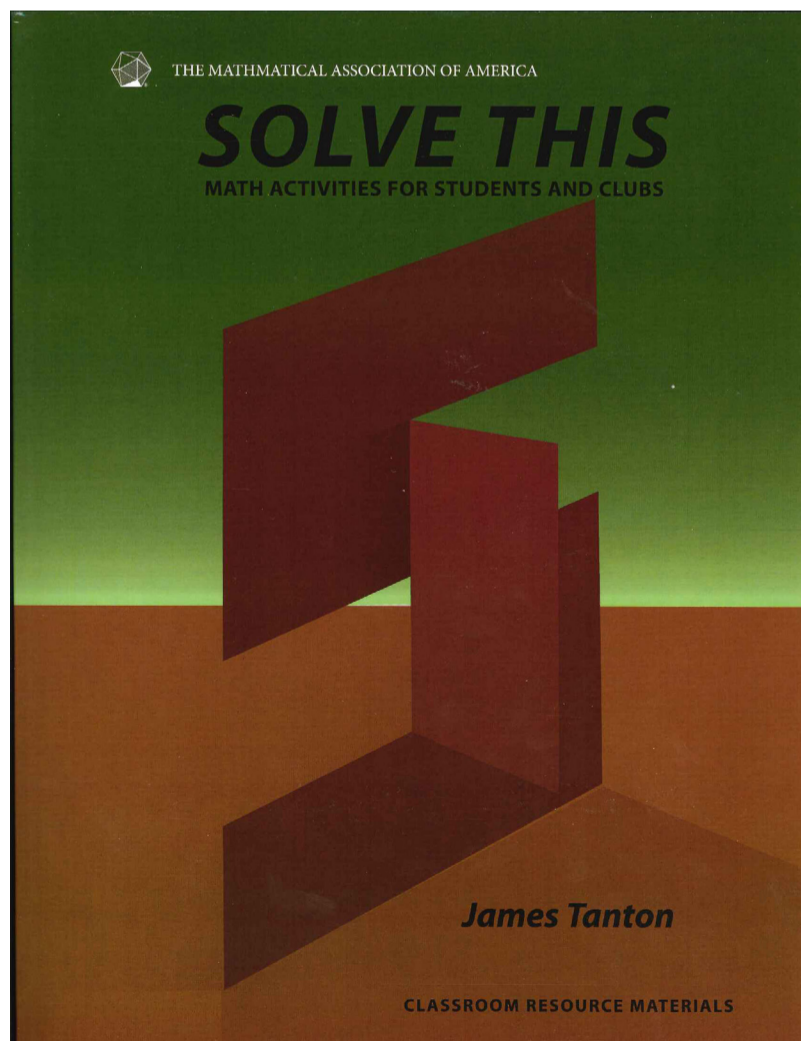
Can you imagine kids getting excited about economics? A 3rd grader itching to learn more about credit, or saving up her allowance for that college fund? DK can. In *Show Me the Money*, young readers are exposed to basic concepts of currency and finance, including the barter system, supply and demand, and how money works differently around the world.



Solve This: Math Activities for Students and Clubs

By: James S. Tanton

This is a collection of intriguing mathematical problems and activities, linked by common themes that all involve objects from our everyday experience. The necessary mathematics is explained fully along the way. Mathematics educators will find this an invaluable resource of fresh and innovative approaches to topics in mathematics.



Stats! The Greatest Numbers in Sports

By: Sports Illustrated for Kids

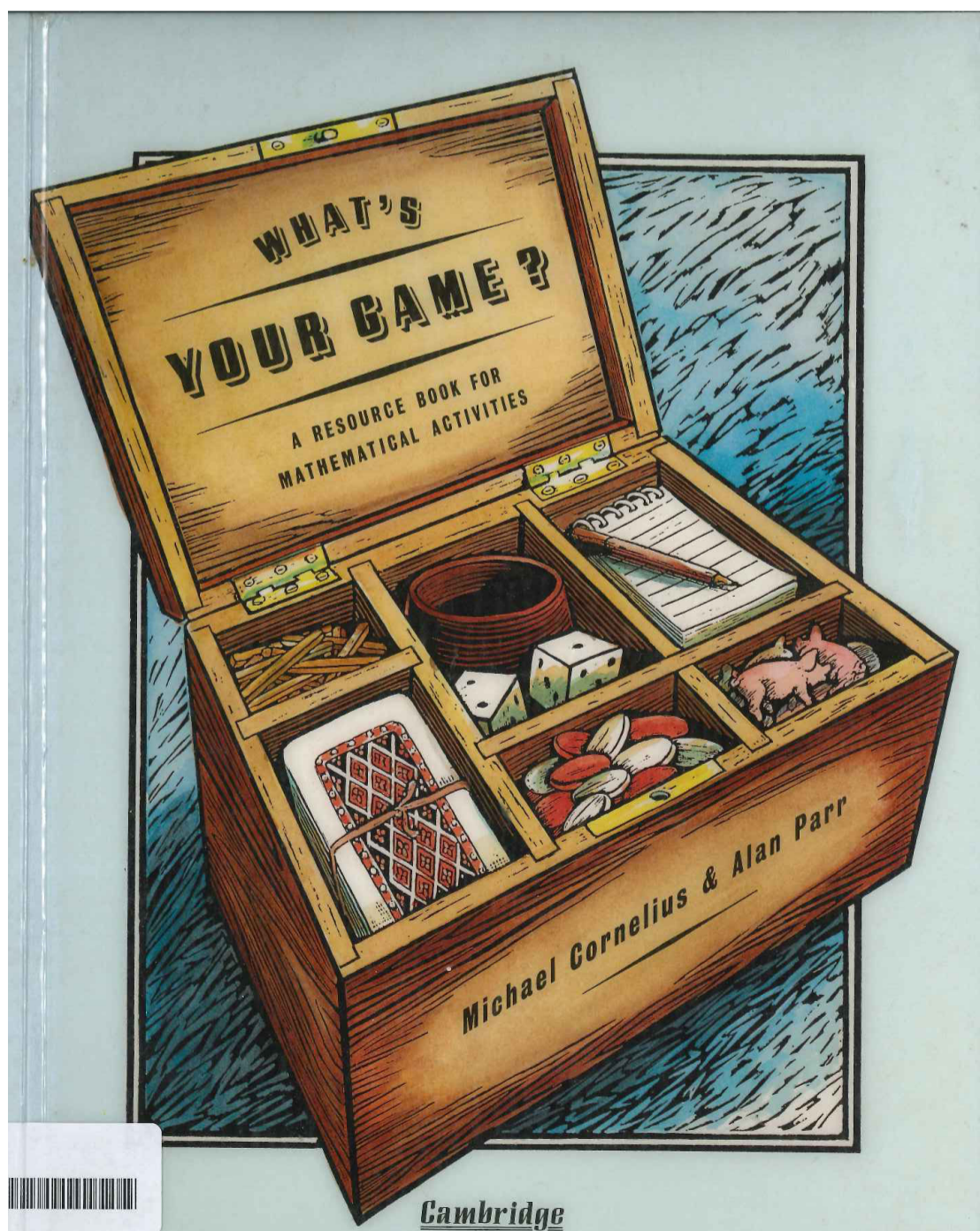
Count up the most fascinating numbers behind sports' greatest moments in **STATS! The Biggest Numbers in Sports**, created by the editors of SI Kids. Filled with need-to-know stats, engaging info graphics, and cool trivia, this 128-page book reveals loads of amazing facts behind each number. Facts like: 27 - the approximate speed of Usian Bolt when he set the world record; 40 - the number of regular season records held or shared by Wayne Gretzky. Beyond the numbers, the colorful book features amazing Sports Illustrated photography and SI Kids' insider knowledge tailor-made for young sports fans. Stats, facts, and great action photos all add up to one thing: a fun book for all ages!



What's Your Game?

By: Michael Cornelius and Alan Parr

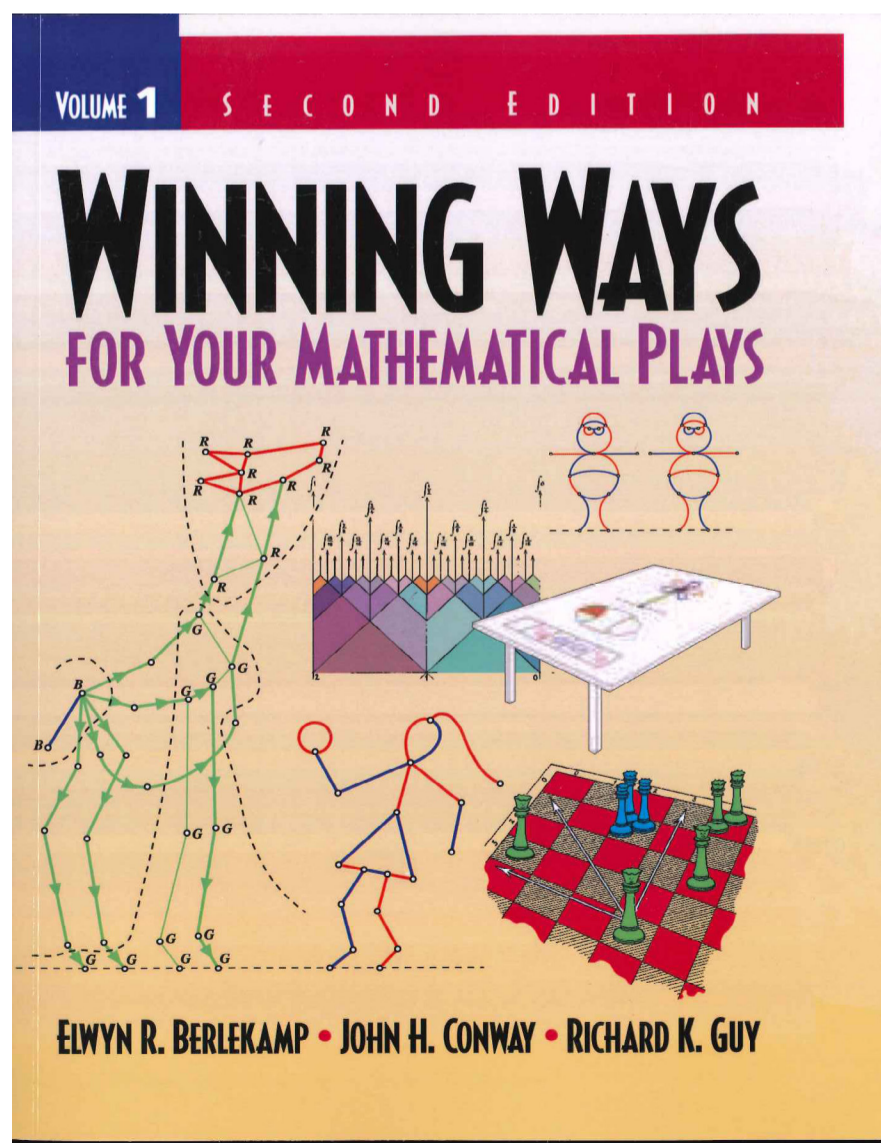
The games described in this volume have been tested in mathematics classrooms and the book includes examples of worksheets and students' work which have been produced. There is a table which references each game to the attainment targets of the National Curriculum.



Winning Ways for Your Mathematical Plays

By: Elwyn R. Berlekamp, John H. Conway, and Richard K. Guy

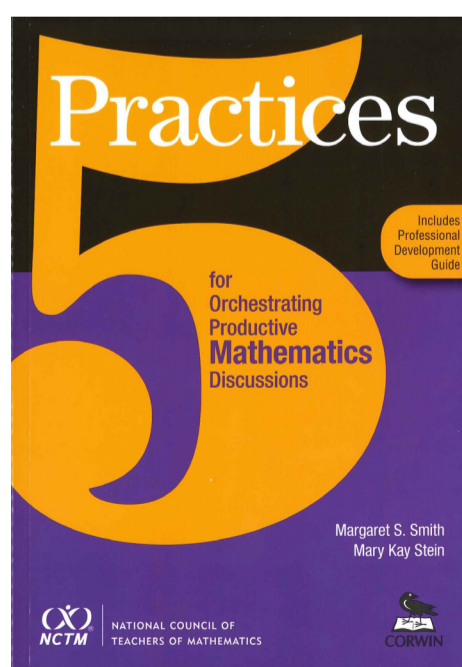
This classic on games and how to play them intelligently is being re-issued in a new, four volume edition. This book had laid the foundation to a mathematical approach to playing games. The wise authors wield witty words, which wangle wonderfully winning ways. In Volume 1, the authors do the Spade Work, presenting theories and techniques to “dissect” games of varied structures and formats in order to develop winning strategies.



5 Practices for Orchestrating Productive Mathematics Discussions

By: Margaret S. Smith and Mary Kay Stein

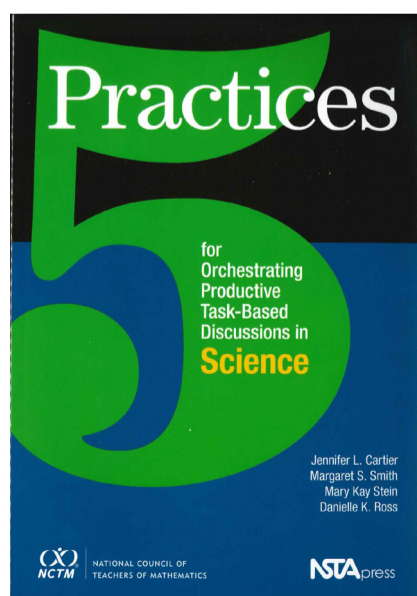
Learn the 5 practices for facilitating effective inquiry-oriented classrooms. Anticipating what students will do--what strategies they will use--in solving a problem. Monitoring their work as they approach the problem in class. Selecting students whose strategies are worth discussing in class. Sequencing those students' presentations to maximize their potential to increase students' learning. Connecting the strategies and ideas in a way that helps students understand the mathematics learned. This book presents and discusses a framework for orchestrating mathematically productive discussions that are rooted in student thinking. The 5 Practices framework identifies a set of instructional practices that will help teachers achieve high-demand learning objectives by using student work as the launching point for discussions in which important mathematical ideas are brought to the surface, contradictions are exposed, and understandings are developed or consolidated. By giving teachers a road map of things that they can do in advance and during whole-class discussions, these practices have the potential for helping teachers to more effectively orchestrate discussions that are responsive to both students and the discipline. Includes a Professional Development Guide.



5 Practices for Orchestrating Task-Based Discussions in Science

By: Jennifer L. Cartier, Margaret S. Smith,
Mary Kay Stein and Danielle K. Ross

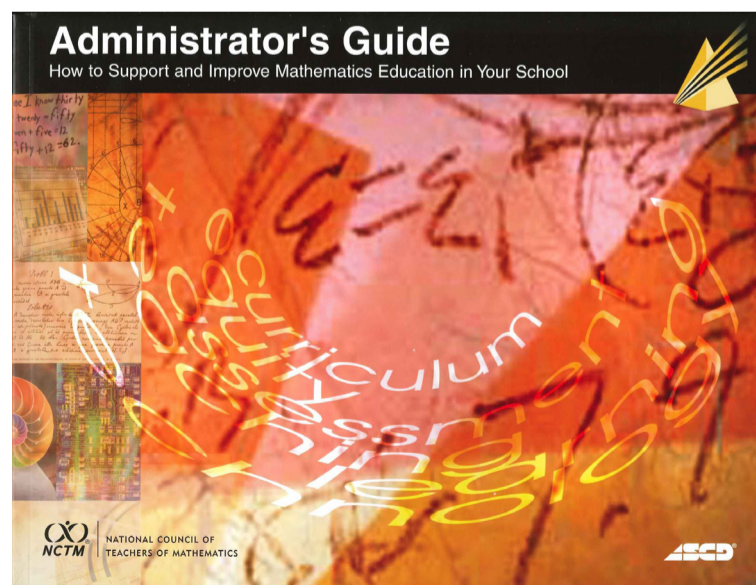
Robust and effective classroom discussions are essential for providing students with opportunities to simultaneously engage in science practices while learning key science content. Using numerous examples and science learning tasks, the authors show how teachers can plan the lesson to encourage students to not only learn science content but employ disciplinary practices as well. This volume outlines the five practices teachers need for facilitating effective inquiry-oriented classrooms: Anticipate what students will do what strategies they will use in solving a problem Monitor their work as they approach the problem in class Select students whose strategies are worth discussing in class Sequence those students presentations to maximize their potential to increase students learning Connect the strategies and ideas in a way that helps students understand the science learned. The 5 Practices framework identifies a set of instructional practices that will help teachers achieve high-demand learning objectives by using student work as the launching point for discussions in which important scientific ideas are brought to the surface, contradictions are exposed, and understandings are developed or consolidated.



Administrator's Guide: How to Support and Improve Mathematics Education in Your School

By: Amy Mirra

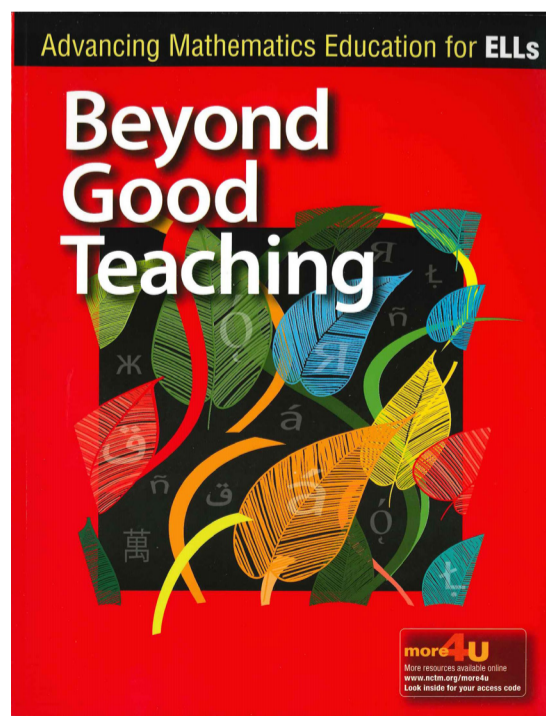
Robust and effective classroom discussions are essential for providing students with opportunities to simultaneously engage in science practices while learning key science content. Using numerous examples and science learning tasks, the authors show how teachers can plan the lesson to encourage students to not only learn science content but employ disciplinary practices as well. This volume outlines the five practices teachers need for facilitating effective inquiry-oriented classrooms: Anticipate what students will do what strategies they will use in solving a problem Monitor their work as they approach the problem in class Select students whose strategies are worth discussing in class Sequence those students presentations to maximize their potential to increase students learning Connect the strategies and ideas in a way that helps students understand the science learned. The 5 Practices framework identifies a set of instructional practices that will help teachers achieve high-demand learning objectives by using student work as the launching point for discussions in which important scientific ideas are brought to the surface, contradictions are exposed, and understandings are developed or consolidated.



Beyond Good Teaching: Advancing Mathematics Education for ELLs

By: Nora Ramirez and Sylvia Celedon-Pattichis

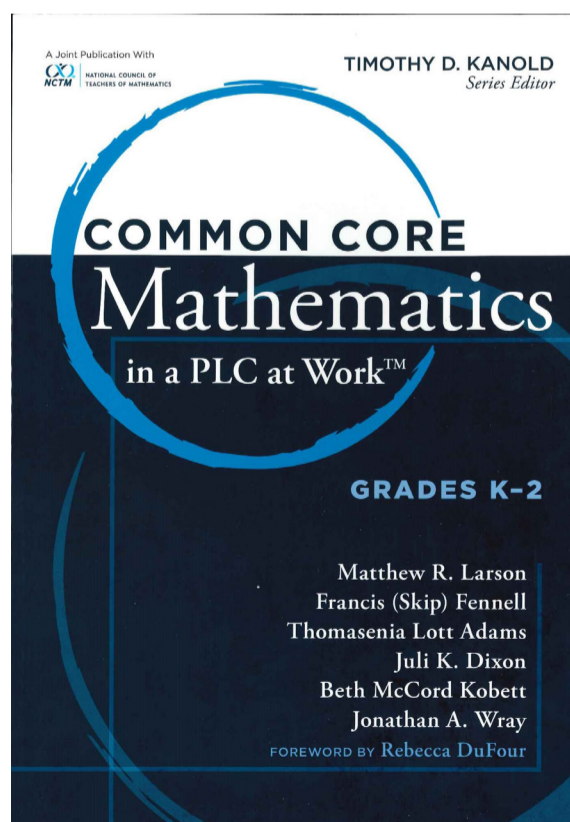
Many languages, many cultures, one goal high-quality mathematics education...English language learners share a basic need to engage, and be engaged, in meaningful mathematics. Through guiding principles and instructional tools, together with classroom vignettes and video clips, this book shows how to go beyond good teaching to support ELLs in learning challenging mathematics while developing language skill. Position your students to share the valuable knowledge that they bring to the classroom as they actively build and communicate their understanding. The design of this book is interactive and requires the reader to move back and forth between the chapters and online resources at nctm.org. Occasionally, the reader is asked to stop and reflect before reading further in a chapter. At other times, the reader is asked to view video clips of teaching practices for ELLs or to refer to graphic organizers, observation and analysis protocols, links to resources, and other supplementary materials. The authors encourage the reader to use this resource in professional development.



Common Core Mathematics in a PLC at Work Grades K-2

By: Matthew R. Larson, Francis (Skip) Fennell, Thomasenia Lott Adams, Juli K. Dixon, Beth McCord Kobett and Jonathan A. Wray

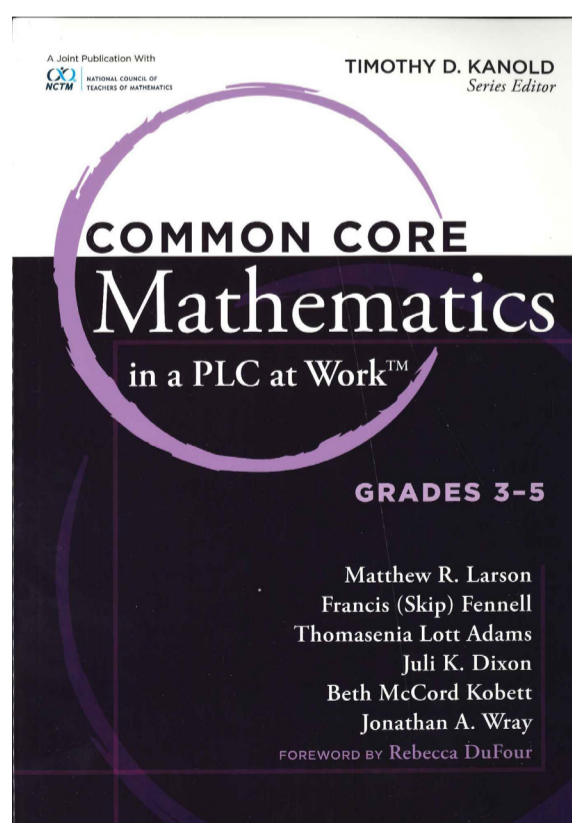
How do you help your students demonstrate mathematical proficiency toward the learning expectations of the Common Core State Standards (CCSS)? This teacher guide illustrates how to sustain successful implementation of the CCSS for mathematics for grades K 2. Discover what students should learn and how they should learn it at each grade level, including insight into prekindergarten early childhood readiness expectations for the K 2 standards, as well as the unique Counting and Cardinality standards for kindergarten. Comprehensive and research-affirmed analysis tools and strategies will help you and your collaborative team develop and assess student demonstrations of deep conceptual understanding and procedural fluency. You'll also learn how fundamental shifts in collaboration, instruction, curriculum, assessment, and intervention can increase college and career readiness in every one of your students.



Common Core Mathematics in a PLC at Work Grades 3-5

By: Matthew R. Larson, Francis (Skip) Fennell, Thomasenia Lott Adams,
Juli K. Dixon, Beth McCord Kobett and Jonathan A. Wray

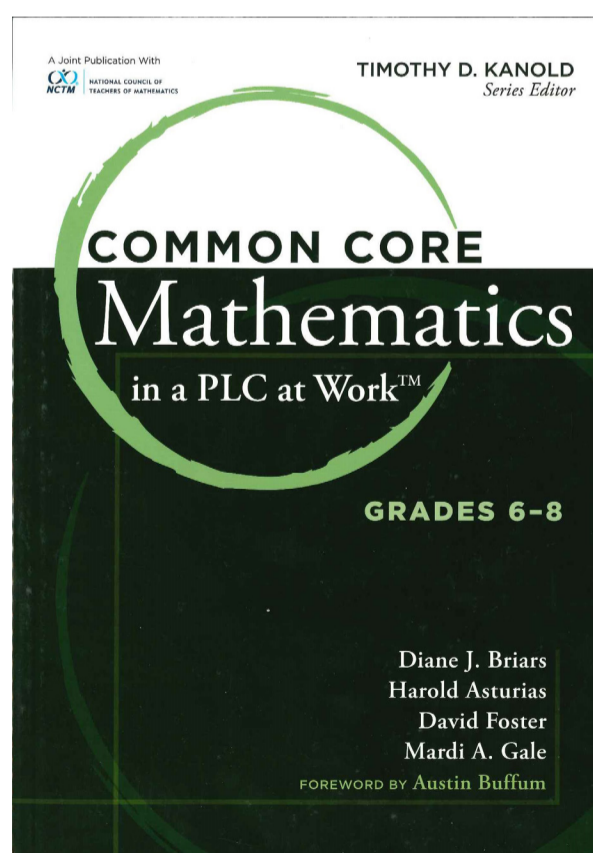
How do you help your students demonstrate mathematical proficiency toward the learning expectations of the Common Core State Standards (CCSS)? This teacher guide illustrates how to sustain successful implementation of the CCSS for mathematics for grades 3-5. Discover what students should learn and how they should learn it at each grade level, including deep support for the unique work for Number & Operations--Fractions in grades 3-5 and learning progression models that capstone expectations for middle school mathematics readiness. Comprehensive and research-affirmed analysis tools and strategies will help you and your collaborative team develop and assess student demonstrations of deep conceptual understanding and procedural fluency. You'll also learn how fundamental shifts in collaboration, instruction, curriculum, assessment, and intervention can increase college and career readiness in every one of your students.



Common Core Mathematics in a PLC at Work Grades 6-8

By: Diane J. Briars, Harold Asturias, David Foster and Mardi A. Gale

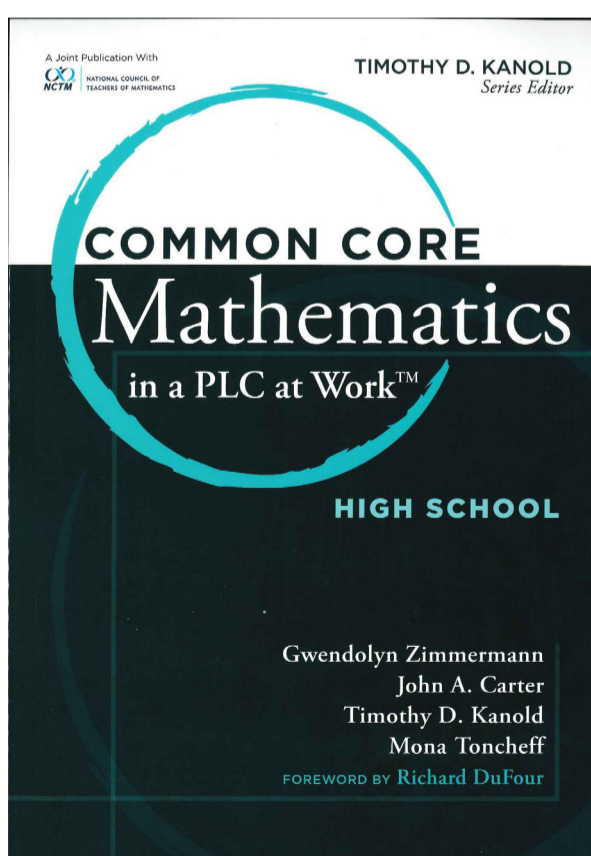
This teacher guide illustrates how to sustain successful implementation of the CCSS for mathematics for grades 6-8. Discover what students should learn and how they should learn it at each grade level. Acquire strategies for meeting the rigor of the grades 6-8 standards, including the unique content around ratios, proportions, and relationships at grades 6 and 7. Get insight into the new expectations for grades 6-8 assessment as well as the readiness required for the high school standards. Comprehensive and research-affirmed analysis tools and strategies will help you and your collaborative team develop and assess student demonstrations of deep conceptual understanding and procedural fluency. You'll also learn how fundamental shifts in collaboration, instruction, curriculum, assessment, and intervention can increase college and career readiness in every one of your students.



Common Core Mathematics in a PLC at Work High School

By: Gwen Zimmerman, John Carter, Timothy Kanold, Mona Toncheff

How do you help your students demonstrate mathematical proficiency toward the learning expectations of the Common Core State Standards (CCSS)? This teacher guide illustrates how to sustain successful implementation of the CCSS for mathematics for high school. Discover what students should learn and how they should learn it, including deep support for the Mathematical Modeling conceptual category of the CCSS. Comprehensive and research-affirmed analysis tools and strategies will help you and your collaborative team develop and assess student demonstrations of deep conceptual understanding and procedural fluency. You'll also learn how fundamental shifts in collaboration, instruction, curriculum, assessment, and intervention can increase college and career readiness in every one of your students. Extensive tools to implement a successful and coherent formative assessment and RTI response are included.

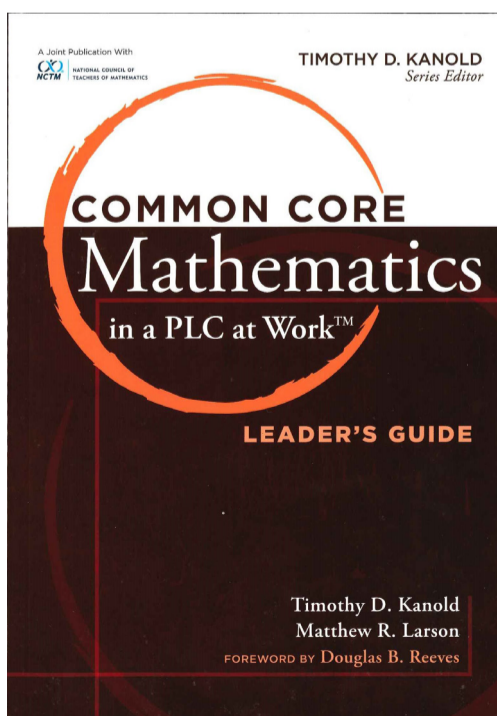


Common Core Mathematics in a PLC at Work Leader's Guide

By: Timothy D. Kanold and Matthew R. Larson

How do you help your students demonstrate mathematical proficiency toward the learning expectations of the Common Core State Standards (CCSS)? This leader companion to the grade-level teacher guides illustrates how to sustain successful implementation of the CCSS for mathematics.

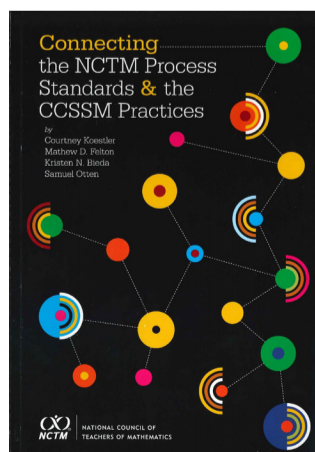
School leaders will discover how to support and focus the work of their collaborative mathematics teams for significant student achievement and improvement. Readers will receive explicit guidance and resources on how to lead and exceed the assessment expectations of the common core. Discover what students should learn and how they should learn it. Comprehensive and research-affirmed analysis tools and strategies will help you and your collaborative teams develop and assess student demonstrations of deep conceptual understanding and procedural fluency. You'll also learn how fundamental shifts in collaboration, instruction, curriculum, assessment, and intervention can increase college and career readiness in every one of your students.



Connecting the NCTM Process Standards & the CCSSM Practices

By: Courtney Koestler, Mathew D. Falton, Kristen N. Bieda and Samuel Otten

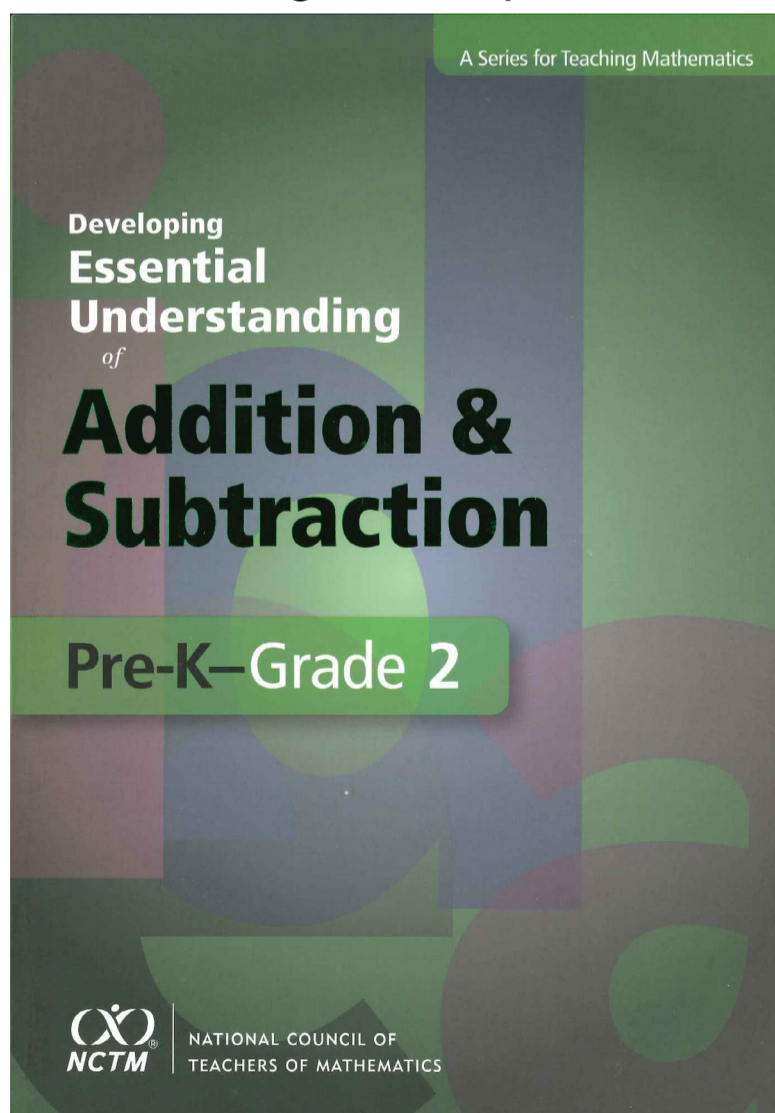
Connecting the Standards, Improving Mathematical Instruction Since their release in 2010, the Common Core State Standards Initiative (CCSSI) has had a profound impact on educational reform. The adoption of these standards represents an opportunity to support teachers in the common goal of helping students achieve a high-quality education. The Common Core State Standards for Mathematics will affect almost every K-12 student and the majority of the nation's teachers over the next decade. Although the CCSSM was created through a top-down approach, spearheaded by the National Governors Association and the Council of Chief State School officers, the primary audience and the ultimate users of the standards are classroom teachers. The focus of this book is on the Standards of Mathematical Practice outlined in the CCSSM. Although the CCSSM features these standards prominently, they are not described in detail and are not integrated into CCSSM's Standards for Mathematical Content. As a result, they are easy to overlook or ignore. The ideas in the Standards for Mathematical Practice are not new but linked to previous practices and standards articulated by other groups, including the National Council of Teachers of Mathematics (NCTM). For example, problem solving and reasoning are at the core of all practices outlined in CCSSM, just as they have been at the core of NCTM's vision for mathematics education since the publication of *An Agenda for Action* in 1980. Subsequent NCTM curriculum recommendations, emphasized and elaborated the role and place of mathematical processes and practices. The Standards of Mathematical Process outlined in CCSSM, and explored in greater detail in this book, reaffirm the significance of habits of mind, mathematical processes, and proficiency as crucial aspects of learning mathematics. Although the terms and emphasis may be new to teachers, the main ideas have existed a long time and remain unchanged. Intended for classroom teachers, this book makes explicit connections between these related ideas and the CCSSM Standards for Mathematical Practice. By connecting the CCSSM to previous standards and practices, the book serves as a valuable guide for teachers and administrators in implementing the CCSSM to make mathematics education the best and most effective for all students.



Developing Essential Understanding of Addition and Subtraction in Pre-K-Grade 2

By: Janet Caldwell, Karen Karp and Jennifer M. Bay-Williams

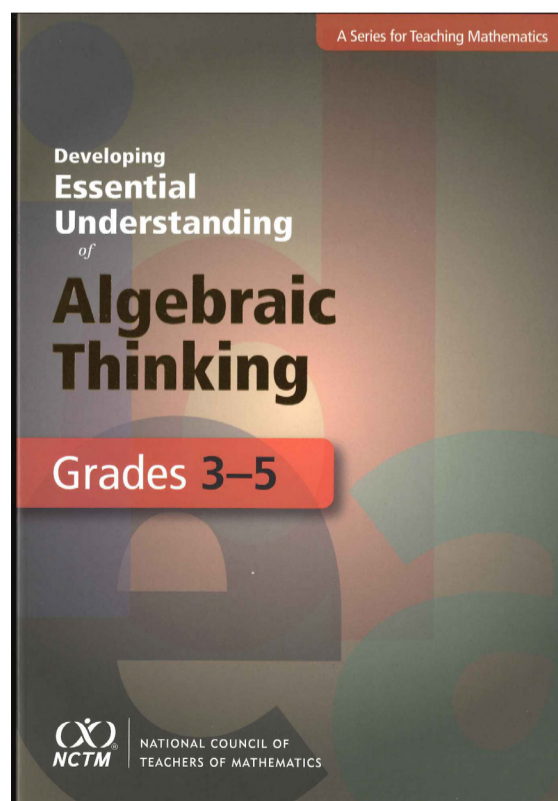
What is the relationship between addition and subtraction? How do you know whether an algorithm will always work? Can you explain why order matters in subtraction but not in addition, or why it is false to assert that the sum of any two whole numbers is greater than either number? It is organized around two big ideas and supported by smaller, more specific, interconnected ideas (essential understandings). Gaining an understanding about addition and subtraction is essential as they are the foundation for students later learning of multiplication and division.



Developing Essential Understanding of Algebraic Thinking in Grades 3-5

By: Maria Blanton, Linda Levi, Terry Crites, Barbara Dougherty
and Rose Mary Zbiek

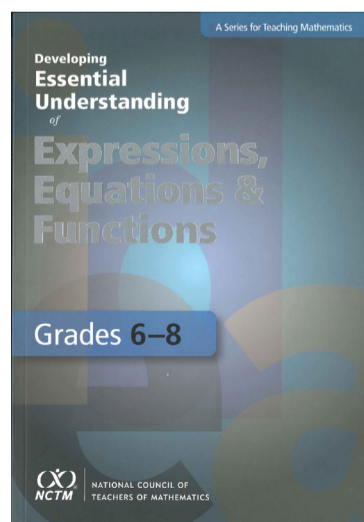
Like algebra at any level, early algebra is a way to explore, analyze, represent, and generalize mathematical ideas and relationships. This book shows that children can and do engage in generalizing about numbers and operations as their mathematical experiences expand. The authors identify and examine five big ideas and associated essential understandings for developing algebraic thinking in grades 3-5. The big ideas relate to the fundamental properties of number and operations, the use of the equals sign to represent equivalence, variables as efficient tools for representing mathematical ideas, quantitative reasoning as a way to understand mathematical relationships, and functional thinking to generalize relationships between covarying quantities. The book examines challenges in teaching, learning, and assessment and is interspersed with questions for teachers' reflection.



Developing Essential Understanding of Expressions, Equations & Functions Grades 6-8

By: Gwendolyn Lloyd, Beth Herbel-Eisenmann, Jon R. Star
and Rose Mary Zbiek

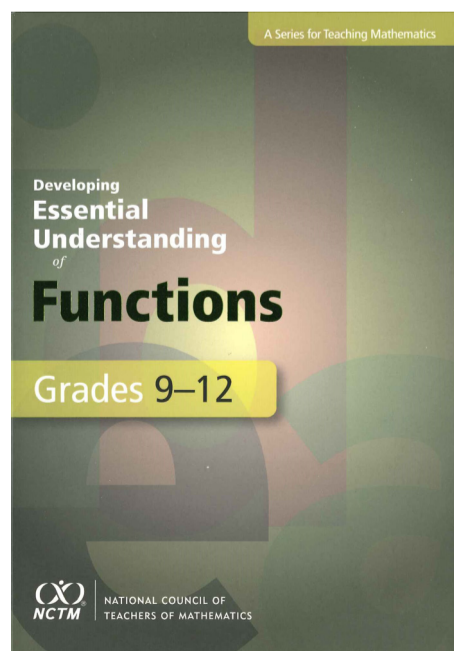
Why do some equations have one solution, other two or even more solutions, and some no solutions? Why do we sometimes need switch the direction of an inequality symbol in solving an inequality? What could you say if a student described a function as an equation? How much do you know...and how much do you need to know? Helping your students develop a robust understanding of expressions, equations, and functions requires that you understand this mathematics deeply. But what does that mean? This book focuses on essential knowledge for teachers about expressions, equations, and functions. It is organized around five big ideas, supported by multiple smaller, interconnected ideas essential understandings. Taking you beyond a simple introduction to expressions, equations, and functions, the book will broaden and deepen your mathematical understanding of one of the most challenging topics for students and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students' understanding of the topic. Focus on the ideas that you need to understand thoroughly to teach confidently.



Developing Essential Understanding of Functions in Grades 9-12

By: Thomas J. Cooney, Sybilla Beckmann and Gwendolyn M. Lloyd

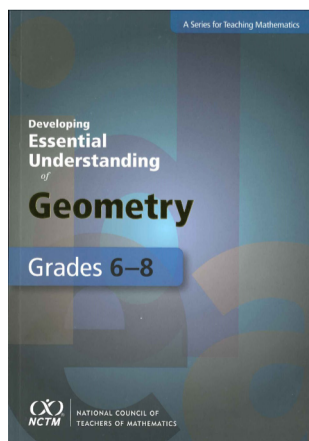
Are sequences functions? What can't the popular vertical line test be applied in some cases to determine if a relation is a function? How does the idea of rate of change connect with simpler ideas about proportionality as well as more advanced topics in calculus? How much do you know... and how much do you need to know? Helping your high school students develop a robust understanding of functions requires that you understand mathematics deeply. But what does that mean? This book focuses on essential knowledge for teachers about functions. It is organized around five big ideas, supported by multiple smaller, interconnected ideas essential understandings. Taking you beyond a simple introduction to functions, this book will broaden and deepen your mathematical understanding of one of the most challenging topics for students and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students understanding of the topic. Focus on the ideas that you need to understand thoroughly to teach confidently.



Developing Essential Understanding of Geometry in Grades 6-8

By: Nathalie Sinclair, David Pimm, Melanie Skelin and Rose Mary Zbiek

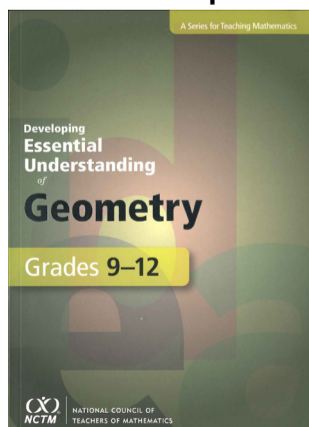
Why are there so many formulas for area and volume, and why do some of them look alike? Why does one quadrilateral have no special name while another has several, like square, rectangle, rhombus, and parallelogram and why are all these names useful? How much do you know ... and how much do you need to know? Helping your students develop a robust understanding of geometry requires that you understand this mathematics deeply. But what does that mean? This book focuses on essential knowledge for teachers about geometry. It is organized around four big ideas, supported by multiple smaller, interconnected ideas essential understandings. Taking you beyond a simple introduction to geometry, the book will broaden and deepen your mathematical understanding of one of the most challenging topics for students and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students understanding of the topic. About the Series: Focus on the ideas that you need to understand thoroughly to teach confidently. Move beyond the mathematics you expect your students to learn. Students who fail to get a solid grounding in pivotal concepts struggle in subsequent work in mathematics and related disciplines. By bringing a deeper understanding to your teaching, you can help students who don't get it the first time by presenting the mathematics in multiple ways. The Essential Understanding Series addresses topics in school mathematics that are critical to the mathematical development of students but are often difficult to teach. Each book in the series gives an overview of the topic, highlights the differences between what teachers and students need to know, examines the big ideas and related essential understandings, reconsiders the ideas presented in light of connections with other mathematical ideas, and includes questions for readers reflection.



Developing Essential Understanding of Geometry in Grades 9-12

By: Nathalie Sinclair, Melanie Skelin, David Pimm and Rose Mary Zbiek

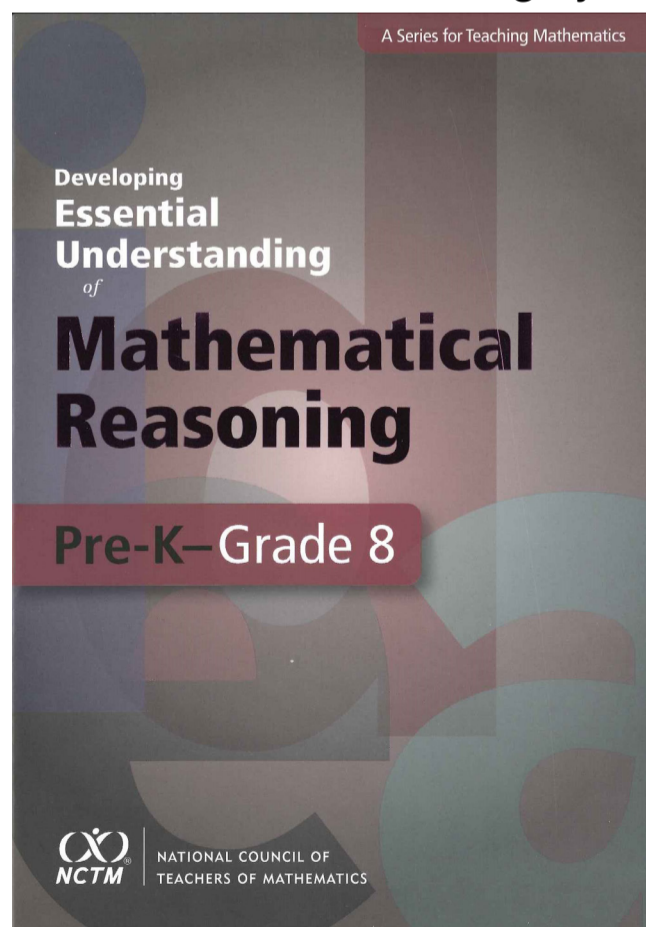
Why does it matter whether we state definitions carefully when we all know what particular geometric figures look like? What does it mean to say that a reflection is a transformation a function? How does the study of transformations and matrices in high school connect with later work with vector spaces in linear algebra? How much do you know... and how much do you need to know? Helping your students develop a robust understanding of geometry requires that you understand this mathematics deeply. But what does that mean? This book focuses on essential knowledge for teachers about geometry. It is organized around four big ideas, supported by multiple smaller, interconnected ideas essential understandings. Taking you beyond a simple introduction to geometry, the book will broaden and deepen your mathematical understanding of one of the most challenging topics for students and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students understanding of the topic. Focus on the ideas that you need to understand thoroughly to teach confidently. Move beyond the mathematics you expect your students to learn. Students who fail to get a solid grounding in pivotal concepts struggle in subsequent work in mathematics and related disciplines. By bringing a deeper understanding to your teaching, you can help students who don't get it the first time by presenting the mathematics in multiple ways. The Essential Understanding Series addresses topics in school mathematics that are critical to the mathematical development of students but are often difficult to teach. Each book in the series gives an overview of the topic, highlights the differences between what teachers and students need to know, examines the big ideas and related essential understandings, reconsiders the ideas presented in light of connections with other mathematical ideas, and includes questions for readers reflection.



Developing Essential Understanding of Mathematical Reasoning Pre-K-Grade 8

By: John Lannin, Amy Ellis, Rebekah Elliot and Rose Mary Zbiek

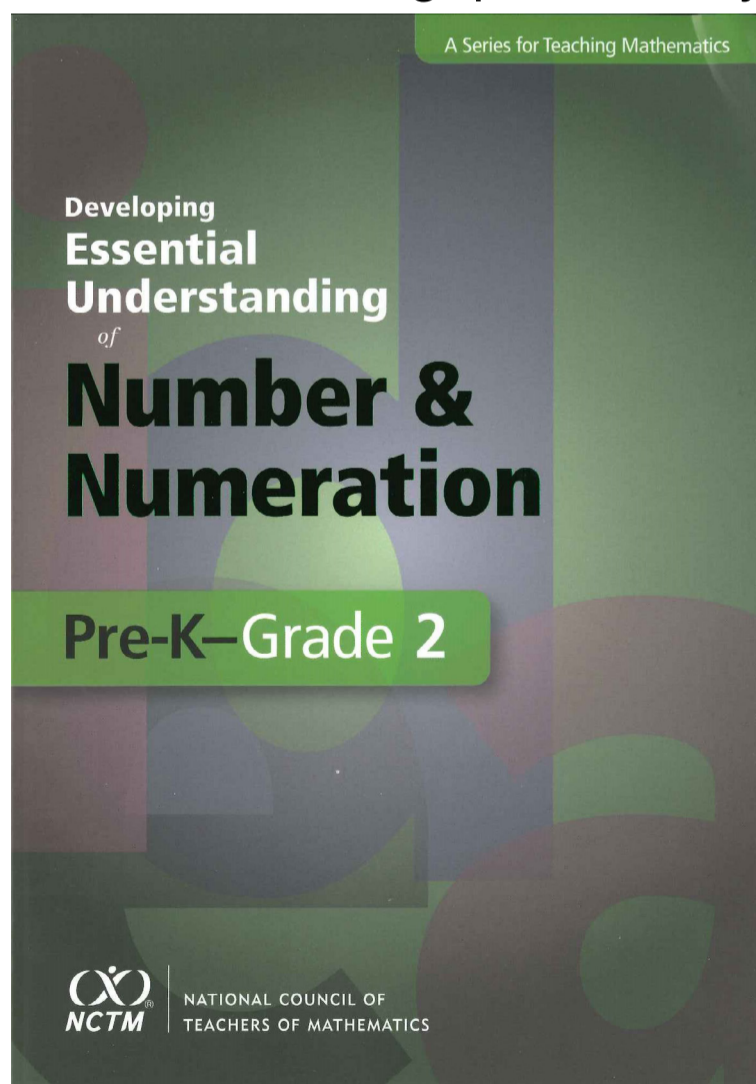
How do your students determine whether a mathematical statement is true? Do they rely on a teacher, a textbook, or various examples? How can you encourage them to connect examples, extend their ideas to new situations that they have not yet considered, and reason more generally? How much do you know...and how much do you need to know? Helping your students develop a robust understanding of mathematical reasoning requires that you understand this mathematics deeply. But what does that mean? This book focuses on essential knowledge for teachers about mathematical reasoning. It is organized around one big idea, supported by multiple smaller, interconnected ideas—essential understandings. Taking you beyond a simple introduction to mathematical reasoning, the book will broaden and deepen your mathematical understanding of one of the most challenging topics for students—and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students' understanding of the topic. Focus on the ideas that you need to understand thoroughly to teach confidently.



Developing Essential Understanding of Number and Numeration Pre-K-Grade 2

By: Barbara Dougherty, Alfinio Flores, Everett Louis, Catherine Sophian
and Rose Mary Zbiek

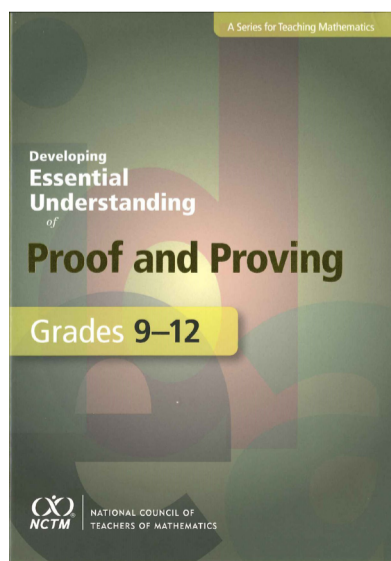
How do composing and decomposing numbers connect with the properties of addition? Focus on the ideas that you need to thoroughly understand in order to teach with confidence. The mathematical content of this book focuses on essential knowledge for teachers about numbers and number systems. It is organized around one big idea and supported by smaller, more specific, interconnected ideas (essential understandings). Gaining this understanding is essential because numbers and numeration are building blocks for other mathematical concepts and for thinking quantitatively about the real-world.



Developing Essential Understanding of Proof and Proving in Grade 9-12

By: Kristen Bieda, Eric Knuth, Amy Ellis and Rose Mary Zbiek

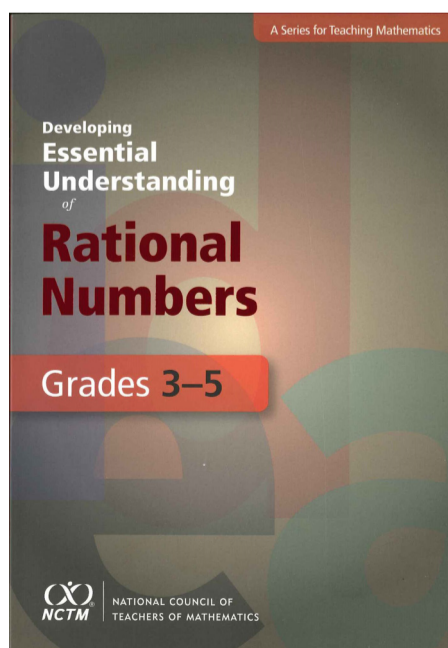
What is the difference between “proof” in mathematics and “proof” in science or a court of law? In mathematics, how does proof differ from other types of arguments? What forms can proof take besides the traditional two-column style? What activities constitute the process of proving? What roles do examples play in proving? Can examples ever prove a conjecture? Why does a single counterexample refute a conjecture? How much do you know...and how much do you need to know? Helping your students develop a robust understanding of mathematical proof and proving requires that you understand this aspect of mathematics deeply. But what does that mean? This book focuses on essential knowledge for teachers about proof and the process of proving. It is organized around five big ideas, supported by multiple smaller, interconnected ideas—essential understandings. Taking you beyond a simple introduction to proof and the activities involved in proving, the book will broaden and deepen your mathematical understanding of one of the most challenging topics for students...and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students’ understanding of the topic. Focus on the ideas that you need to understand thoroughly to teach confidently.



Developing Essential Understanding of Rational Numbers in Grade 3-5

By: Carne Clarke, William Fisher, Rick Marks, Sharon Ross and Rose Mary Zbiek

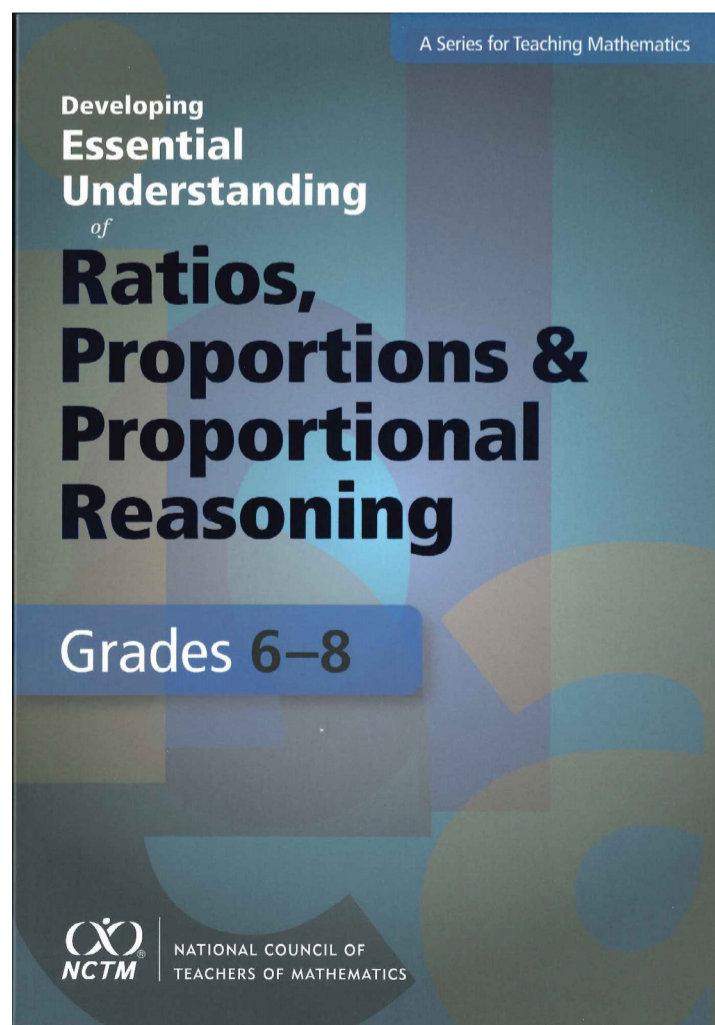
What is the relationship between fractions and rational numbers? Can you explain why the product of two fractions between 0 and 1 is less than either factor? How are rational numbers related to irrational numbers, which your students will study in later grades? How much do you know... and how much do you need to know? Helping your upper elementary school students develop a robust understanding of rational numbers requires that you understand this mathematics deeply. But what does that mean? This book focuses on essential knowledge for teachers about rational numbers. It is organized around four big ideas, supported by multiple smaller, interconnected ideas—essential understandings. Taking you beyond a simple introduction to rational numbers, the book will broaden and deepen your mathematical understanding of one of the most challenging topics for students—and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students' understanding of the topic. Focus on the ideas that you need to understand thoroughly to teach confidently.



Developing Essential Understanding of Ratios, Proportions & Proportional Reasoning in Grades 6-8

By: Joanne Lobato, Amy Ellis and Rose Mary Zbiek

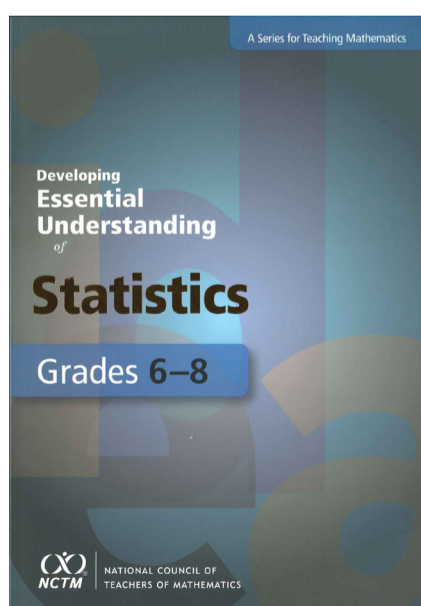
How do you refute the erroneous claim that all ratios are fractions? This book goes beyond a simple introduction to ratios, proportions, and proportional reasoning. It will help broaden and deepen your mathematical understanding of one of the most challenging topics for students—and teachers—to grasp. It will help you engage your students, anticipate their perplexities, help them avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing your students' understanding of the topic.



Developing Essential Understanding of Statistics in Grades 6-8

By: Gary Kader, Tim Jacobbe, Patricia Wilson and Rose Mary Zbiek

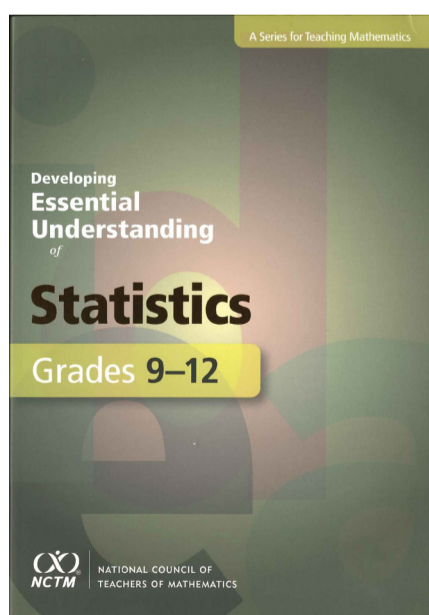
How does working with data in statistics differ from working with numbers in mathematics? What is variability, and how can we describe and measure it? How can we display distributions of quantitative or categorical data? What is a data sample, and how can we choose one that will allow us to draw valid conclusions from data? How much do you know and how much do you need to know? Helping your students develop a robust understanding of statistics requires that you understand fundamental statistical concepts deeply. But what does that mean? This book focuses on essential knowledge for mathematics teachers about statistics. It is organized around four big ideas, supported by multiple smaller, interconnected ideas—essential understandings. Taking you beyond a simple introduction to statistics, the book will broaden and deepen your understanding of one of the most challenging topics for students—and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students' understanding of the topic. Focus on the ideas that you need to understand thoroughly to teach confidently.



Developing Essential Understanding of Statistics in Grades 9-12

By: Roxy Peck, Rob Gould, Stephen Miller and Rose Mary Zbiek

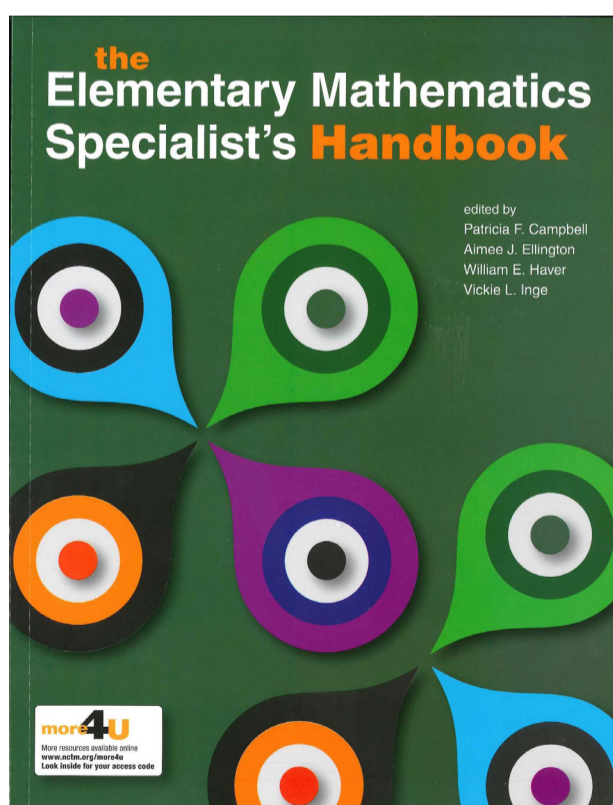
How does a statistical model differ from a mathematical model? What are the differences among the sample distribution, the sampling distribution, and the population distribution? In an experiment, what effect does the sampling method have on the results? What are the implications of the use of processes of random selection and random assignment? Can a small sample yield accurate estimates of population parameters? This book examines five big ideas and twenty-four related essential understandings for teaching statistics in grades 9–12. The authors distinguish mathematical and statistical models, explore distributions as descriptions of variability in data, focus on the fundamentals of testing hypotheses to draw conclusions from data, highlight the importance of the data collection method, and recognize the need to examine bias, precision, and sampling method in evaluating statistical estimators. Recognizing that analyzing data is an important part of understanding the world, the authors discuss the growth of students' ideas about statistics and examine challenges to teaching, learning, and assessment. They intersperse their discussion with questions for teachers' reflection.



The Elementary Mathematics Specialist's Handbook

By: Patricia F. Campbell, Aimee J. Ellington, William E. Haver, and Vickie L. Inge

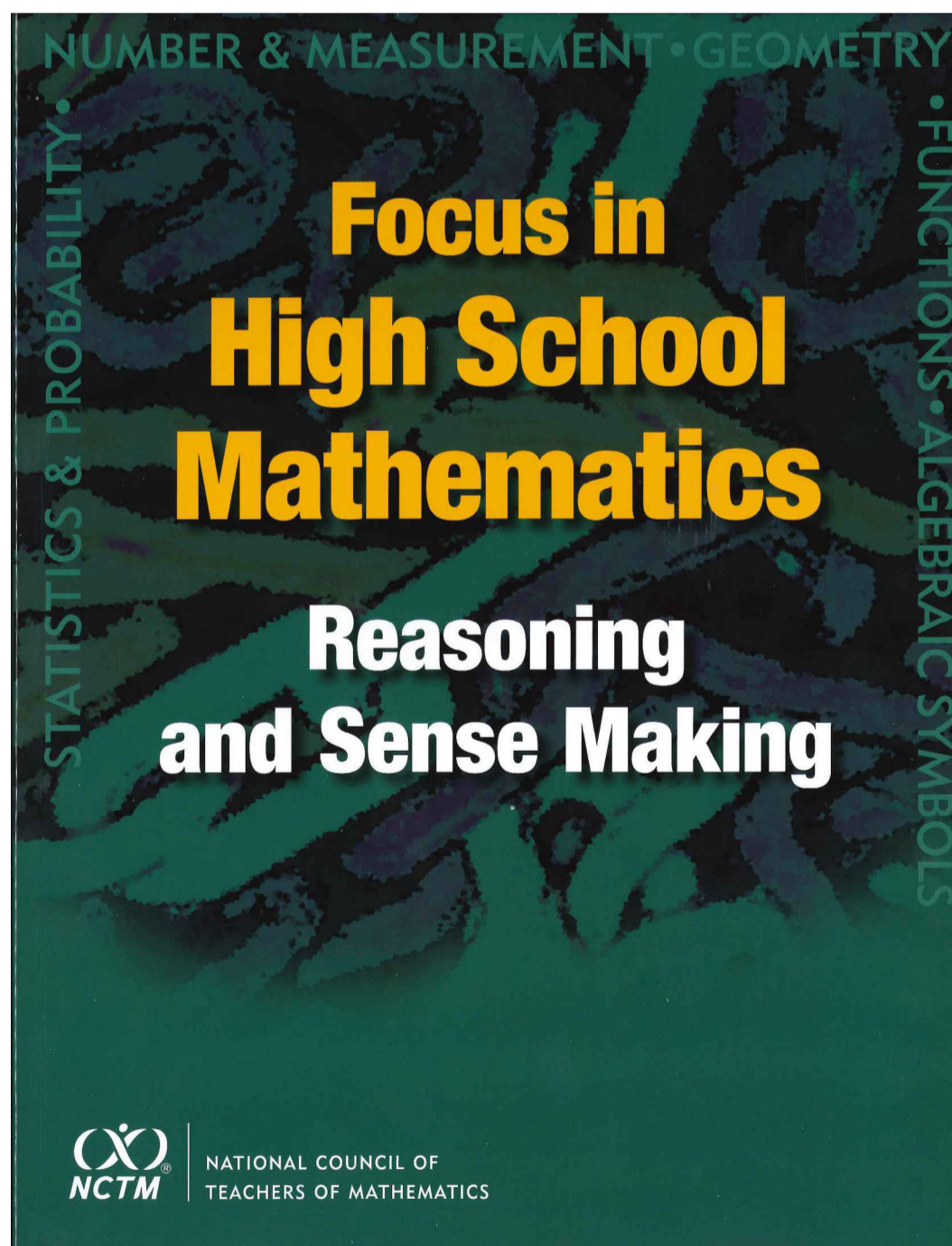
An influential new member joins the elementary school team... Placing mathematics specialists in elementary schools is a recent development that is gaining momentum as schools move to more rigorous standards, including the Common Core State Standards for Mathematics. Working with teachers to improve schoolwide mathematics performance, the mathematics specialist is unique among the specialists at elementary schools today. In this handbook Vignettes flesh out the elementary mathematics specialist's many responsibilities. Experienced specialists offer tips on gaining teachers' trust and access to their classrooms. Special guidance highlights effective collaboration between the principal and the specialist. The transition from classroom teacher to elementary mathematics specialist is challenging, but the principal can smooth the specialist's path by reassuring teachers that the new specialist is there to support them, not judge them. In the author's words, the mathematics specialist, when introduced to the faculty in the right way, becomes a soft place where the teacher can fall.



Focus in High School Mathematics: Reasoning and Sense Making

By: W. Gary Martin, John Carter, Susan Forster, Roger Howe, Gary Kader,
Henry Kepner, Judith Reed Quander, William McCallum, Eric Robinson,
Vincent Snipes and Patricia Valdez

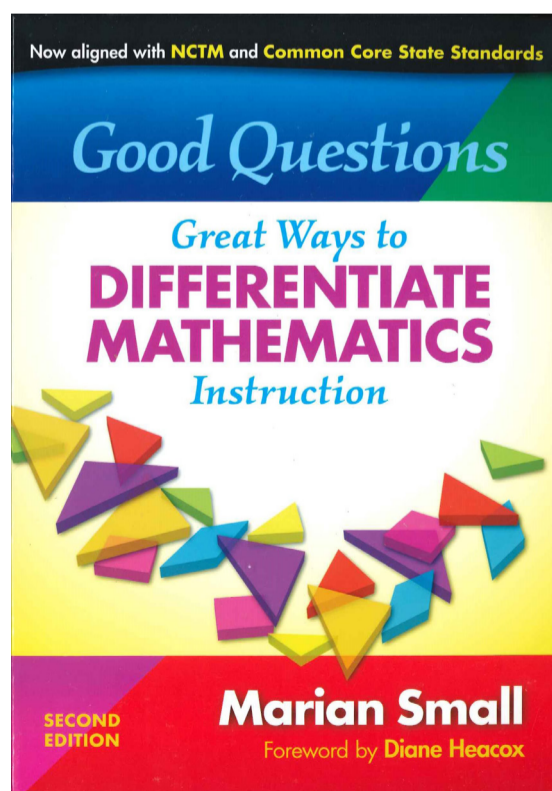
A framework to guide the development of future 9–12 mathematics
curriculum and instruction.



Good Questions: Great Ways to Differentiate Mathematics Instruction

By: Marian Small

Expanded to include connections to Common Core State Standards, as well as National Council of Teachers of Mathematics (NCTM) standards, this critically acclaimed book will help every teacher and coach to meet the challenges of differentiating mathematics instruction in the K-8 classroom. In this bestseller, math education expert Marian Small explains two powerful and universal strategies that teachers can use across all math content: Open Questions and Parallel Tasks. Showing teachers how to get started and become expert with these strategies, Small also demonstrates more inclusive learning conversations that promote broader student participation and mathematical thinking required by CCSS. Specific strategies and examples for each grade band are organized around NCTM content strands: Number and Operations, Geometry, Measurement, Algebra, and Data Analysis and Probability.

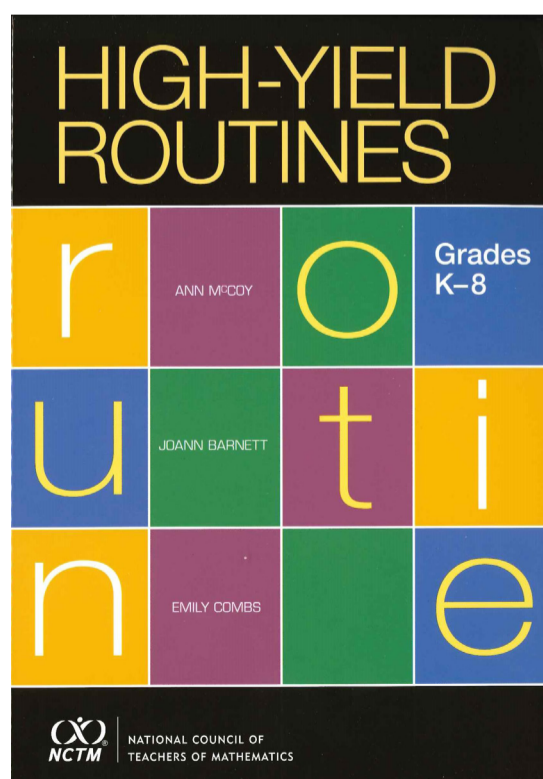


High-Yield Routines

Grades K-8

By: Ann McCoy, Joann Barnett and Emily Combs

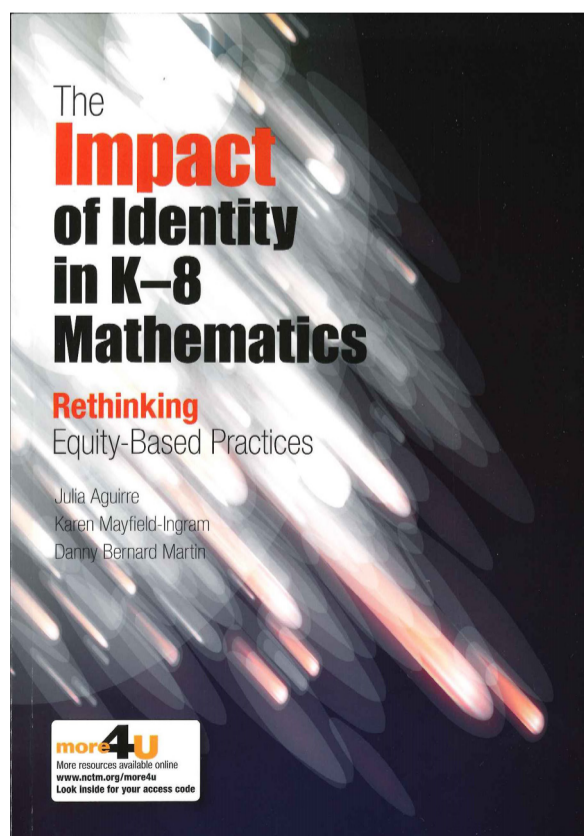
Today's classrooms are full of routines. Although we often think of routines as being used for organization, routines can also be used to enhance instruction. In this book, the authors present seven easily implemented mathematical routines that may be used effectively at a variety of grade levels and with a variety of mathematical content. The book also includes ideas for infusing mathematics into the nonmathematical routines that take time away from instruction. Each chapter begins with classroom vignettes that provide a glimpse of how the routine might look as it is implemented in a variety of grade levels. A description of the routine and implementation strategies follow and the authors provide examples of student work from various grade levels for each of the routine, including examples of ways to assess student thinking by using the routines, and suggestions for adapting the routines. The book includes connections to the Common Core practice standards and focuses on creating opportunities for differentiated instruction. A highly useful book, written by seasoned mathematics educators, this book is a must-have for all elementary and middle school mathematics teachers.



The Impact of Identity in K-8 Mathematics: Rethinking Equity-Based Practices

By: Julia Aguirre, Karen Mayfield-Ingram and Danny Bernard Martin

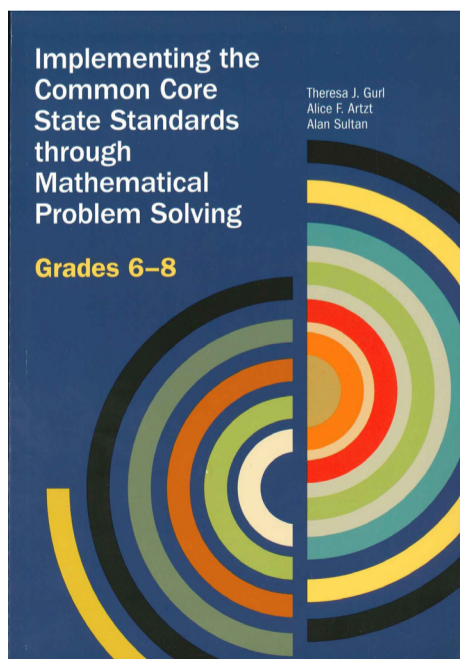
Each teacher and student brings many identities to the classroom. What is their impact on the student's learning and the teacher's teaching of mathematics? This book invites K8 teachers to reflect on their own and their students' multiple identities. Rich possibilities for learning result when teachers draw on these identities to offer high-quality, equity-based teaching to all students. Reflecting on identity and re-envisioning learning and teaching through this lens especially benefits students who have been marginalized by race, class, ethnicity, or gender. The authors encourage teachers to reframe instruction by using five equity-based mathematics teaching practices: going deep with mathematics, leveraging multiple mathematical competencies, affirming mathematics learners' identities, challenging spaces of marginality, drawing on multiple resources of knowledge.



Implementing the Common Core State Standards through Mathematical Problem Solving Grades 6-8

By: Theresa J. Gurl, Alice F. Artzt and Alan Sultan

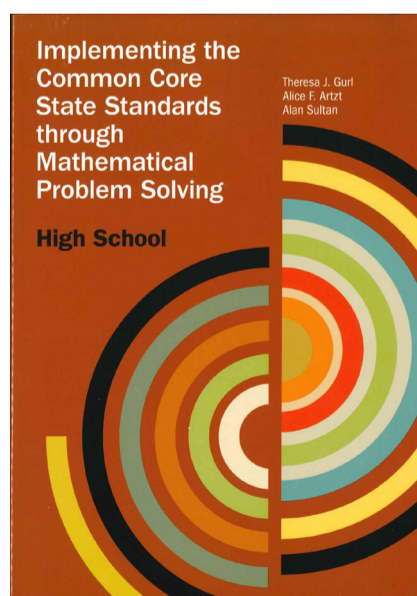
Mathematics educators have long worked to help students to develop problem-solving skills. More recently, they have sought to provide students with the knowledge in the Common Core State Standards (CCSS). This volume is the second in a series from NCTM that equips classroom teachers with targeted, highly effective problems for achieving both goals at once. For every mathematics educator, the books in this series will illuminate a crucial link between problem solving and the Common Core State Standards. The 37 problems and tasks for students in this book are organized into the major areas of the Common Core for grades 6-8: ratios and proportional relationships; the number system; geometry; statistics and probability; and expressions, equations, and functions. For each task, teachers will find a rich, engaging problem or set of problems to use as a lesson starting point, with accompanying discussions that tie the tasks to specific Common Core domains and clusters. This book provides middle school mathematics teachers with dozens of problems they can use as is, adapt for their classrooms, or be inspired by while creating related problems on other topics. For every mathematics educator, the books in this series will help to illuminate a crucial link between problem solving and the Common Core State Standards.



Implementing the Common Core State Standards through Mathematical Problem Solving High School

By: Theresa J. Gurl, Alice F. Artzt and Alan Sultan

Connect the Process of Problem Solving with the Content of the Common Core. Mathematics educators have long recognized the importance of helping students to develop problem-solving skills. More recently, they have searched for the best ways to provide their students with the knowledge encompassed in the Common Core State Standards (CCSS). This volume is one in a series from NCTM that equips classroom teachers with targeted, highly effective problems for achieving both goals at once. The 44 problems and tasks for students in this book are organized into the major areas of the high school Common Core: algebra, functions, geometry, statistics and probability, and number and quantity. Examples of modeling, the other main CCSS area, are incorporated throughout. Every domain that is required of all mathematics students is represented. For each task, teachers will find a rich, engaging problem or set of problems to use as a lesson starting point. An accompanying discussion ties these tasks to the specific Common Core domains and clusters they help to explore. Follow-up sections highlight the relevant CCSS Standards for Mathematical Practice that students will engage in as they work on these problems. This book provides high school mathematics teachers with dozens of problems they can use as is, adapt for their classrooms, or be inspired by while creating related problems on other topics. For every mathematics educator, the books in this series will help to illuminate a crucial link between problem solving and the Common Core State Standards.



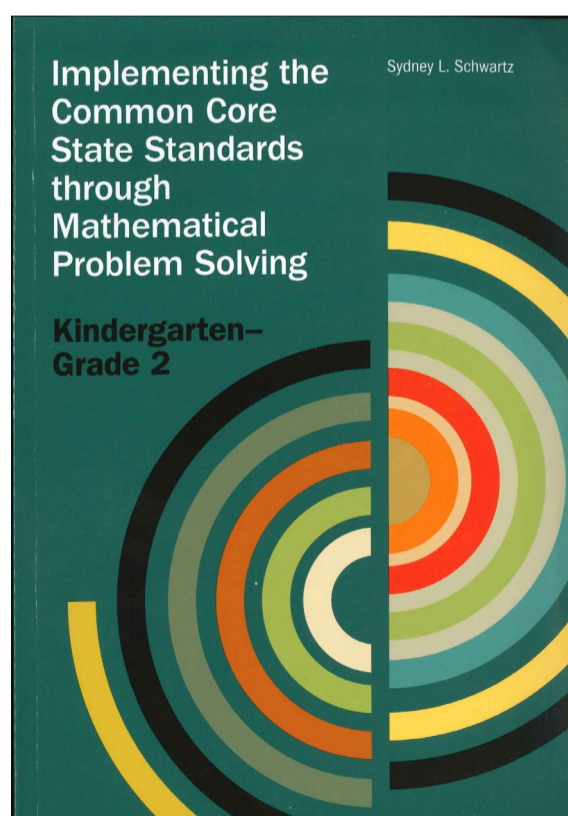
Implementing the Common Core State Standards through Mathematical Problem Solving Kindergarten-Grade 2

By: Sydney L. Schwartz

Connect the Process of Problem Solving with the Content of the Common Core.

Mathematics educators have long worked to help students to develop problem-solving skills. More recently, they have sought to provide students with the knowledge in the Common Core State Standards (CCSS). This volume is the second in a series from NCTM that equips classroom teachers with targeted, highly effective problems for achieving both goals at once. For every mathematics educator, the books in this series will illuminate a crucial link between problem solving and the Common Core

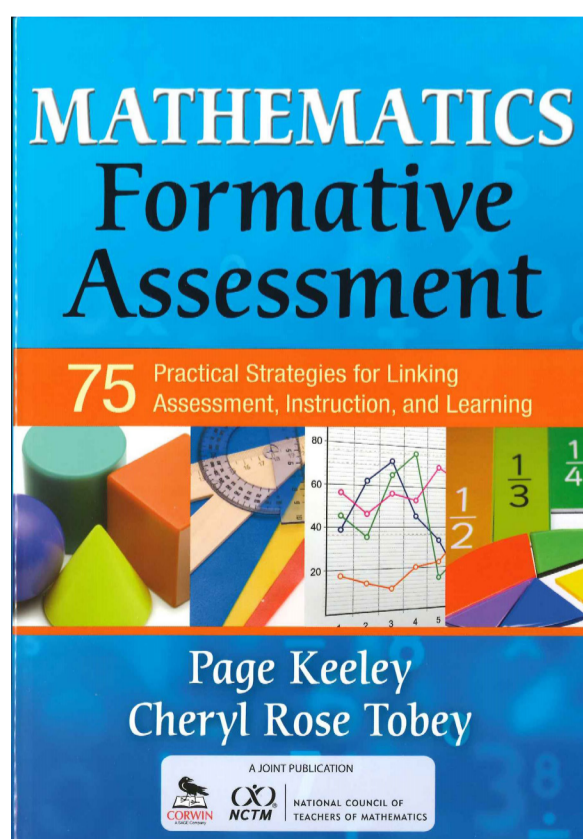
State Standards. Early childhood educators can open this treasure chest to find enriching answers to the questions: How can we match the active ways that young children learn mathematical content and strategies while connecting with the Common Core State Standards for Mathematics? How can we provide specific game formats and engaging tasks that attract children with opportunities to solve mathematical problems that are both challenging and attainable?



Mathematics Formative Assessment: 75 Practical Strategies for Linking Assessment, Instruction, and Learning

By: Page Keeley and Cheryl Rose Tobey

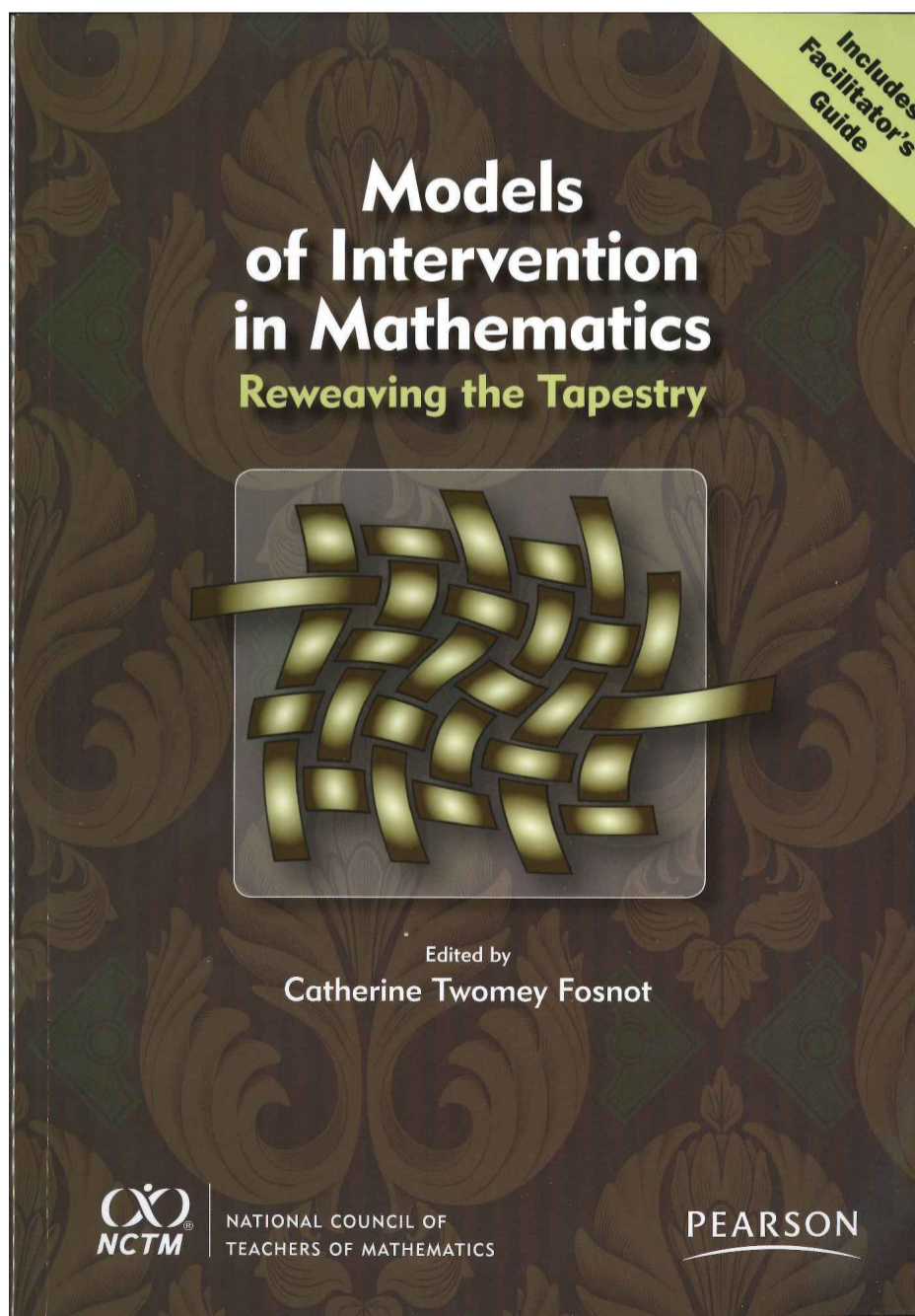
Award-winning author Page Keeley and mathematics expert Cheryl Rose Tobey apply the successful format of Keeley's best-selling Science Formative Assessment to mathematics. They provide 75 formative assessment strategies and show teachers how to use them to inform instructional planning and better meet the needs of all students. Research shows that formative assessment has the power to significantly improve learning, and its many benefits include: stimulation of metacognitive thinking, increased student engagement, insights into student thinking, development of a discourse community. The authors also provide important guidance with each technique, including usage tips and caveats, implementation examples, and suggested modifications. With practical strategies that are relevant for all grades and topic areas, Mathematics Formative Assessment provides the tools to transform teaching and learning in your classroom.



Models of Intervention in Mathematics: Reweaving the Tapestry

By: Catherine Twomey Fosnot

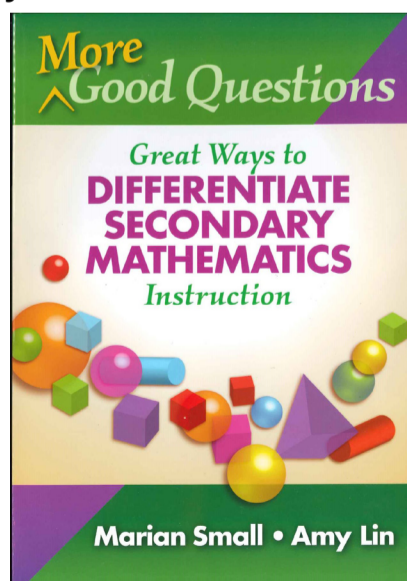
Explore successful models of intervention. No Child Left Behind has set the high expectation that every child meet grade level expectations. This publication synthesizes the research on intervention programs and best practices related to mathematical instructional pedagogy and differentiation to assist teachers, schools, and school districts in improving the manner in which they serve children with challenges in mathematics.



More Good Questions: Great Ways to Differentiate Secondary Mathematics Instruction

By: Marian Small and Amy Lin

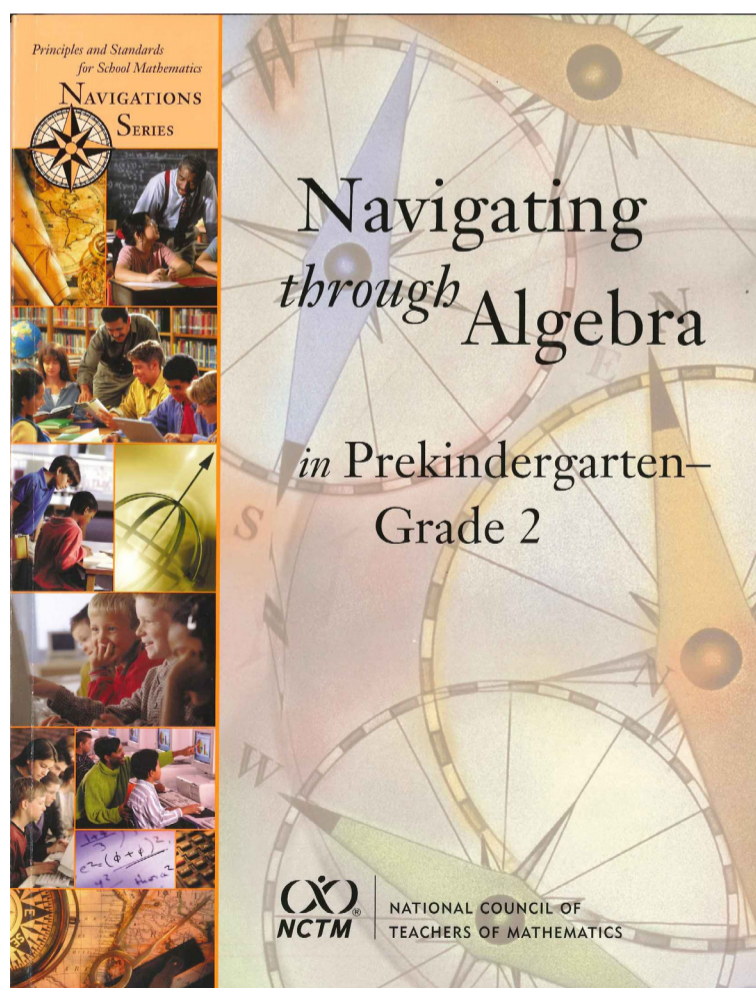
More Good Questions, written specifically for secondary mathematics teachers, presents two powerful and universal strategies that teachers can use to differentiate instruction across all math content: Open Questions and Parallel Tasks. Showing teachers how to get started and become expert with these strategies, this book also demonstrates how to use more inclusive learning conversations to promote broader student participation. Strategies and examples are organized around Big Ideas within the National Council of Teachers of Mathematics (NCTM) content strands. With particular emphasis on Algebra, chapters also address Number and Operations, Geometry, Measurement, and Data Analysis and Probability, with examples included for Pre-Calculus. To help teachers differentiate math instruction with less difficulty and greater success, this resource: underscores the rationale for differentiating secondary math instruction; provides specific examples for secondary math content; describes two easy-to-implement strategies designed to overcome the most common DI problems that teachers encounter; offers almost 300 questions and tasks that teachers and coaches can adopt immediately, adapt, or use as models to create their own, along with scaffolding and consolidating questions; includes Teaching Tips sidebars and an organizing template at the end of each chapter to help teachers build new tasks and open questions; and shows how to create a more inclusive classroom learning community with mathematical talk that engages.



Navigating through Algebra in Prekindergarten-Grade 2 (with CD-ROM)

By: Carole E. Greenes, Mary C. Cavanagh, Linda Dacey and Carol Findell

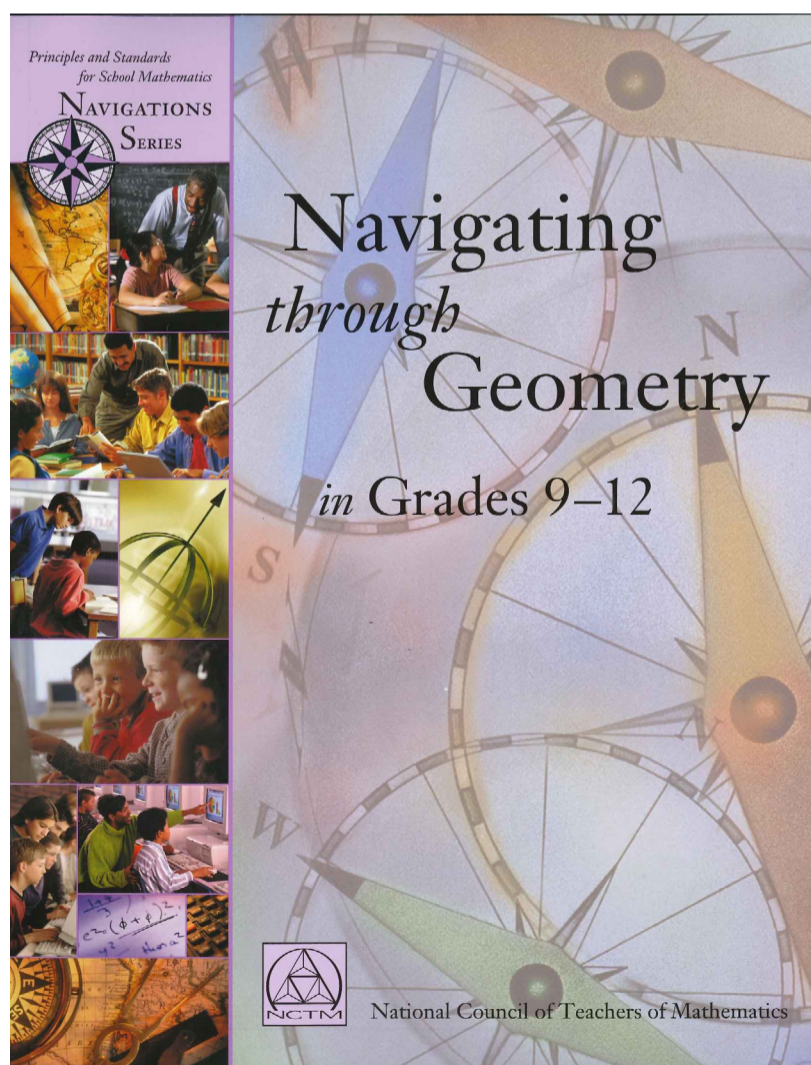
This book demonstrates how some of the fundamental ideas of algebra can be introduced, developed, and extended. It focuses on repeating and growing patterns, introduces the concepts of variable and equality, and examines relations and functions. Its activities are designed to capture the interest of small children as they investigate growing patterns, use pictures of dogs with varying numbers of spots to solve for missing addends, and use spinners to identify and explore functions. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



Navigating through Geometry in Grades 9-12 (with CD-ROM)

By: Roger Day, Paul Kelley, Libby Krussel, Johnny W. Lott and
James Hirstein

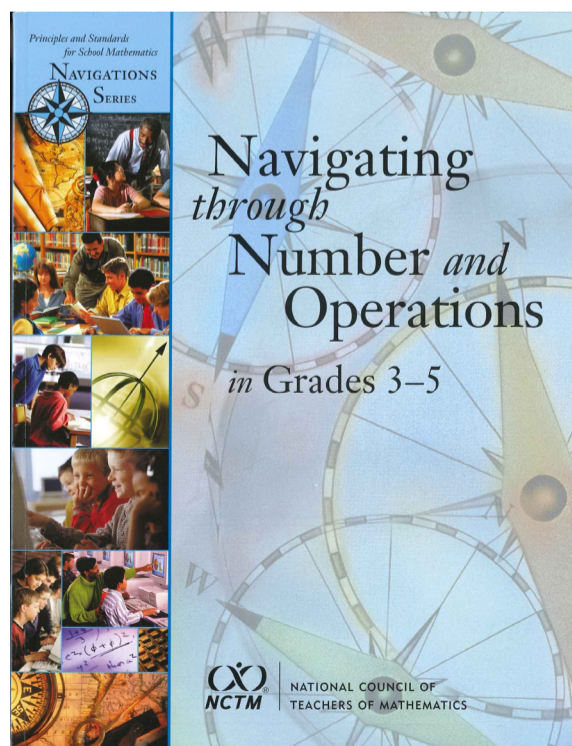
Approaching geometry through a transformational lens, this book concentrates on topics such as the use of transformations, coordinates and matrices, and congruence and similarity. Activities that take students through geometric tasks require some use of technology, including interactive geometry software and a calculator or a computer with software that produces geometric images and graphs. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



Navigating through Number and Operations in Grades 3-5 (with CD-ROM)

By: Natalie N. Duncan, Charles Geer, DeAnn Huinker, Larry Leutzinger, Ed Rathmell
and Charles Thompson

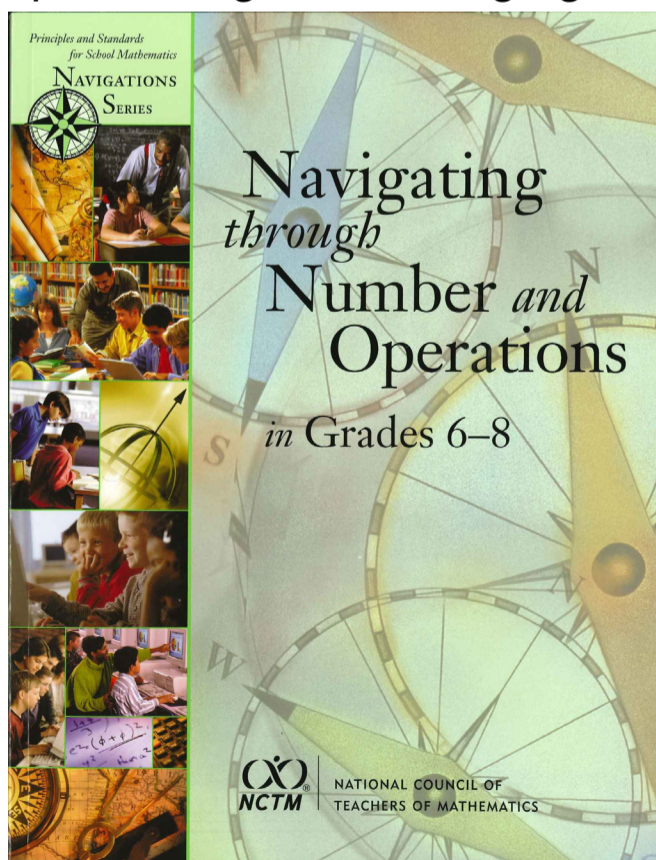
In grades 3-5, students extend their understanding of place value, larger whole numbers, fractions, and decimals. They develop an understanding of multiplication and division, mastering and applying basic facts. Concrete materials can help students represent and reinforce these important concepts. Activities in this book invite students to use fraction circles to compare fractions and dot arrays to explore multiplication and the distributive property. The authors present many other hands-on approaches, including the use of work mats, open number lines, multiplication “chains,” and games with spinners. Numbers and the operations that we perform with them are the starting points for all mathematics. Accordingly, Principles and Standards for School Mathematics makes the Number and Operations Standard first among the five Content Standards and gives it centrality across the mathematics curriculum from prekindergarten through grade 12. The Navigations Series translates Principles and Standards for School Mathematics into action. Each book includes practical, teacher-tested activities and a supplemental CD-ROM that features applets for students’ use and resources for teachers’ professional development.



Navigating through Number and Operations in Grades 6-8 (with CD-ROM)

By: Sid Rachlin, Kathleen Cramer, Connie Finseth, Linda Cooper Foreman,
Dorothy Geary, Seth Leavitt and Margaret Schwan Smith

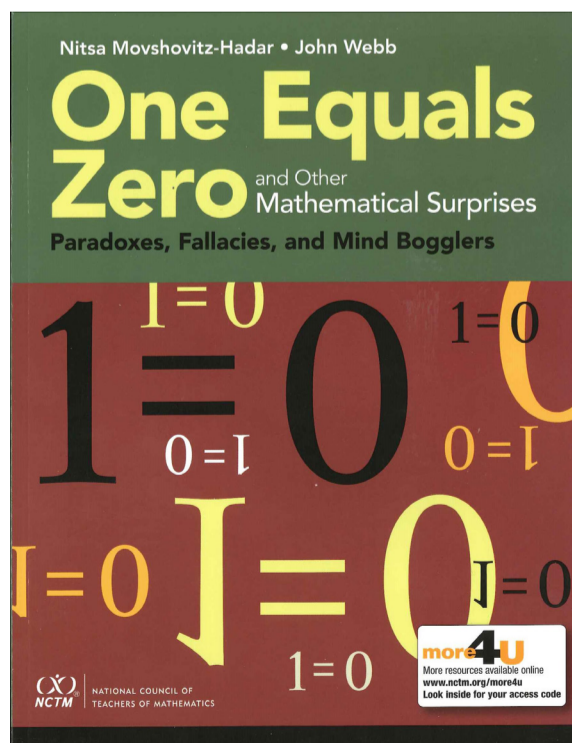
Middle school students consolidate their understanding of integers and rational numbers, increasing their facility with fractions, decimals, and percents and encountering proportionality. This book shows how students can explore these important ideas in such diverse activities as exchanging currency and using area models to develop algorithms for multiplying and dividing fractions. Underlying each activity is the belief that students learn best when they build computational fluency on a firm conceptual foundation. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers. Numbers and the operations that we perform with them are the starting points for all mathematics. Accordingly, Principles and Standards for School Mathematics makes the Number and Operations Standard first among the five Content Standards and gives it a centrality across the mathematics curriculum from prekindergarten through grade 12.



One Equals Zero and Other Mathematical Surprises: Paradoxes, Fallacies, and Mind Boggling

By: Sid Rachlin, Kathleen Cramer, Connie Finseth, Linda Cooper Foreman,
Dorothy Geary, Seth Leavitt and Margaret Schwan Smith

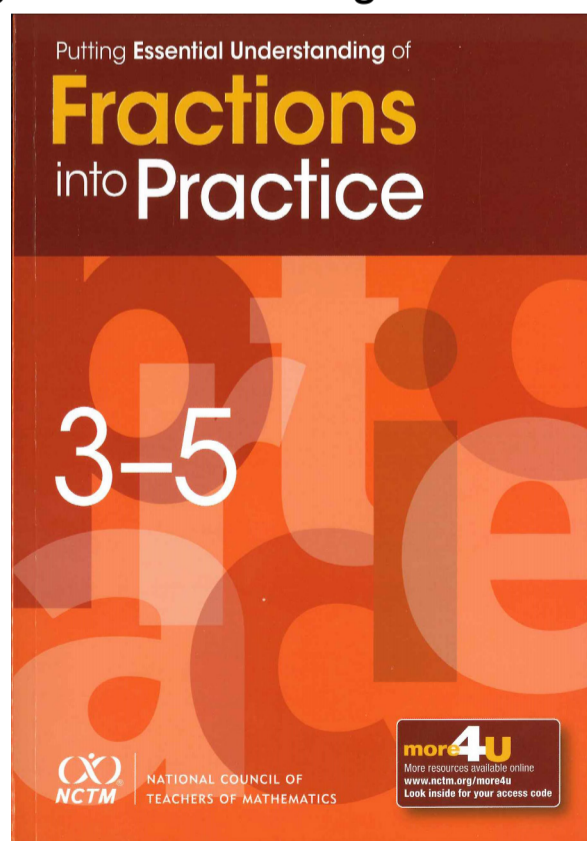
Middle school students consolidate their understanding of integers and rational numbers, increasing their facility with fractions, decimals, and percents and encountering proportionality. This book shows how students can explore these important ideas in such diverse activities as exchanging currency and using area models to develop algorithms for multiplying and dividing fractions. Underlying each activity is the belief that students learn best when they build computational fluency on a firm conceptual foundation. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers. Numbers and the operations that we perform with them are the starting points for all mathematics. Accordingly, Principles and Standards for School Mathematics makes the Number and Operations Standard first among the five Content Standards and gives it a centrality across the mathematics curriculum from prekindergarten through grade 12.



Putting Essential Understanding of Fractions into Practice in Grades 3-5

By: Kathryn Chval, John Lannin, Dustin Jones, Barbara Dougherty

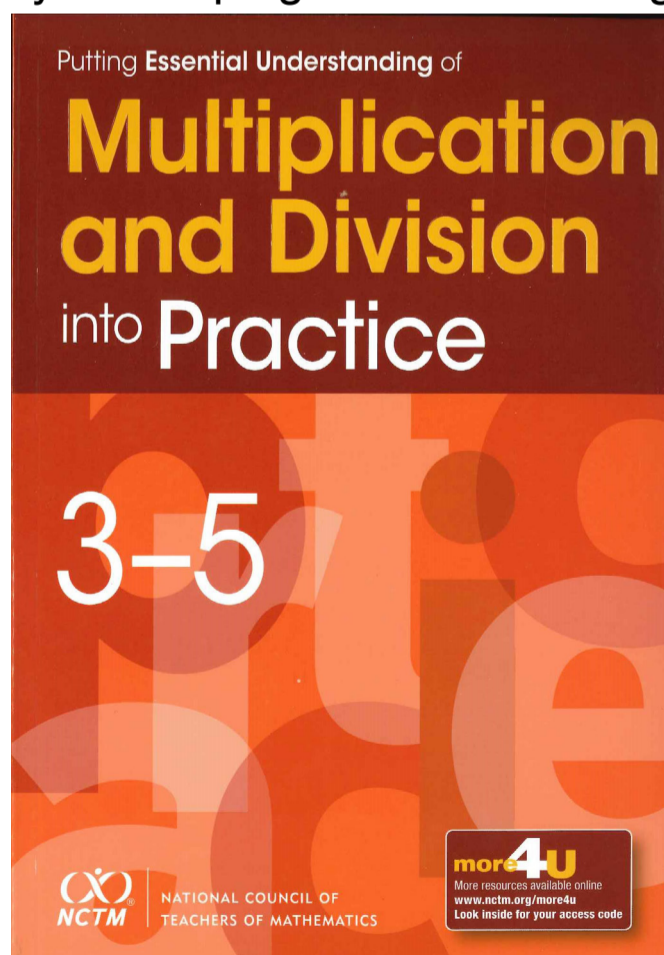
Do your students suppose that $\frac{1}{3}$ is greater than $\frac{1}{2}$, since 3 is greater than 2? Do they believe that having “halves” means having two, and only two, congruent “pieces” of a whole? What tasks can you offer—what questions can you ask—to determine what your students know or don’t know—and move them forward in their thinking? This book focuses on the specialized pedagogical content knowledge that you need to teach fractions effectively in grades 3–5. The authors demonstrate how to use this multifaceted knowledge to address the big ideas and essential understandings that students must develop for success with fractions—not only in their current work, but also in higher-level mathematics and a myriad of real-world contexts. Explore rich, research-based strategies and tasks that show how students are reasoning about and making sense of fractions. Use the opportunities that these and similar tasks provide to build on their understanding while identifying and correcting misunderstandings that may be keeping them from taking the next steps in learning.



Putting Essential Understanding of Multiplication and Division into Practice in Grades 3-5

By: John Lannin, Kathryn Chval, Dustin Jones, Barbara Dougherty

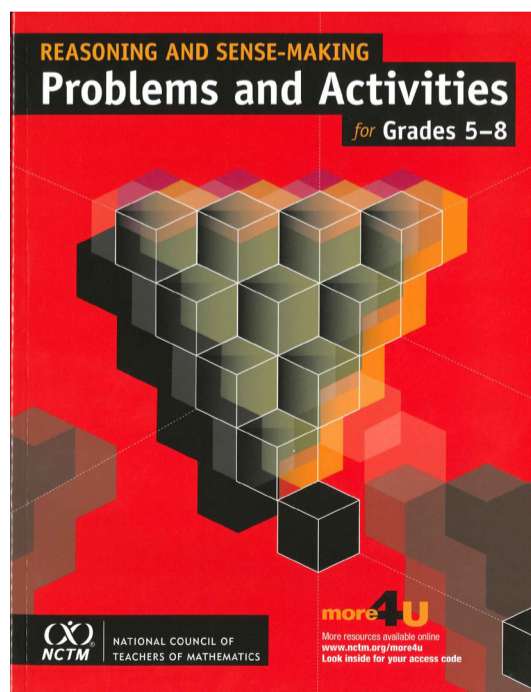
Do your students believe that division “doesn’t make sense” if the divisor is greater than the dividend? Explore rich, researched-based strategies and tasks that show how students are reasoning about and making sense of multiplication and division. This book focuses on the specialized pedagogical content knowledge that you need to teach multiplication and division effectively in grades 3-5. The authors demonstrate how to use this multifaceted knowledge to address the big ideas and essential understandings that students must develop for success with these computations -- not only in their current work, but also in higher-level math and a myriad of real-world contexts. Explore rich, research-based strategies and tasks that show how students are reasoning about and making sense of multiplication and division. Use the opportunities that these and similar tasks provide to build on their understanding while identifying and correcting misunderstandings that may be keeping them from taking the next steps in learning.



Reasoning and Sense-Making Problems and Activities for Grades 5-8

By: Elizabeth Phillips and Judith Zawojewski

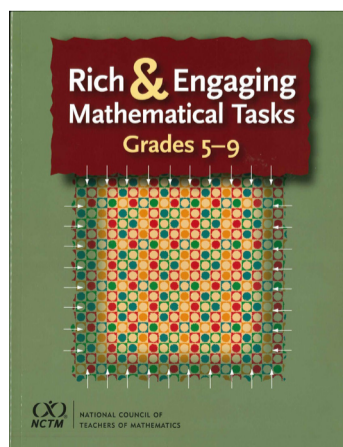
This book is a collection of the best of NCTM's Addenda series, grades 5-8 and includes problems and examples that represent critical content for today's middle school curriculum. The problems focus on the four key practices: roles of representation, generalization, problem solving and connections in mathematics learning and teaching. First introduced by NCTM, these four key practices are part of the set of Mathematical Practices described by the Common Core State Standards for Mathematics. The book is organized into four chapters: Number and Operations, Measurement and Geometry, Data and Chance, and Algebra. The chapters show each problem with a goal statement, a list of needed materials, possible solutions, teacher's notes and ideas for extensions. Teacher's notes include the problem's mathematical goals, key information for implementing the problem, elaboration on students' possible strategies, and sample questions and answers. The editors identify throughout the book where a problem incorporates one of the CCSSM Mathematical Practices. An appendix includes reproducible blackline masters, which can also be found online and downloaded from NCTM's MORE4U website page. This book has More4U, which includes additional resources online. Download activities, classroom materials, and blackline masters. Look inside book for access code.



Rich & Engaging Mathematical Tasks: Grades 5-9

By: Glenda Lappan, Margaret Schwan Smith and Elizabeth Jones

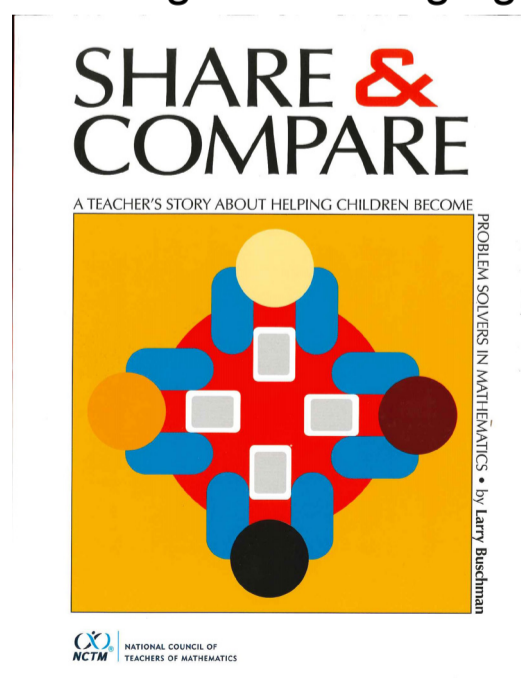
Engage your students with rich content in proven mathematical tasks! Promote real understanding of important mathematical concepts. Design and enact rich instructional experiences that encourage thinking and reasoning. Lessons follow key areas of mathematics featured in the Common Core State Standards for Mathematics (CCSSM). Mathematically rich and engaging tasks offer excellent opportunities for students to learn what mathematics is and how one does it. Such tasks, however, can often be the most difficult to implement effectively during instruction. Research shows that tasks that promote thinking, reasoning, and problem solving often decline during execution due to a variety of classroom factors. The result is students apply previously learned rules and procedures without learning the connection to meaning and understanding and opportunities for thinking and reasoning are lost. This book, a collection of carefully selected articles from past issues of NCTM journals, includes activities for teachers to use with their students to promote the understanding of the mathematical content. Articles are arranged into content strands and ordered within a strand to promote the development of important areas of mathematics. These key areas are all highlighted in the Common Core State Standards for Mathematics (CCSSM) as important for students' progress in mathematics. Each section of the book highlights articles on a key area of mathematics featured in the CCSSM: rational numbers, proportional reasoning, numbers, number theory, patterns and functions, linear equations, measurement, geometry, and probability and statistics. Each article in a section includes mathematical exploration on the focus topic to use with students. Mathematical tasks that provide rich content and engage students allow them to not only understand what they have learned but remember and apply it as well. A valuable resource to any mathematics teacher, this rich collection of mathematical tasks will enliven students' engagement in mathematical thinking and reasoning and help them succeed in the classroom.



Share & Compare: A Teacher's Story About Helping Children Become Problem Solvers in Mathematics

By: Larry Buschman

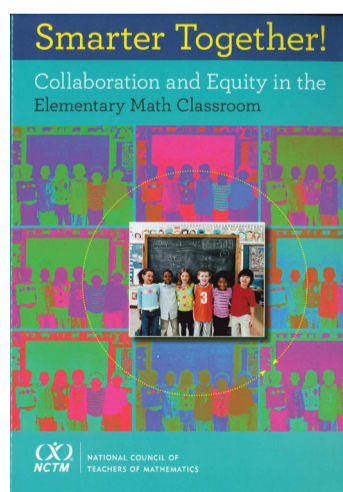
Middle school students consolidate their understanding of integers and rational numbers, increasing their facility with fractions, decimals, and percents and encountering proportionality. This book shows how students can explore these important ideas in such diverse activities as exchanging currency and using area models to develop algorithms for multiplying and dividing fractions. Underlying each activity is the belief that students learn best when they build computational fluency on a firm conceptual foundation. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers. Numbers and the operations that we perform with them are the starting points for all mathematics. Accordingly, Principles and Standards for School Mathematics makes the Number and Operations Standard first among the five Content Standards and gives it a centrality across the mathematics curriculum from prekindergarten through grade 12.



Smarter Together! Collaboration and Equity In the Elementary Math Classroom

By: Helen Featherstone, Sandra Crespo, Lisa Jilk, Joy Oslund,
Amy Parks and Marcy Wood

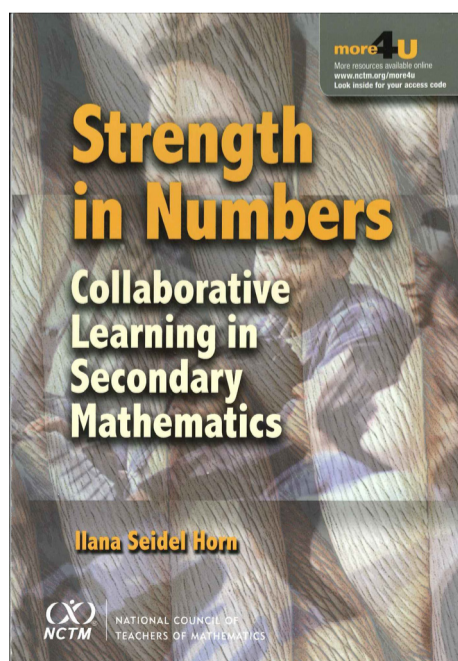
“In this beautifully written book the authors, who combine many years of wisdom as teachers and teacher educators, explain an approach to teaching that results in students working equitably, achieving at high levels and loving math. They explain the approach clearly and engagingly. The authors give us lots of specific teaching ideas, we hear from different students who have benefited from the approach, and we hear wonderful ideas about teaching and learning that explain why children need this approach. Every elementary teacher - indeed every teacher of math - should read this book to start their students on a mathematical path that will bring them enjoyment and understanding.”-Jo Boaler, Professor Mathematics Education, Stanford University. One of the boys in the group responded, “That’s so smart! That’s so smart! That’s what we should do!” Complex Instruction (CI) is a response to the paradox that group work offers much potential but often creates circumstances where few students seem to learn. CI is a set of ideas and strategies that address the problems that confound group work, but that create powerful learning for children. This book offers guidance to readers on how to use these strategies and ideas. The authors describe the lessons they learned using group work, explain how complex instruction helps unsuccessful students, and analyze how to design assignments that support group learning—using group-worthy tasks—giving readers examples of good tasks and help in adapting math problems from their own curricula.



Strength in Numbers: Collaborative Learning in Secondary Mathematics

By: Ilana Seidel Horn

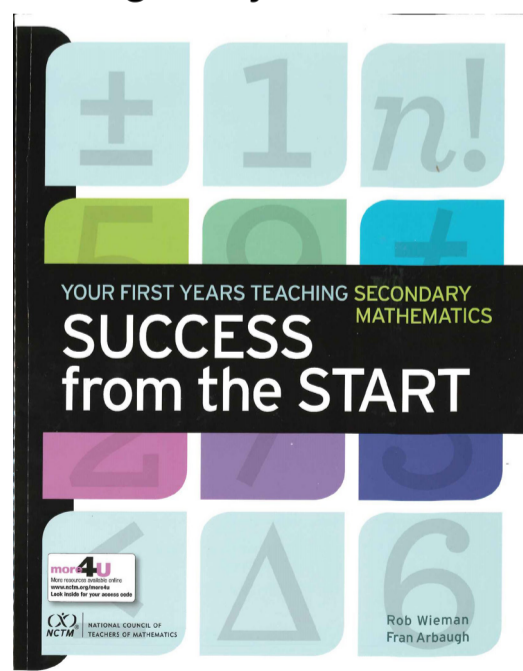
Students who work together, succeed together. Isn't that every teacher's goal? Use group work effectively to create a learning environment in the secondary mathematics classroom. Learn how students experience learning mathematics in collaborative settings. Develop tasks, concepts, strategies, and tools that create successful group work and reach students of all abilities. Written by a seasoned teacher, researcher and teacher educator with over two decades of teaching experience, the goal of this book is to support teachers in developing tools for effective group work in their secondary mathematics classrooms. Effective group work engages children's own thinking and allows them to work together to understand a concept. It can also address problems that often arise in typical mathematics instruction by providing a framework for teachers to create engaging learning environments. The book outlines ways to choose tasks, help students adjust to new ways of approaching schoolwork, and discusses the types of status problems that can impede the most earnest attempts at collaborative learning. This practical, useful book introduces tested tools and concepts for creating equitable collaborative learning environments that supports all students and develops confidence in their mathematical ability.



Success from the Start: Your First Years Teaching Secondary Mathematics

By: Rob Wieman and Fran Arbaugh

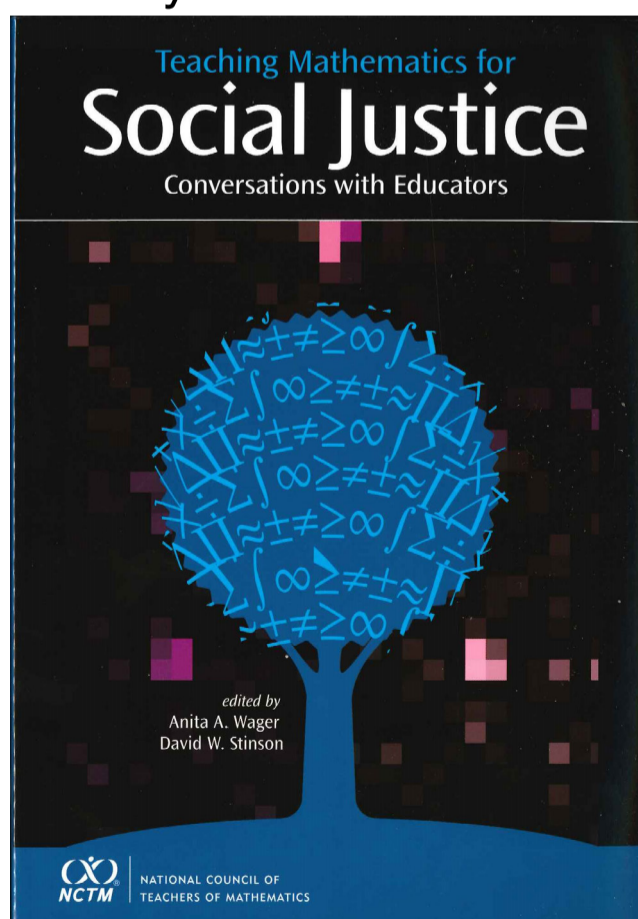
The Essential Guide to Navigating Your First Years of Teaching Secondary Mathematics. You just signed your first contract to teach secondary math. You're excited, but you probably have many questions and concerns: What do I do when students don't get the lesson? How can I help students who struggle with math that they supposedly learned in elementary school? How do I arrange for students who are absent to make up the work? Do I assign seating or let students choose their seats? Should I have students work in groups? How much homework should I assign and how much should I grade? Though you may envision your classroom as a place where students engage with mathematics and learn important content, you may also worry about how your teaching will actually play out how you and your students will interact and what they will learn. Based on classroom observations and interviews with seasoned and beginning teachers, this highly useful book offers valuable suggestions to improve your teaching and your students opportunities to learn. The authors explore both the visible and invisible aspects of teaching and offer proven strategies to make the work meaningful not merely manageable. Success from the start means being prepared from the start. This book not only teaches you how to be an effective math teacher but also gives you the tools to do it well.



Teaching Mathematics for Social Justice: Conversations with Educators

By: Anita A. Wager and David W. Stinson

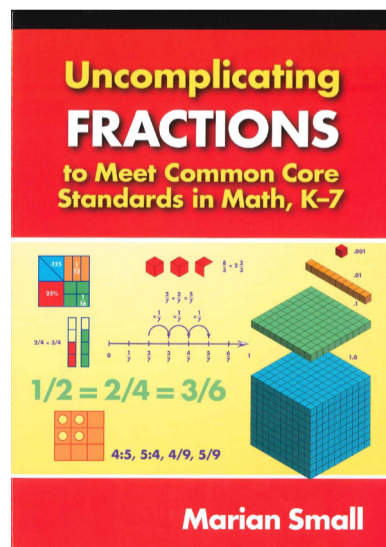
Mathematics as a Catalyst for Change for ALL Students. Educators increasingly recognize the important role that mathematics teaching plays in helping students to understand and overcome social injustice and inequality. This collection of original articles is the start of a compelling conversation among some of the leading figures in critical and social justice mathematics, a number of teachers and educators who have been inspired by them and who have inspiring stories of their own to tell and any reader interested in the intersection of education and social justice. An important read for every educator, this book shows how to teach mathematics so that all students are given the tools they need to confront issues of social justice today and in the future.



Uncomplicating Fractions to Meet Common Core Standards in Math, K-7

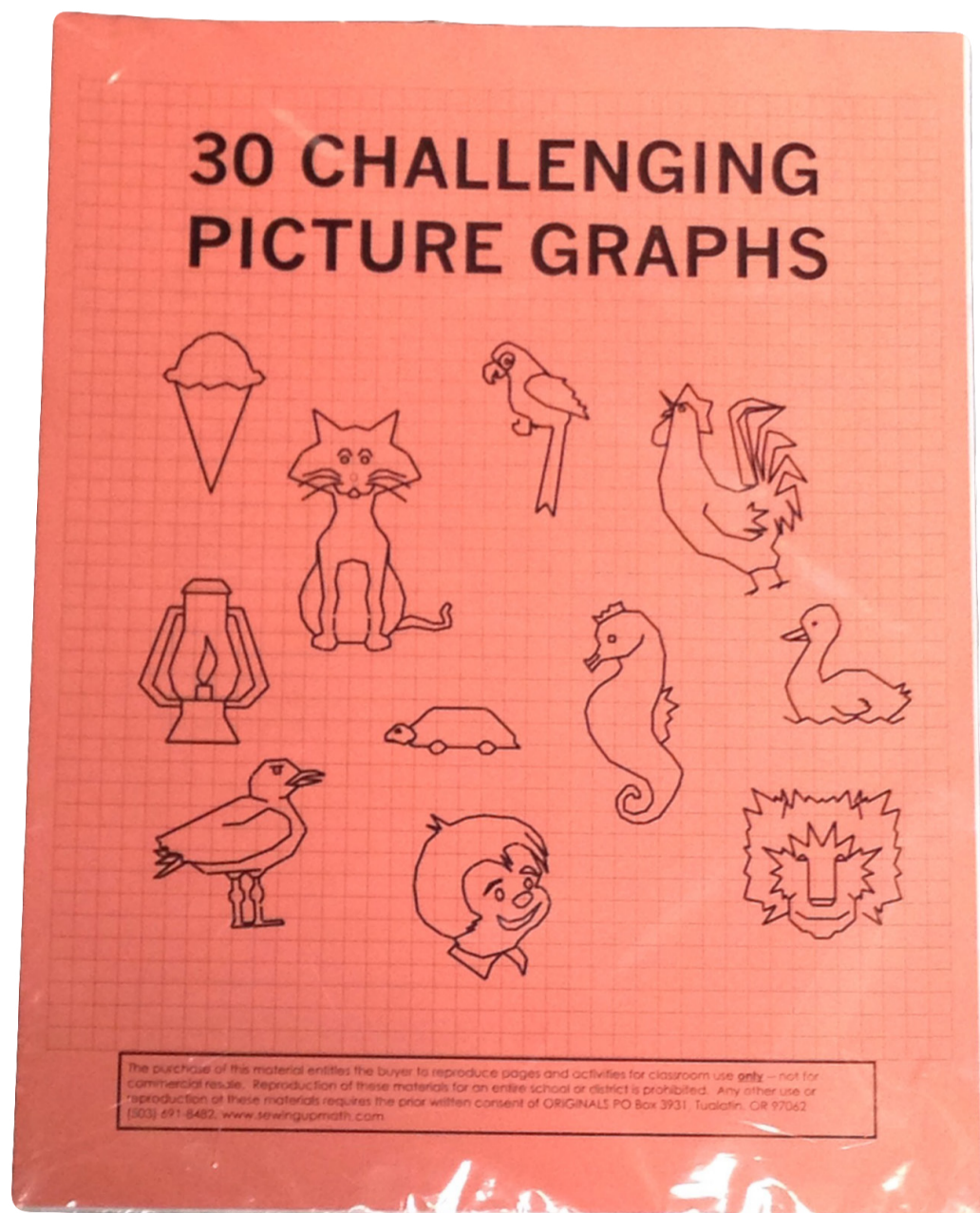
By: Marian Small

The Common Core State Standards for Mathematics challenges students to become mathematical thinkers, not just mathematical “doers.” In her new resource, professional developer Marian Small shows teachers how to uncomplicate the teaching of fractions by focusing on the most important fraction ideas that students need to grasp. The book is organized by grade level beginning with Grade 1, where the first relevant standard is found in the geometry domain, and ending with Grade 7, where the focus is on operations with rational numbers and proportional thinking. In each section the relevant standard is presented, followed by a discussion of important underlying ideas associated with that standard, as well as some thoughtful, concept-based questions that can be used for classroom instruction, practice, or assessment. Underlying ideas include: background for the mathematics of the standard; suggestions for appropriate representations for those specific mathematical ideas, including equations, drawings, and manipulatives; suggestions for explaining ideas to students; and cautions about misconceptions or situations to avoid. This accessible book provides math teachers with support for differentiated instruction. Math coaches can use it to assist teachers with their transition to the Common Core State Standards. All teachers will find it helpful to see the mathematical fraction learning that precedes and follows the grades that they teach. It is also an excellent text for preservice teachers as they prepare themselves and their students to understand and teach math with a deep level of understanding.



30 Challenging Picture Graphs

Includes 30 reproducible graphs and coordinates. Connect the coordinates to “draw” the picture. Ranges from easy to challenging. Uses all 4 quadrants. The last 2 picture graphs are mirror images but you are only given half the directions, the rest is up to your students to figure out.





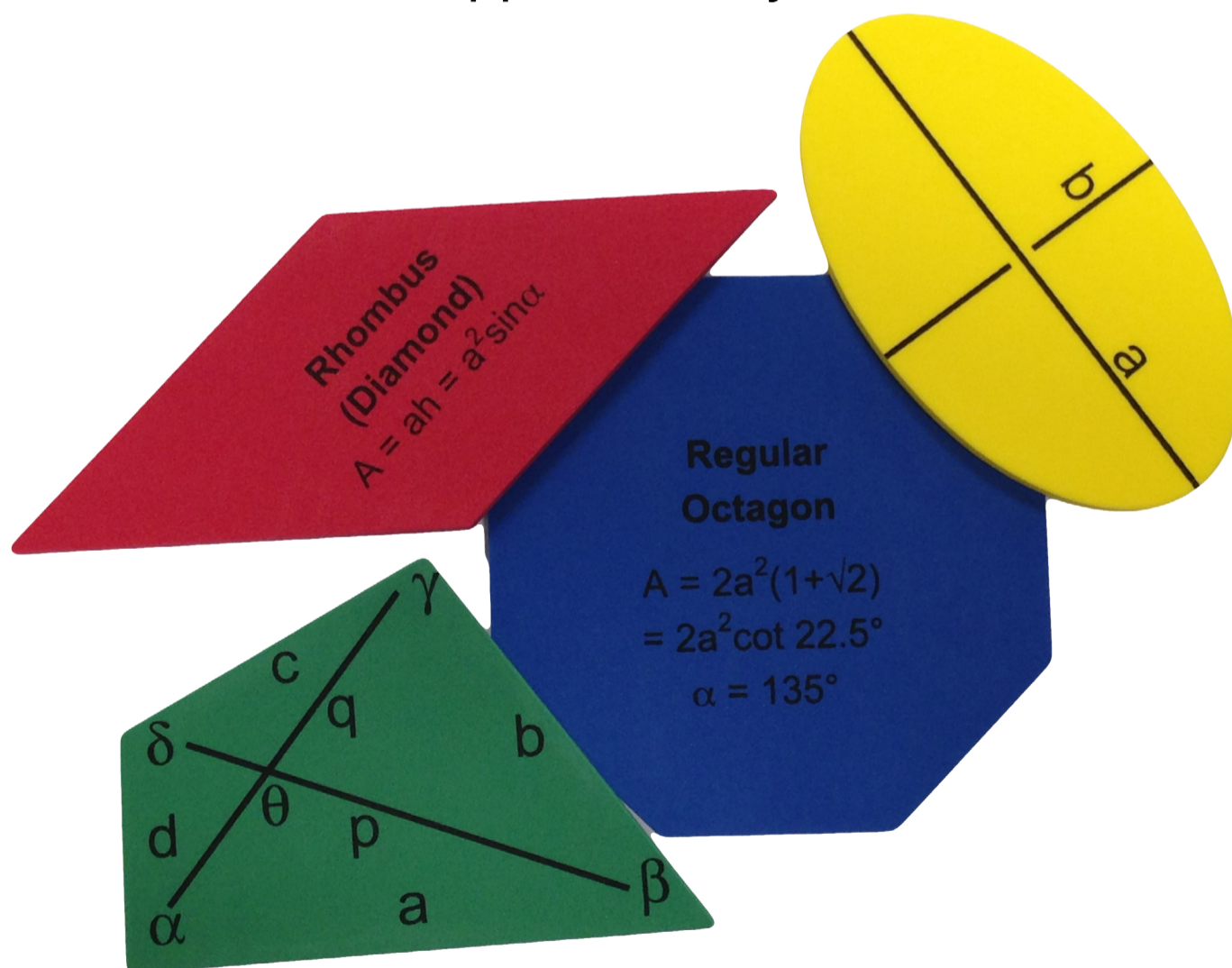
30m/100ft Measuring Tape

High-quality, fiberglass tapes in closed reels. Calibrated on 1 side in inches and the other in metric. Useful for outdoor activities. Will not tear, break, rust, or stretch.



Advanced Geometric Shapes

A set of 30 soft, quiet, durable, and nontoxic EVA foam shapes. Different colors are used to group shapes. Key parameters such as edge length and angles are labeled on 1 side of each piece, with the name of the shape and its area printed on the other side. Allows shapes to be used like flash cards to help students learn names of shapes and calculate the area of shapes. Set includes instructions and student worksheets. Shapes measure approximately 4".



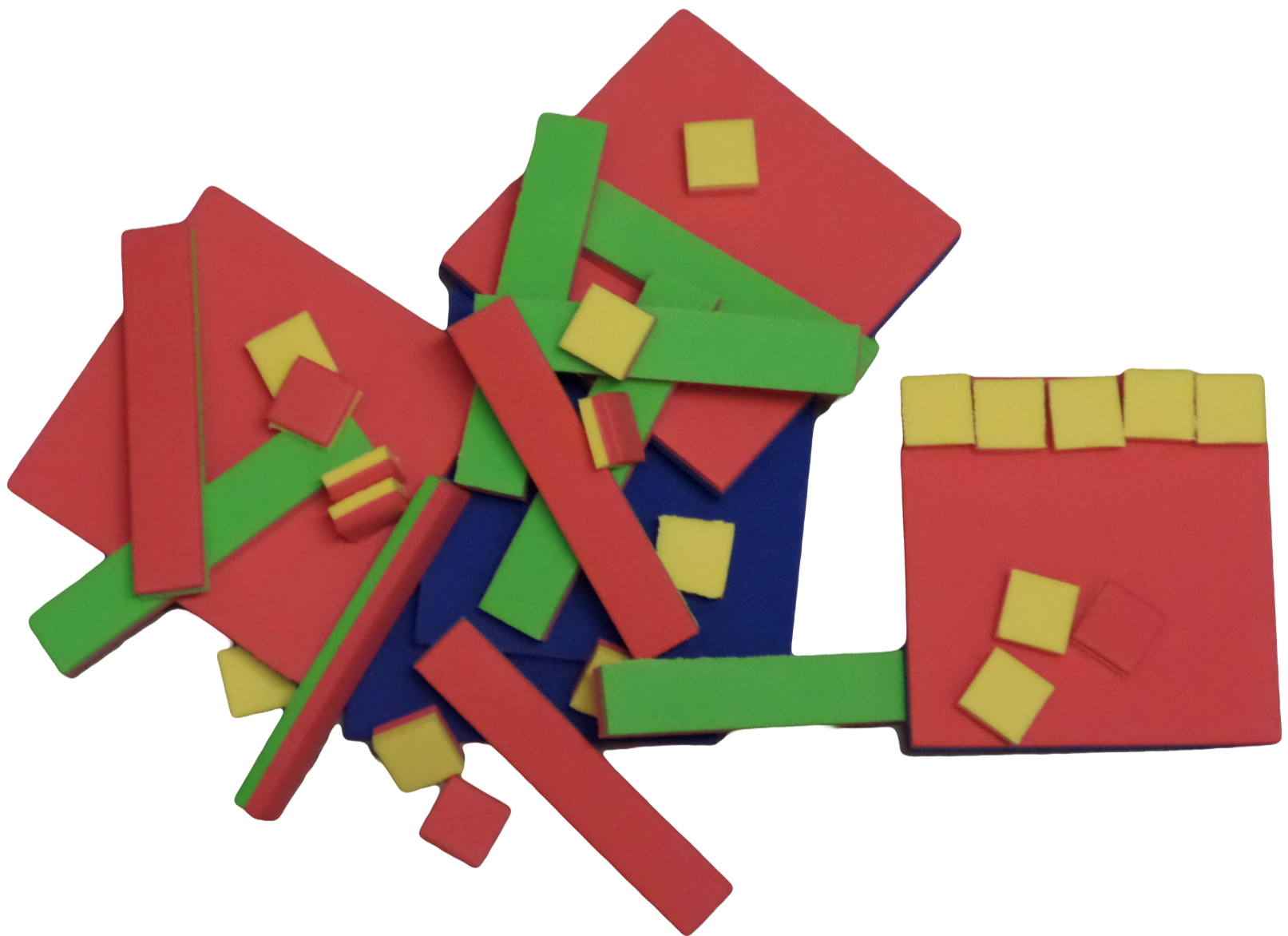
A-Ha! Brainteaser Kit

Students build problem-solving and critical-thinking skills as they play through 8 brainteasers centers, using hints to help scaffold learning as needed. The “Aha! Moment” that comes from solving a brainteaser encourages students to exercise logic in new ways and builds confidence to take on more difficult challenges. Centers include Straight Arrow, The Missing “T”, Four T’s, 4-Piece Pyramid, Starburst, The Fifth Chair, Double Square, and Pack It In. Suggested for grades 2-8.



Algebra Tiles

Contains thirty, 32-piece student sets. Each student set contains shapes that are easy to handle and quiet on desktops (32-piece two-color foam set of Algebra Tiles).

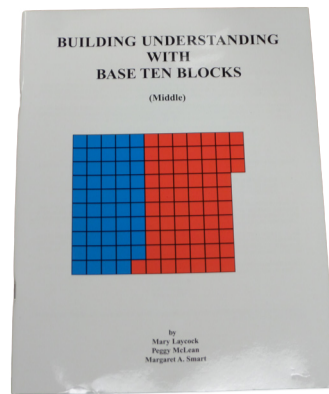




All Hands on Deck Manipulative Kit

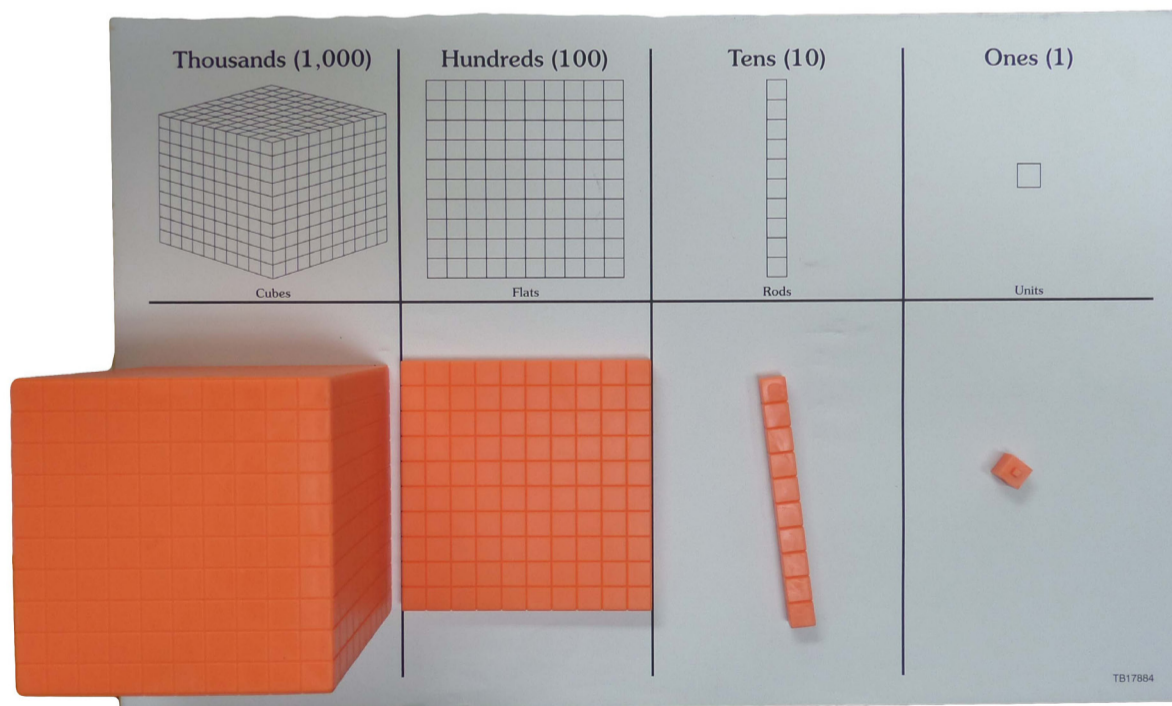
Book includes games to reinforce operations, place value, decimals, positive and negative integers, and graphing. Activities use ordinary playing cards, dice, and counters. Kit includes 1 deck of 52 giant playing cards, 10 decks of traditional playing cards, and 48 dot dice.





Base 10 Classroom Set

Enough materials for 20-25 students or groups. Includes 600 unit cubes, 200 rods, 20 flats, 3 decimeter cubes, place value charts, 96-page book. Two additional sets without place value charts and the book available as well.



Basic Geometric Construction Kit

An economical kit with everything students need to measure, draw, design, and more. All components feature accurate standard and metric measurements. Includes 30 measuring tapes (60"), 30 professional protractors (6"), 30 transparent student rulers (12"), 1 overhead ruler, and 30 safe-drawing compasses.



Blank Transparent Spinners

These 4 1/2" square washable plastic boards have plastic spinners. Set of 35 spinners.

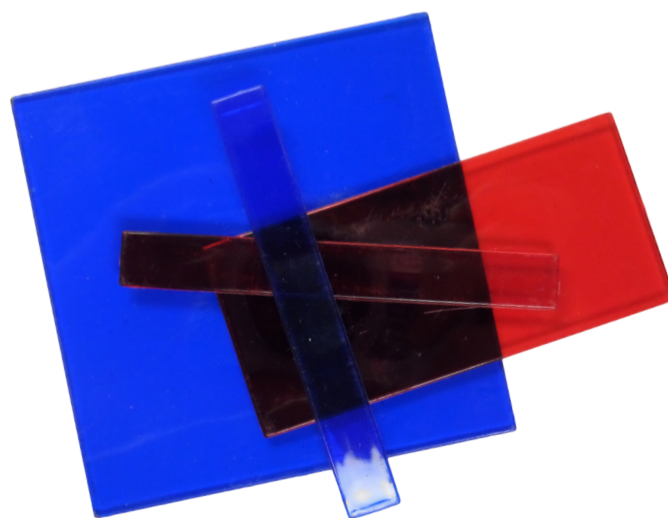
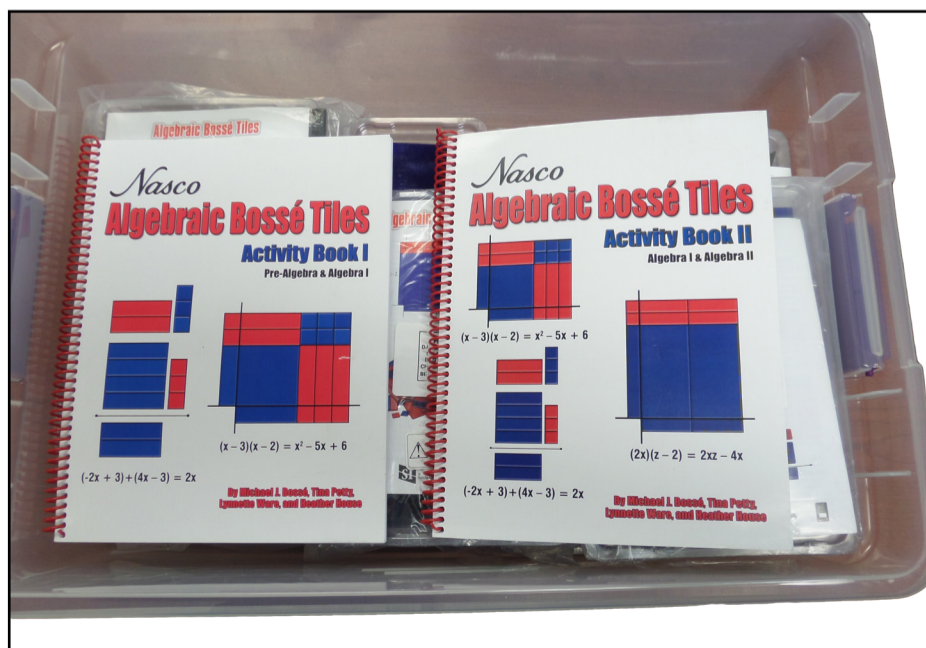


Bosse Tiles X, Y, and Z

Class Set

A visual aid to help reinforce and clarify algebraic principles by combining the power of Algebra Tiles and Algebra Lab Gear.

Bosse Tiles are manipulatives that represent the different elements of an algebraic equation. Using these manipulatives allow students to make a hands-on connection to algebraic concepts. Tiles can represent the product of linear polynomials up to 3 variables or the factoring of quadratic polynomials with as many as 6 terms. Tiles are translucent, allowing for use on an overhead. The Bosse Tiles books provide teachers and students with a variety of practice problems and information about using the Bosse Tiles to find and double-check answers. Includes 4 sets of the x, y, and z Bosse Tiles; Algebraic Bosse Tiles Activity Book II for Algebra I and Algebra II; and teacher's guide.



Classroom Dice Kit

Great for reinforcing core math concepts, this dice kit offers an entertaining way for students to work with numbers. Kit includes two books; 94-page Dice Activities for Math and 120-page Dice Activities for Mathematical Thinking. Hands-on manipulatives include; 36-foam dot dice, 36-foam fraction dice, 36-foam number dice, 36-5/8" blank dice, 36 blank dice with labels, 4 write-on magnetic dice, 24-1 3/4" foam dot dice, 2-5" foam dot dice, 2-5" foam number dice, 144-3 color dot dice, and classroom dice assortment (36-20 sided dice, 28-10 sided dice, 10-6 sided dice, 7-12 sided dice, 7-8 sided dice, and 9-4 sided dice).





Classroom Domino Kit

Kit includes 840 double-six wooden dominoes. The book More Domino Math contains 66 blackline masters emphasizes addition and basic facts drills in multiplication and division. The book Domino Math Games: Linking the learning for kids, concepts covered include all operations, place value, fractions, problem solving, data management and analysis, probability, and more.



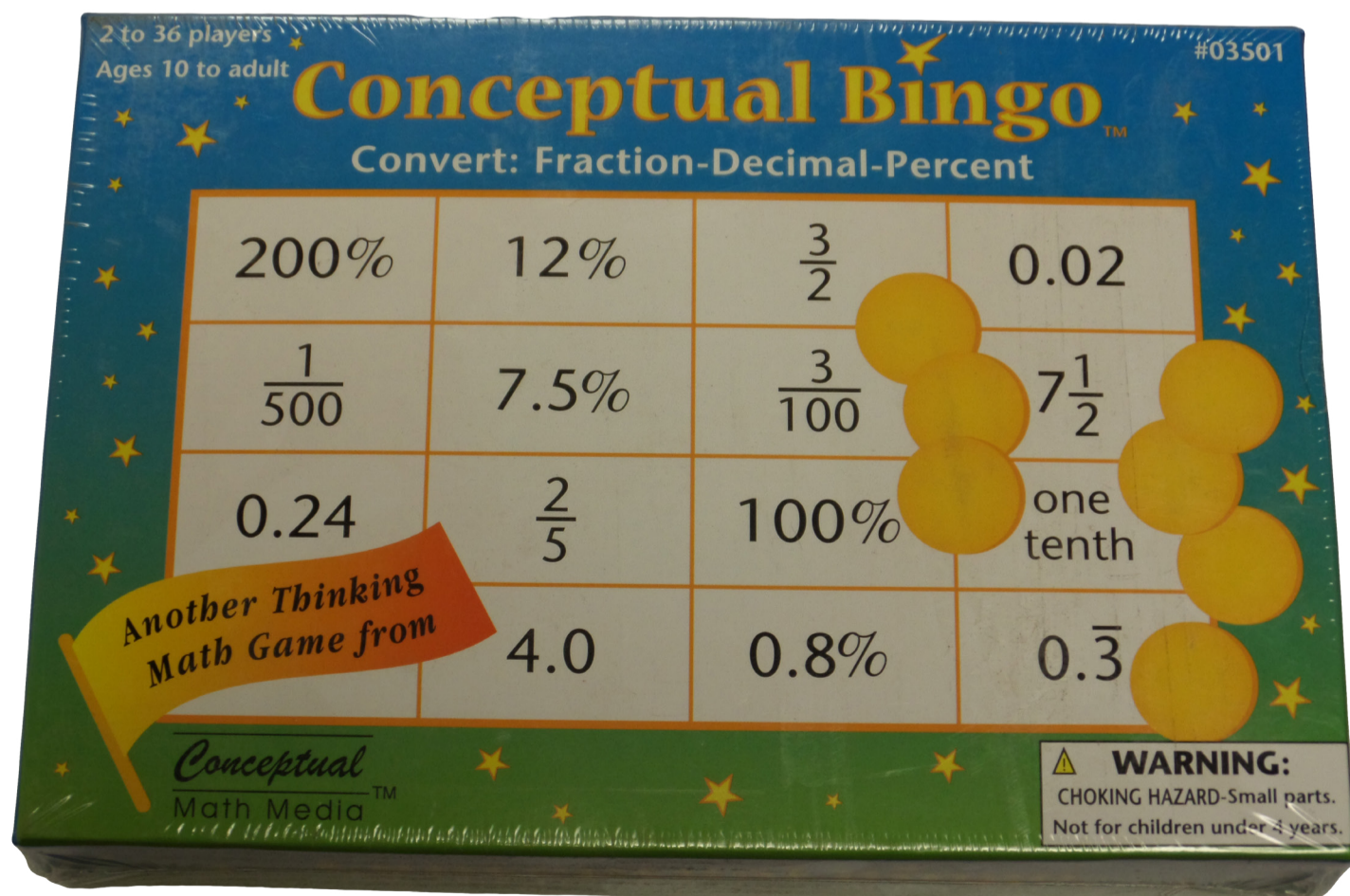
Clinometers

Determining heights of trees, buildings or other structures, and the depth of valleys is simple with this sturdy measuring device. Students point the clinometer at the top of a tree or building, wait for the graduated disc to stop spinning, and then read the angle on the protractor. With this information, students can then calculate height by using the formula found in the included guide. Set includes one teacher clinometer and ten student clinometers.



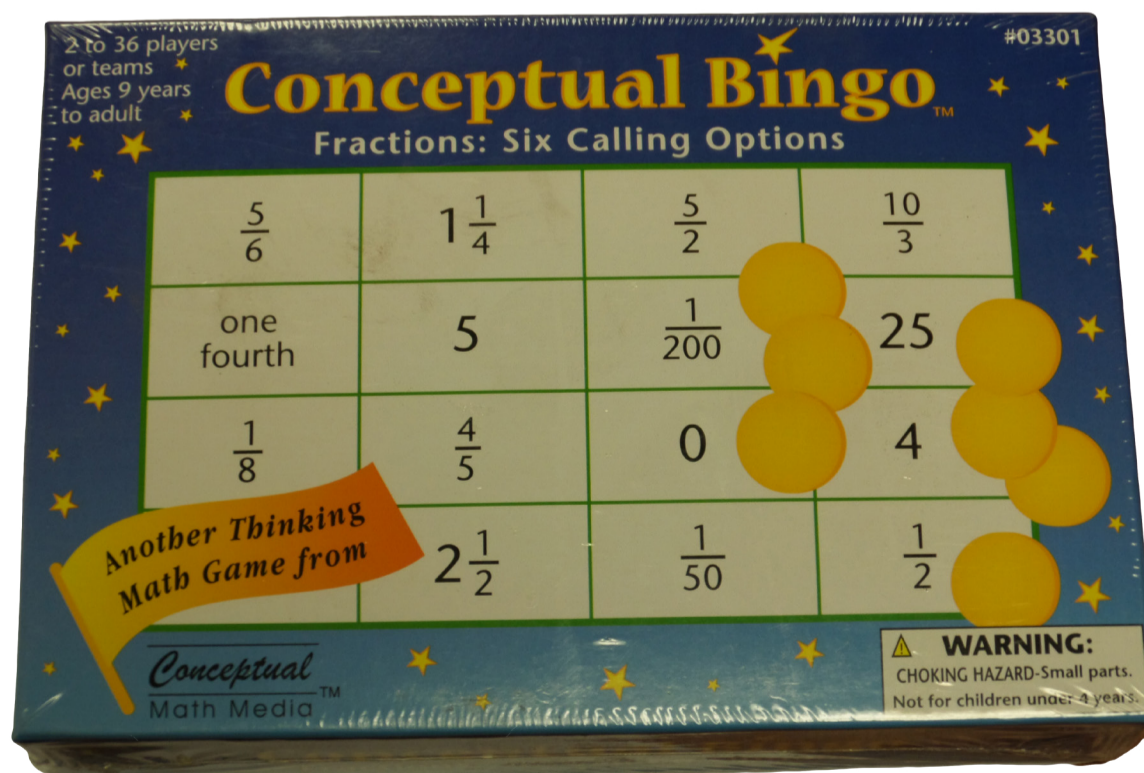
Conceptual Bingo: Convert Fraction- Decimal-Percent

Includes 6 ways to call each value. These options maximize flexibility by covering numerous topics. The questions go beyond computation to include concepts and language. Each game includes 36 playing cards, 360 plastic markers, and 2 reproducible masters to help with assessing and customizing. Calling cards cover naming fractions, counting by fractions, adding and subtracting with like denominators, simplifying fractions, mixed number and improper fraction conversation, rate, ratio, multiplication, division, adding with unlike denominators, averaging, and language. The bingo cards contain selected fractions from 0 to 200.



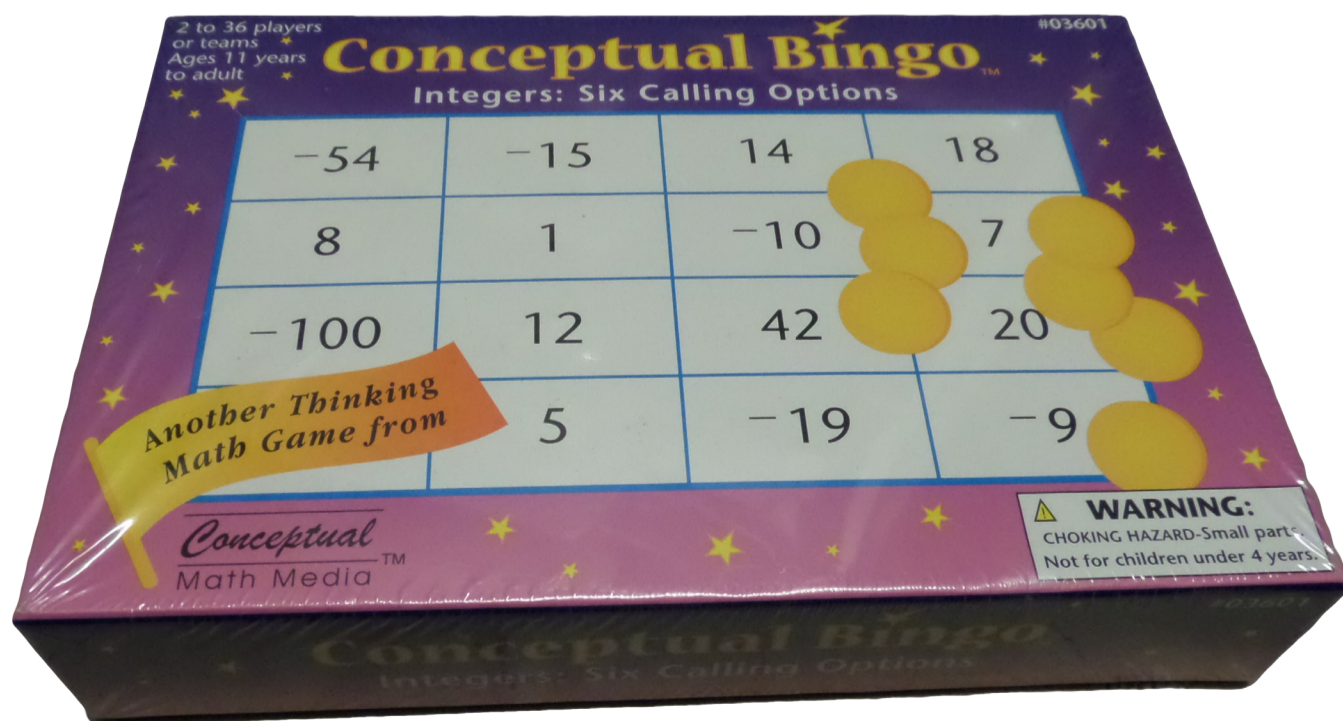
Conceptual Bingo: Fractions

Includes 6 ways to call each value. These options maximize flexibility by covering numerous topics. The questions go beyond computation to include concepts and language. Each game includes 36 playing cards, 360 plastic markers, and 2 reproducible masters to help with assessing and customizing. Calling cards cover naming fractions, counting by fractions, adding and subtracting with like denominators, simplifying fractions, mixed number and improper fraction conversation, rate, ratio, multiplication, division, adding with unlike denominators, averaging, and language. The bingo cards contain selected fractions from 0 to 200.



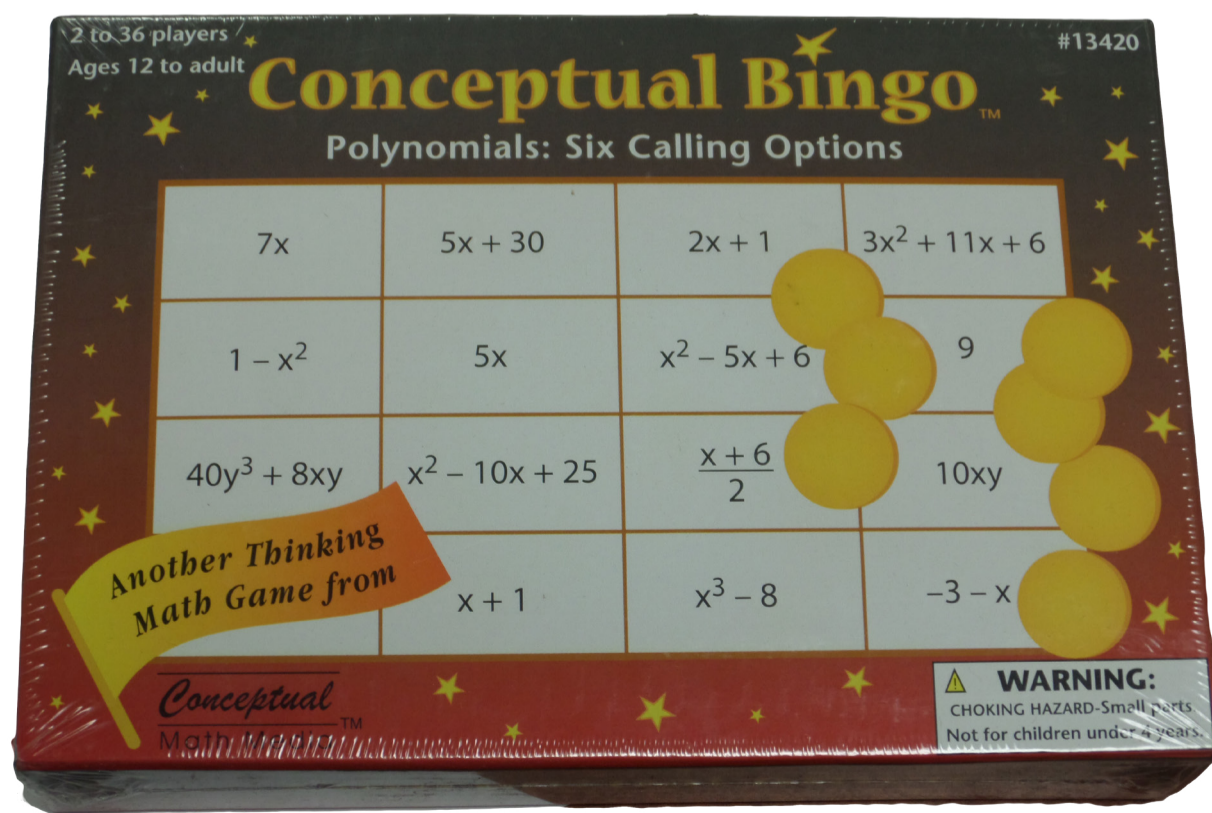
Conceptual Bingo: Integers

This bingo game provides 6 ways to call each value. These options maximize flexibility by covering numerous topics. Questions go beyond computation to include concepts and language. The 6 questions on each calling card cover naming, comparing and interpreting integers, opposite of a number, absolute value of a number, the 4 basic operations, and language. Cards contain selected integers from -100 to 100. Contains 2 reproducible masters to help assess and customize. Includes 60 calling cards, 36 unique bingo cards, and 360 plastic markers.



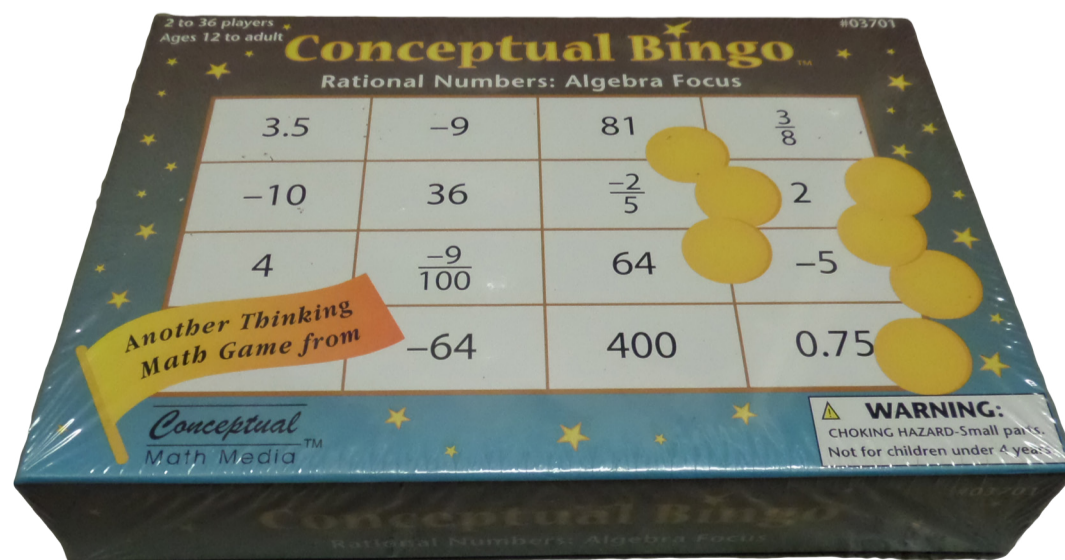
Conceptual Bingo: Polynomials

A fun and creative way to learn math. The 6 questions on each calling card allow for different learning levels and multiple-topic coverage. The options maximize the game's flexibility. Questions cover concepts, language, and computation. Each game includes 36 unique bingo cards, 360 plastic markers, calling cards, and 2 reproduceable masters to help assess students and customize the game. Covers naming polynomials, combining like terms, multiplying monomials, using the distributive law, multiplying binomials, factoring and dividing polynomials, and working with polynomial fractions. The bingo cards contain a variety of monomials, binomials, and trinomials. Includes 51 calling cards.



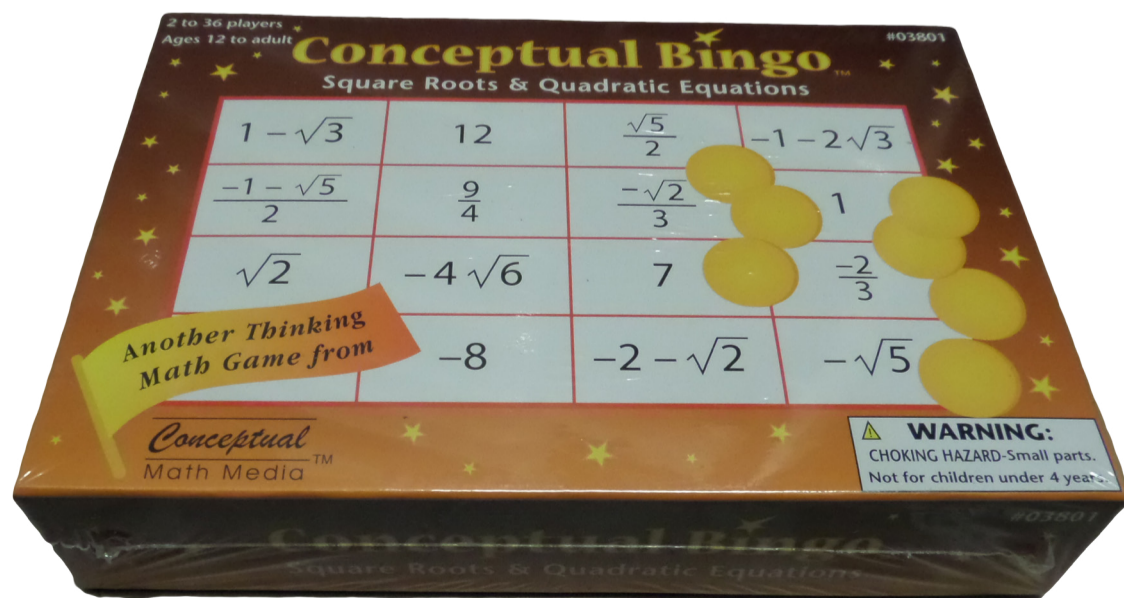
Conceptual Bingo: Rational Numbers

A fun and creative way to learn math. The 6 questions on each calling card allow for different learning levels and multiple-topic coverage. The options maximize the game's flexibility. Questions cover concepts, language, and computation. Each game includes 36 unique bingo cards, 360 plastic markers, calling cards, and 2 reproduceable masters to help assess students and customize the game. Covers basic review of the 4 basic operations, involving rational numbers, exponents, language, evaluating numerical expressions at 2 difficulty levels, order of operations, evaluating algebraic expressions and formulas for given values of the variable, and solving linear equations and formulas at 2 difficulty levels. The bingo cards contain selected rational numbers from -1,000 to 400.



Conceptual Bingo: Square Roots & Quadratic Equations

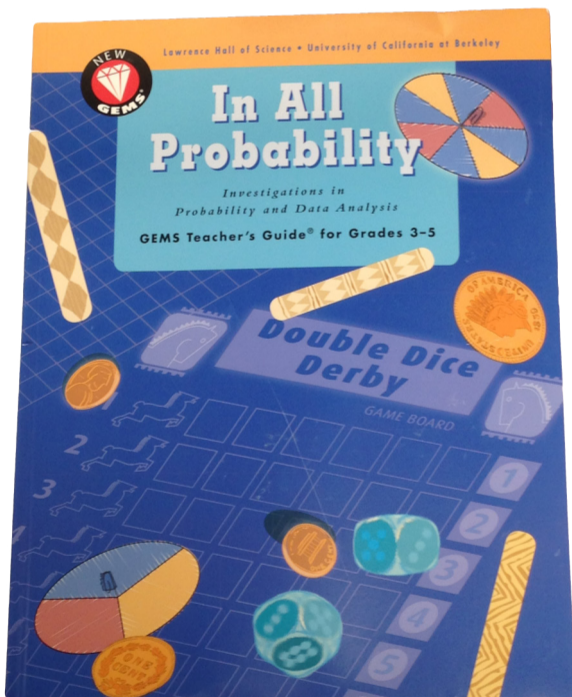
A fun and creative way to learn math. The 6 questions on each calling card allow for different learning levels and multiple-topic coverage. The options maximize the game's flexibility. Questions cover concepts, language, and computation. Each game includes 36 unique bingo cards, 360 plastic markers, calling cards, and 2 reproduceable masters to help assess students and customize the game. Covers simplifying and operating with square-root expressions, solving quadratic equations set up for factoring or square-root methods, preparing for the quadratic formula, and solving quadratic equations in standard and non-standard form. Includes 54 calling cards.





Data & Chance Kit

This convenient kit includes the most popular reference materials and hands-on manipulatives used for introducing and reinforcing the concept of probability. Contains enough materials for 5 teams of students. Kit includes the book *Probability and Statistics*. Hands-on manipulatives include various spinners (45), playing cards (5 standard decks), and various-sided dice (241).



Digital Compact Scale

An electronic classroom scale featuring a tare button; auto power off; and large digital display; plus a mode button for grams, pounds, and ounces. Capacity: 5,000 g/176.4 oz. Accuracy: 1.0 g/0.1 oz. Requires 4 “AA” batteries (included).

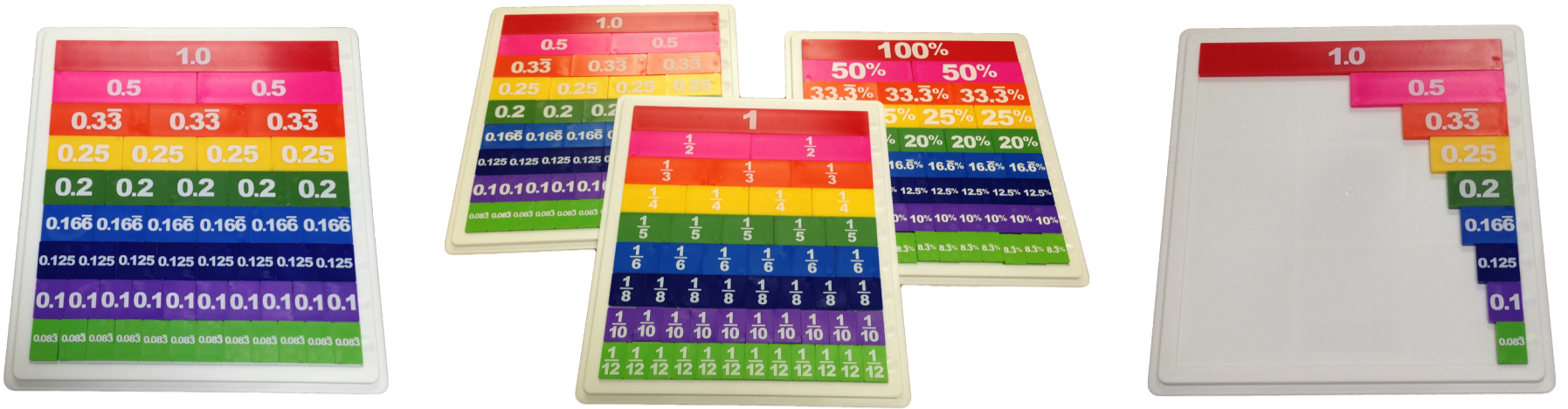




Elapsed Time Kit

A classroom-tested tool that successfully helps students calculate the correct amount of time elapsed. Simply set the blue hands on the clock to the start time and set the red hands to reflect the end time. Count, clockwise from the start hour hand to the end hour hand, to calculate the number of hours that have passed. Repeat with minute hands to calculate the number of minutes that have passed. Includes 1 Elapsed Time Clock (14" dia. face) and 6 Elapsed Time Student Clocks (4 3/4"). Blue time card holder with blue and red time cards to make a multitude of elapsed time combinations. This unique, write-on/wipe-off time tool allows students to measure time in a number line format where they can visually see where the time goes! Includes 30 Student Elapsed Time Rulers™ (17" x 1 3/4"), 1 Demonstration Elapsed Time Ruler™ (60" x 5 1/2").

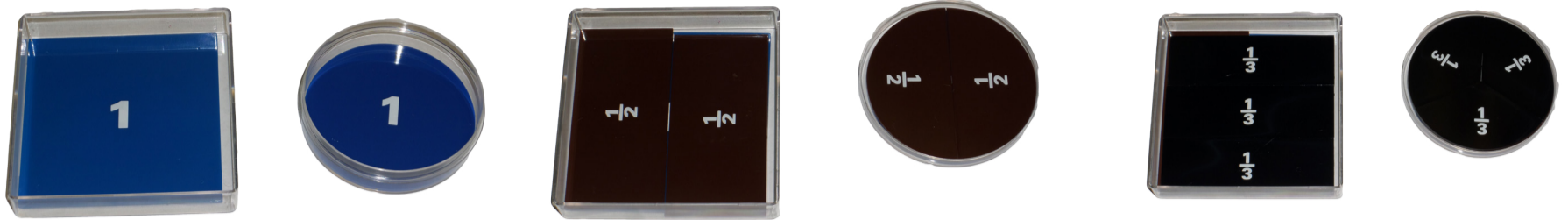




Equivalence Tiles Kit

Students will cross over and compare fractions, decimals, and percents with ease when they begin to use these equivalence tiles. Fraction tiles read 1, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{8}$, $\frac{1}{10}$, and $\frac{1}{12}$; decimal tiles read 1.0, 0.5, 0.33, 0.25, 0.2, 0.166, 0.125, 0.1, and 0.083; percent tiles read 100%, 50%, 33.3%, 25%, 20%, 16.6%, 12.5%, 10%, and 8.3%. Set includes 10 sets each of fraction tiles, decimal tiles, and percent tiles; 1 set each of transparent fraction tiles, transparent decimal tiles, and transparent percent tiles.





Printed Fraction Circles & Squares

Reinforce Standards-based fraction concepts with this collection of shapes and manipulatives that will build up students' problem solving and reasoning abilities. Includes 18 sets of the fraction circles, 1 set of the transparent fraction circles, 18 sets of the fraction squares, 1 set of the transparent fraction squares, and a reference guide.



Fraction Tiles Class Kit

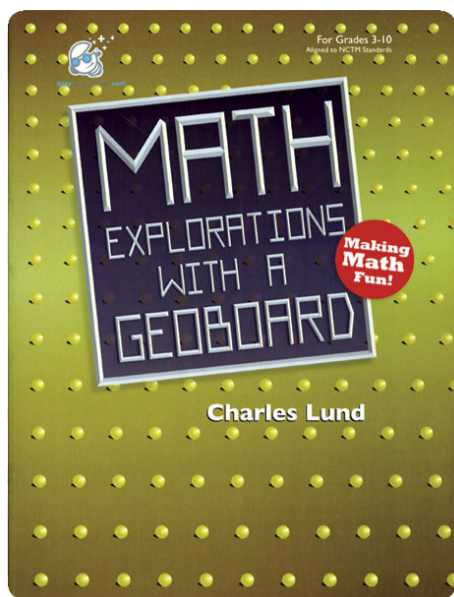
Teach your students fraction comparisons with these colorful fraction tiles. Includes tiles that read 1, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{8}$, and $\frac{1}{10}$.



Deluxe Fraction Tower Activity Set

A visual, concrete way to teach fractions. Includes 36 double-sided fraction activity cards and a class set of fraction tower blocks.

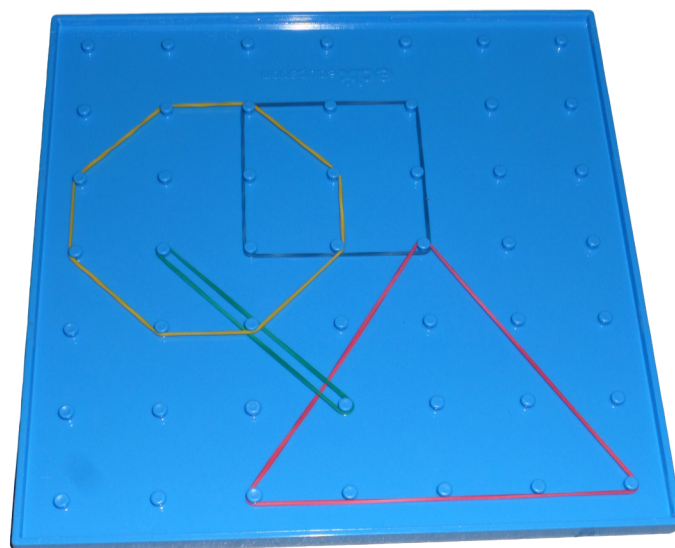
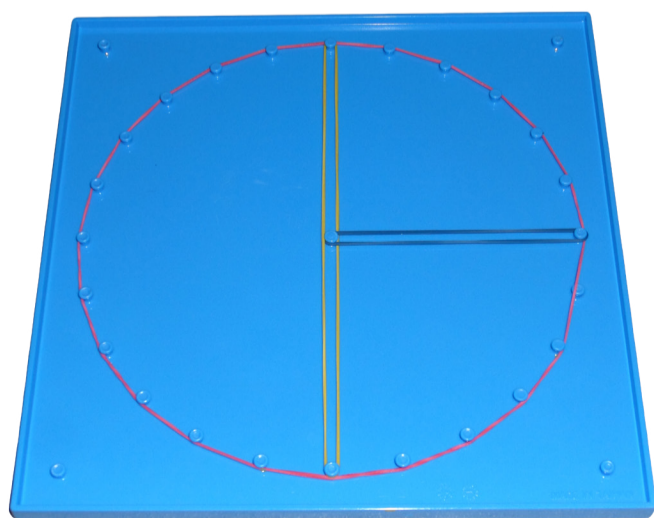




Geoboards

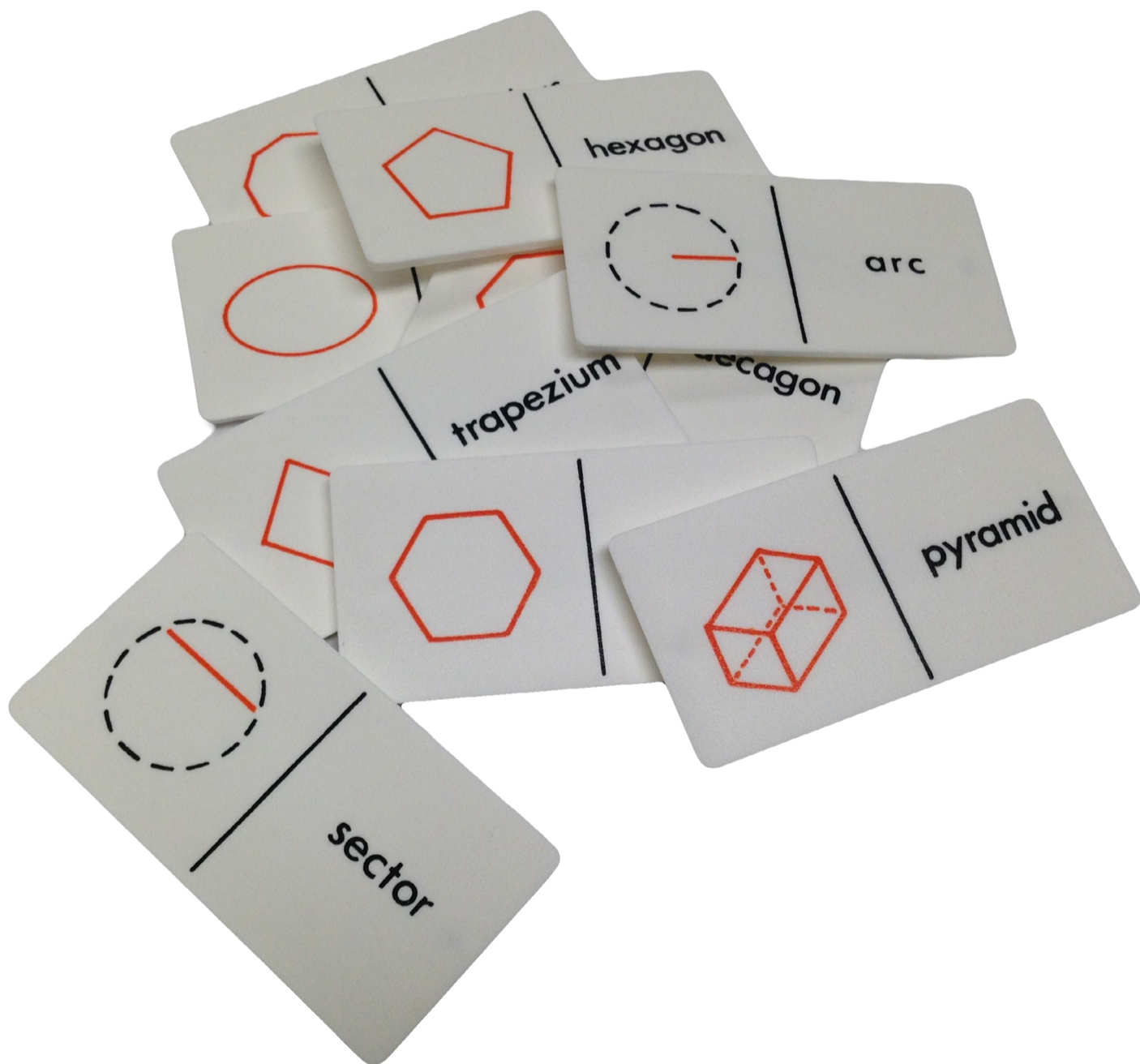
Each 2-sided geoboard features 1 side with 7 x 7 pins and 1 side with a 24-pin circular design. Includes teacher's guide, 30 geoboards, and 2 bags of geobands (250 geobands per bag).

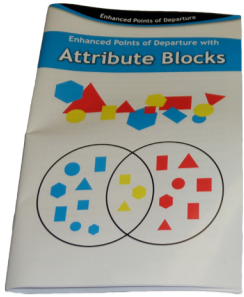
The kit also includes the book Math Explorations with a Geoboard. This book is a reproducible resource book presents activities for students to gain hands-on experiences with polygons and their properties, problem-solving puzzles and games, investigations, graphing, fractions, ratios, percents, and logical reasoning. Includes masters and selected answers and comments.



Geometry Dominoes

These 24 dominoes are printed on heavy plastic and aim to aid in the recognition of 2-D and 3-D shapes, and to extend the student's mathematical vocabulary.





Geometry Kit

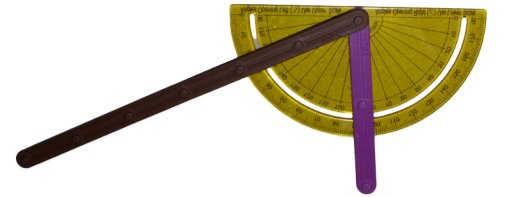
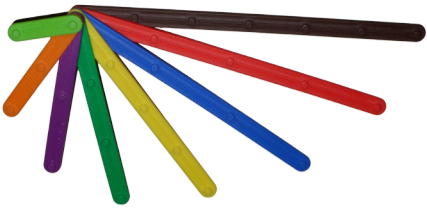
This kit includes everything you need to teach basic geometry concepts including: attribute blocks set, 400 color tiles, 36 sets of tangrams, 250 pattern blocks, 100-2cm wooden color cubes, and 6 sets of pentominoes.



Geosolids

Excellent set of transparent teaching tools for classroom discussions on surface, perimeter, symmetry, volume, and other geometric topics. Contains 11 transparent 4", 3-D GeoShapes and 11 corresponding 2-D folding nets.

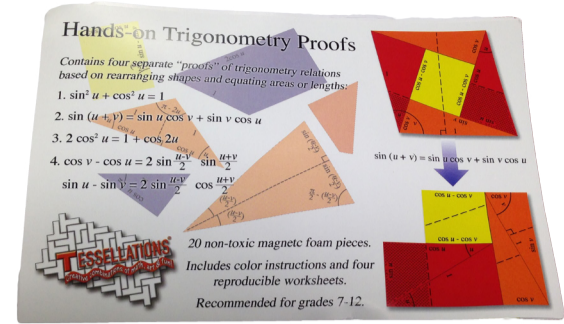
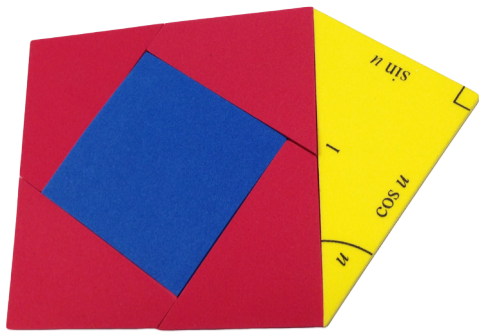




Geo Stix

Explore plane geometry with these hands-on manipulatives. The 8 different lengths, each a different color, allow students to build angles and polygons of various sizes. This will enable students to study the heights of polygons, calculate areas, find center points, and more. By snapping 2 or more Geo Stix onto 1 of the 4" protractors, angle measurements can be calculated. The length of each Geo Stix, along with the length between each segment of the Geo Stix, is written on each Geo Stix. Includes 80 Geo Arms (8 each of red, brown, blue, and yellow; 12 each of dark green, purple, orange, and light green) and 2 protractors.



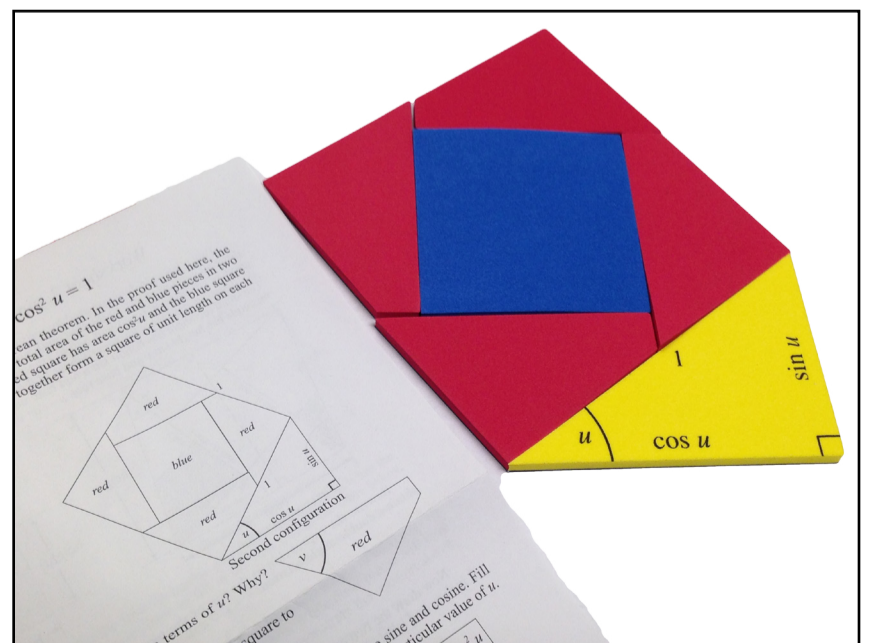
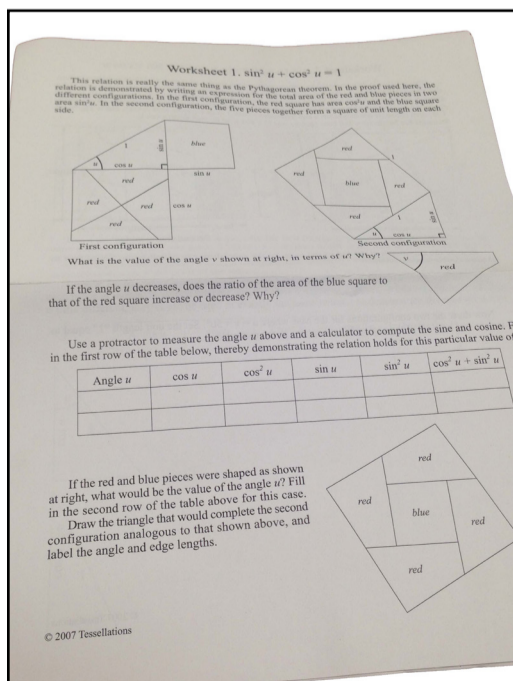


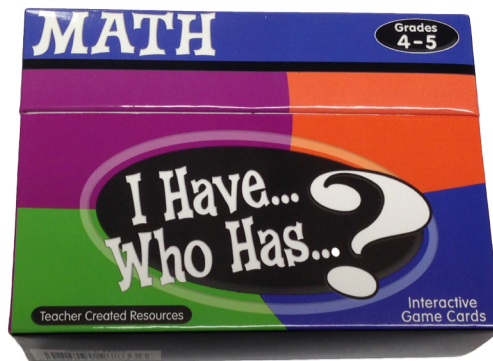
Hands-On Trigonometry Proofs

This set contains 4 separate “proofs” of trigonometry relations with examples of Pythagorean identity, a sum formula, a double-angle formula, and 2 sum-to-product formulas.

Demonstration of each relation is accomplished by physically rearranging the pieces to establish equalities of areas or lengths.

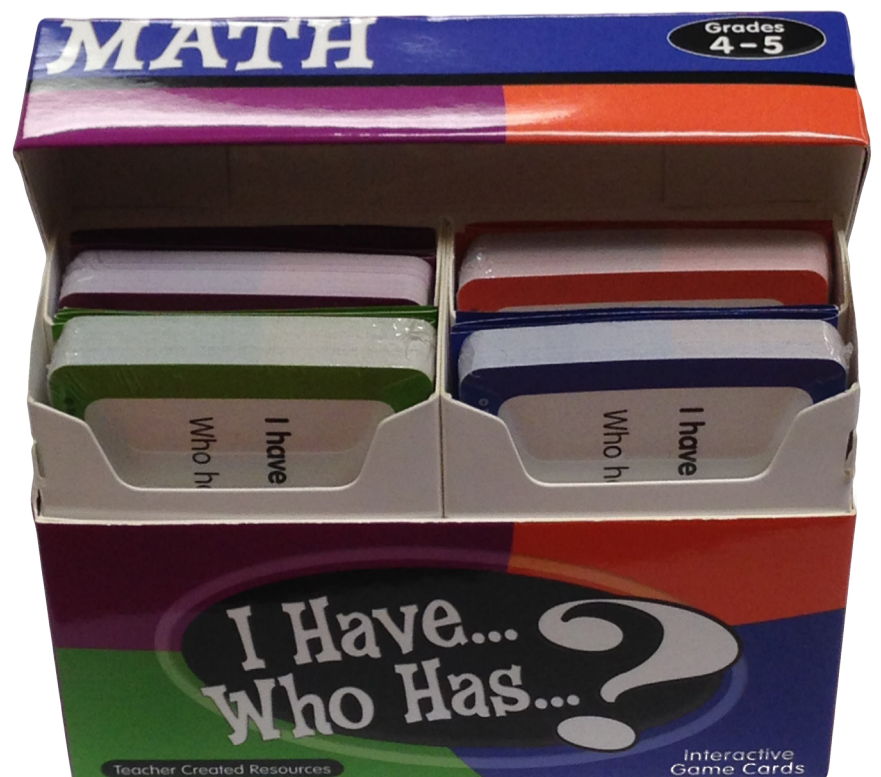
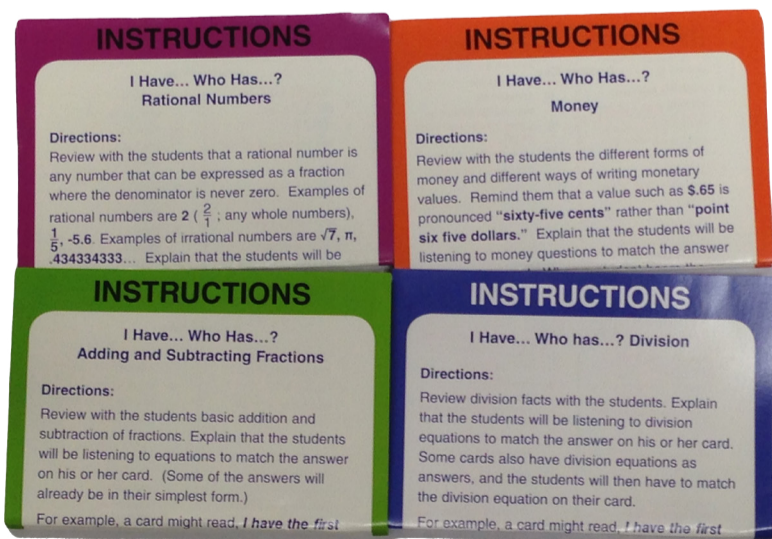
These are not rigorous mathematical proofs, but rather visual common-sense proofs. As such, they help make these abstract relationships real and believable. By actually handling the pieces, students engage their minds to a greater degree than they would by merely looking at the proofs on paper. The color instructions describe how each proof is demonstrated, and reproducible worksheets reinforce the material-contains magnetic foam pieces.

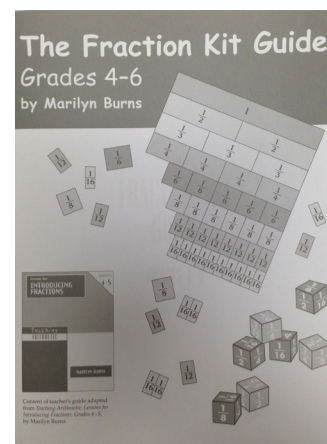
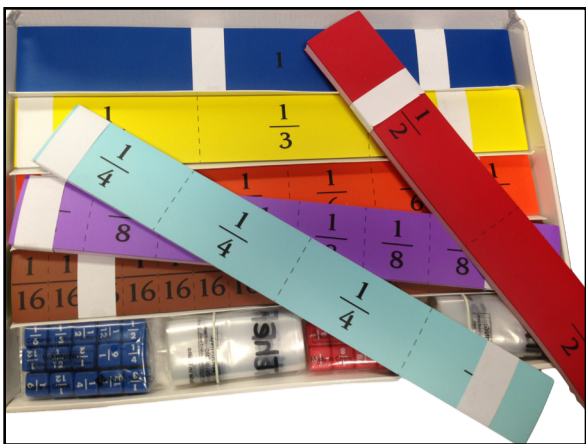




I have... Who has...? Game

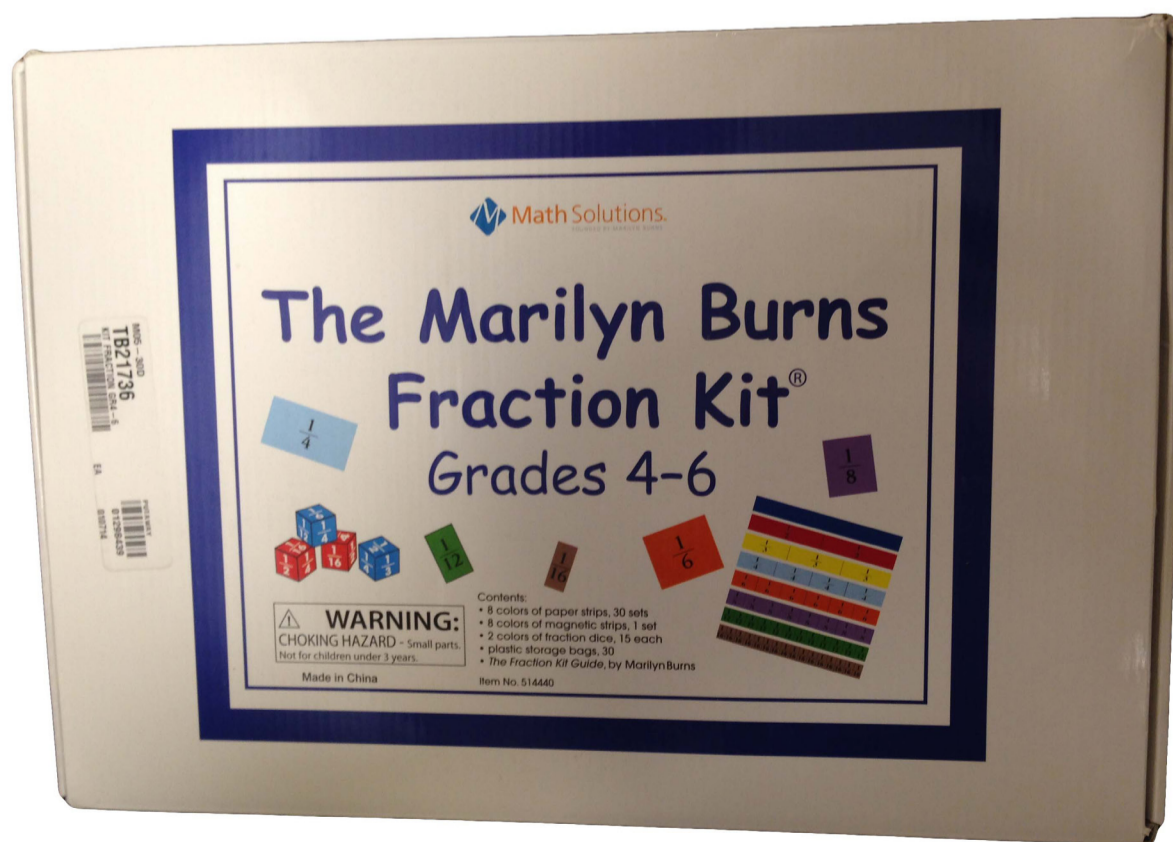
The entire class can have fun while practicing math skills. Hands out all 37 cards. Some players may get more than 1 card. The student whose card reads, "I have the first card. Who has...?" begins. The student whose card has the answer to that question responds and then asks a different question. Play continues until the person with the last card gives the final answer and then says, "This is the end of the game!" The box provides 4 sets of cards for 4 different games. Game titles include Money, Division, Rational Numbers, and Adding and Subtracting Fractions.





Marilyn Burns Fraction Kit

An effective manipulative for teaching fractions. This classroom set provides all of the materials needed to use the kit to develop students' understanding of skills. The kit includes 30 sets of 8 colored 2" X 15" strips with student storage bags, 15 beginner fraction dice (red), 15 advanced fraction dice (blue), a teacher set of magnetic strips, and a 48-page instruction booklet by Marilyn Burns.



Math in the Cards Kit

Kit includes decks of standard cards and the book, Math in the Cards. Students explore problem-solving activities using a deck of cards. Game and activity topics include whole-number concepts and operations, geometry, measurement, probability, statistics, pre-algebra, card tricks, and more. 186 reproducible pages.

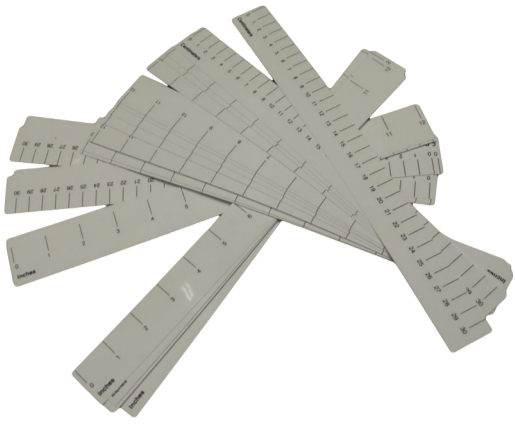




Measuring Kit Part 1

A kit for all your measurement curriculum needs. Hands-on manipulatives include: 6 TI-108 solar calculators, a set of measuring cups, Spring scales that measure in grams and Newtons, 60" tape measures, and digital stopwatches.

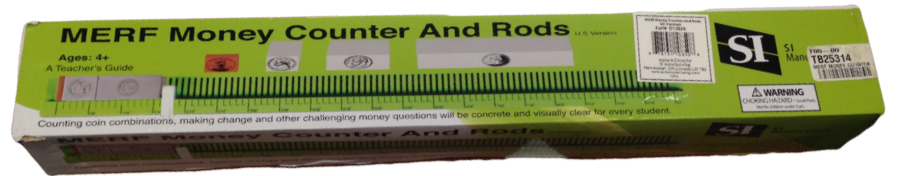
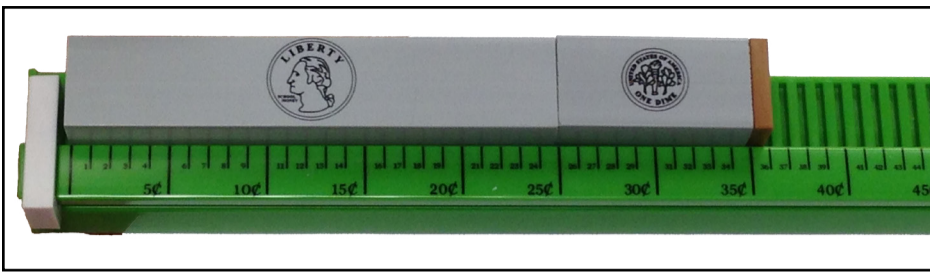




Measuring Kit Part 2

A kit for all your measurement curriculum needs. Hands-on manipulatives include: 32 Flexible plastic rulers, 1 set of 7 graduated cylinders, 1 transparent demonstration thermometer, 30 thermometers, and 1 set of 500 centimeter gram cubes.





Merf Money Counter and Rods

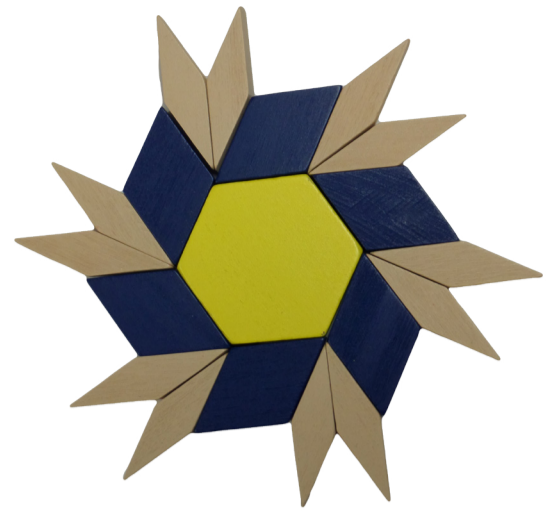
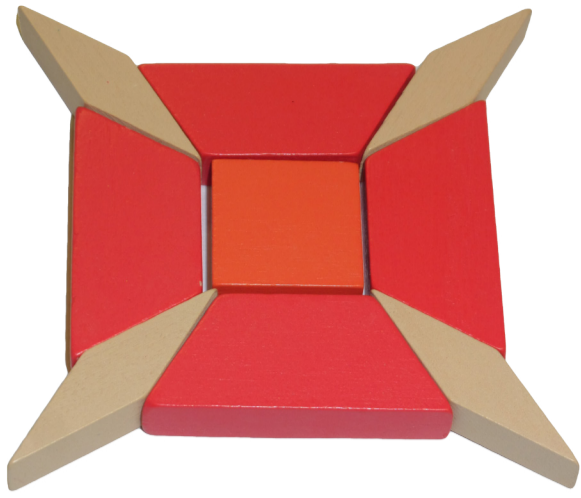
Counting coin combinations, making change, and other challenging money questions will be concrete and visually clear for every student. Kit includes a 21" coin counting ruler with an adjustable sliding piece, 59 coin rod manipulatives, and teacher manual with interactive money games.



Money Classroom Kit

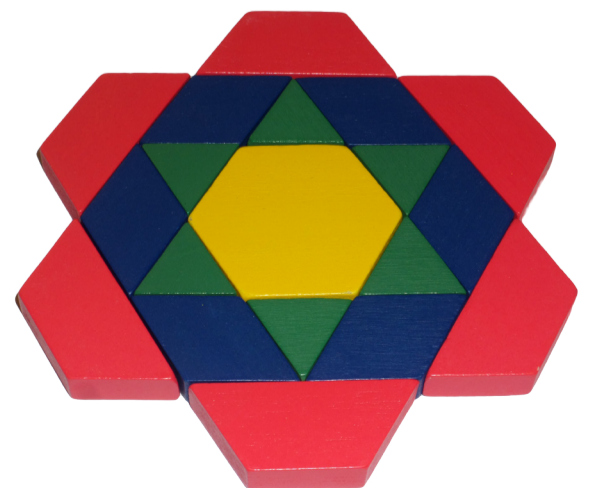
Everything you need to teach important money skills. Contains tray with lid; 100 each of pennies, nickels, dimes, quarters, \$1 bills, \$5 bills, \$10 bills, and \$20 bills; and 50 each of half-dollars, dollar coins, \$50 bills, and \$100 bills. Also includes a 52-page teacher's guide.

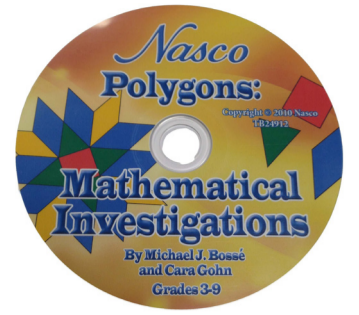
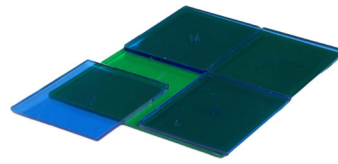
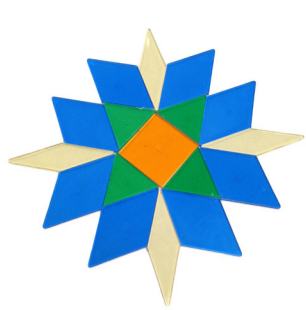
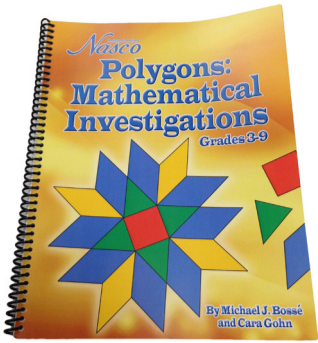




Pattern Blocks

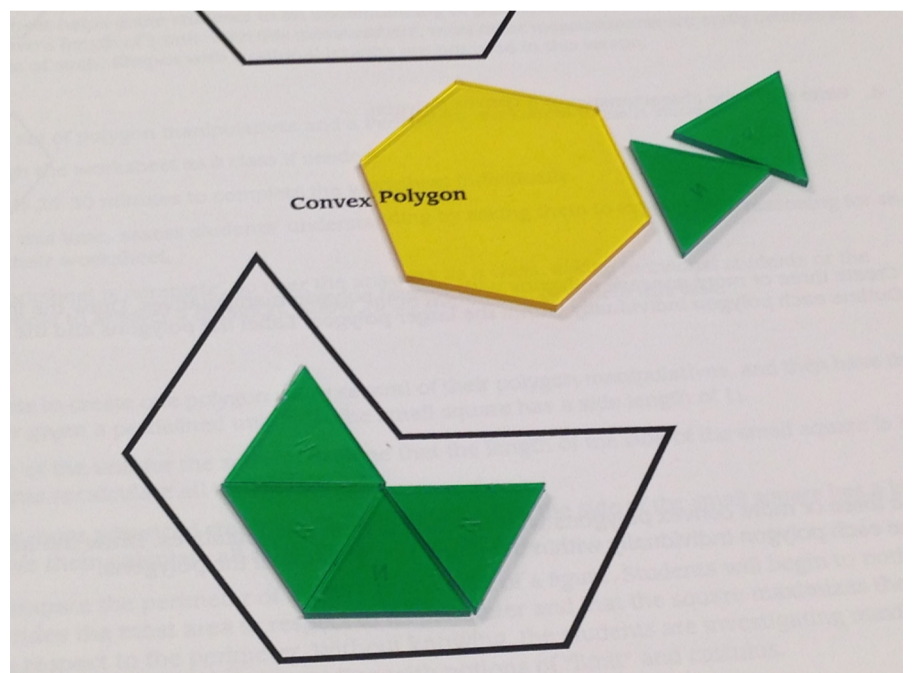
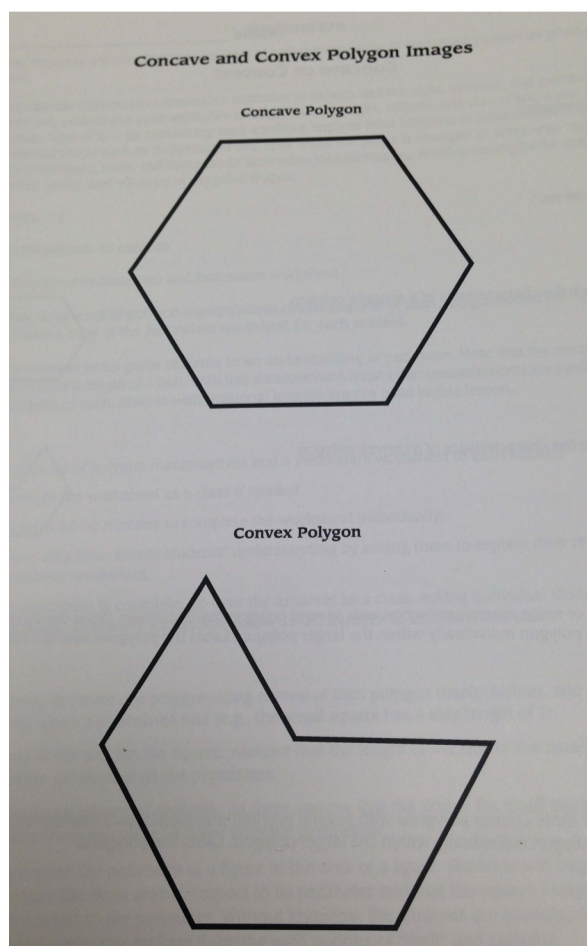
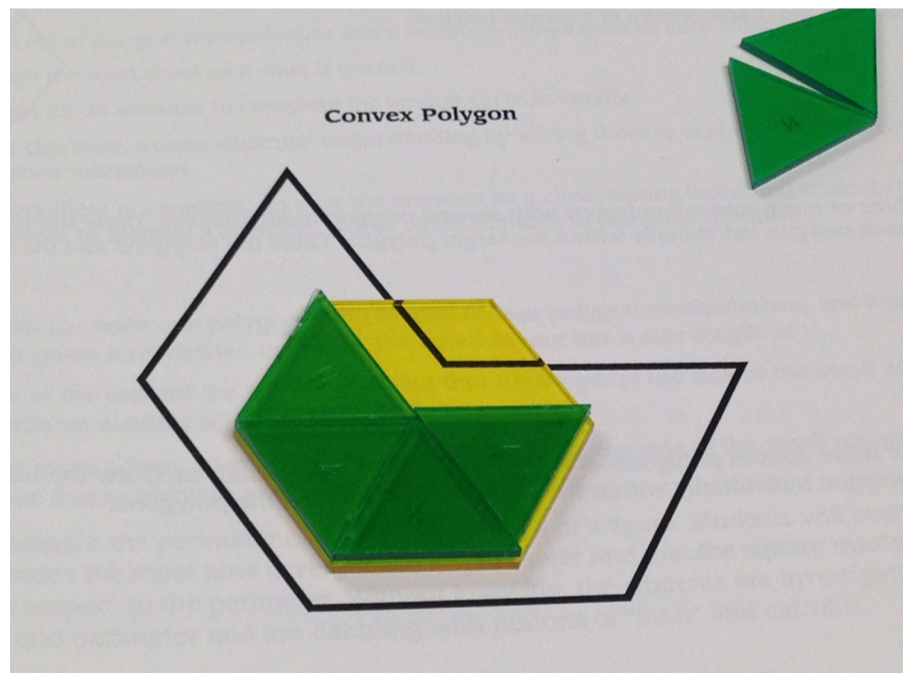
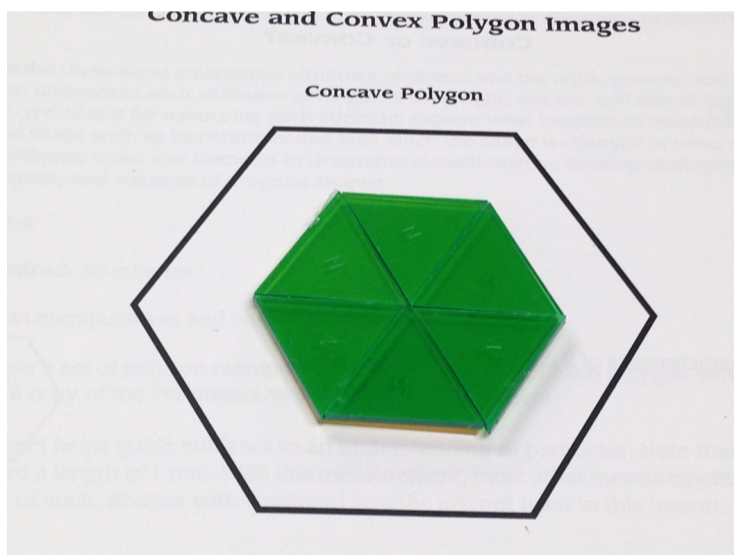
Set of 2,000 wooden pattern blocks, 1cm thick. This includes yellow hexagons, orange squares, green triangles, red trapezoids, blue parallelograms, and tan rhombuses.





Polygons & Polygon Book Set

Explore the possibilities of area, perimeter, patterns, and fractions with a set of transparent, 2-D polygons and an activity book with CD-ROM.



Reflect-View Classroom Set

Explore the possibilities of area, perimeter, patterns, and fractions with a set of transparent, 2-D polygons and an activity book with CD-ROM.

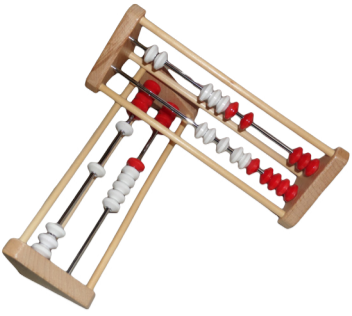




Rekenreks Part 1

This classroom kit is designed to teach basic math skills.
Includes 15 student Rekenreks up to 20.





Rekenreks Part 2

This classroom kit is designed to teach basic math skills.
Includes 15 student Rekenreks up to 20.





Spinzone Magnetic Whiteboard Spinners

Draw a circle, write in content, attach a spinner, and play!
Includes 3-11" spinners, giant playing hand, giant arrow, and giant pencil.

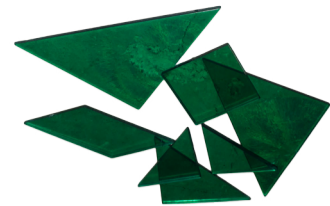




Tangram Kit

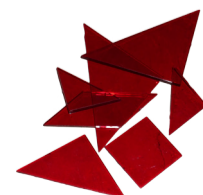
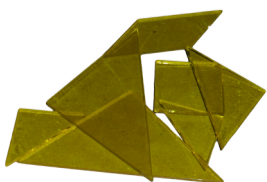
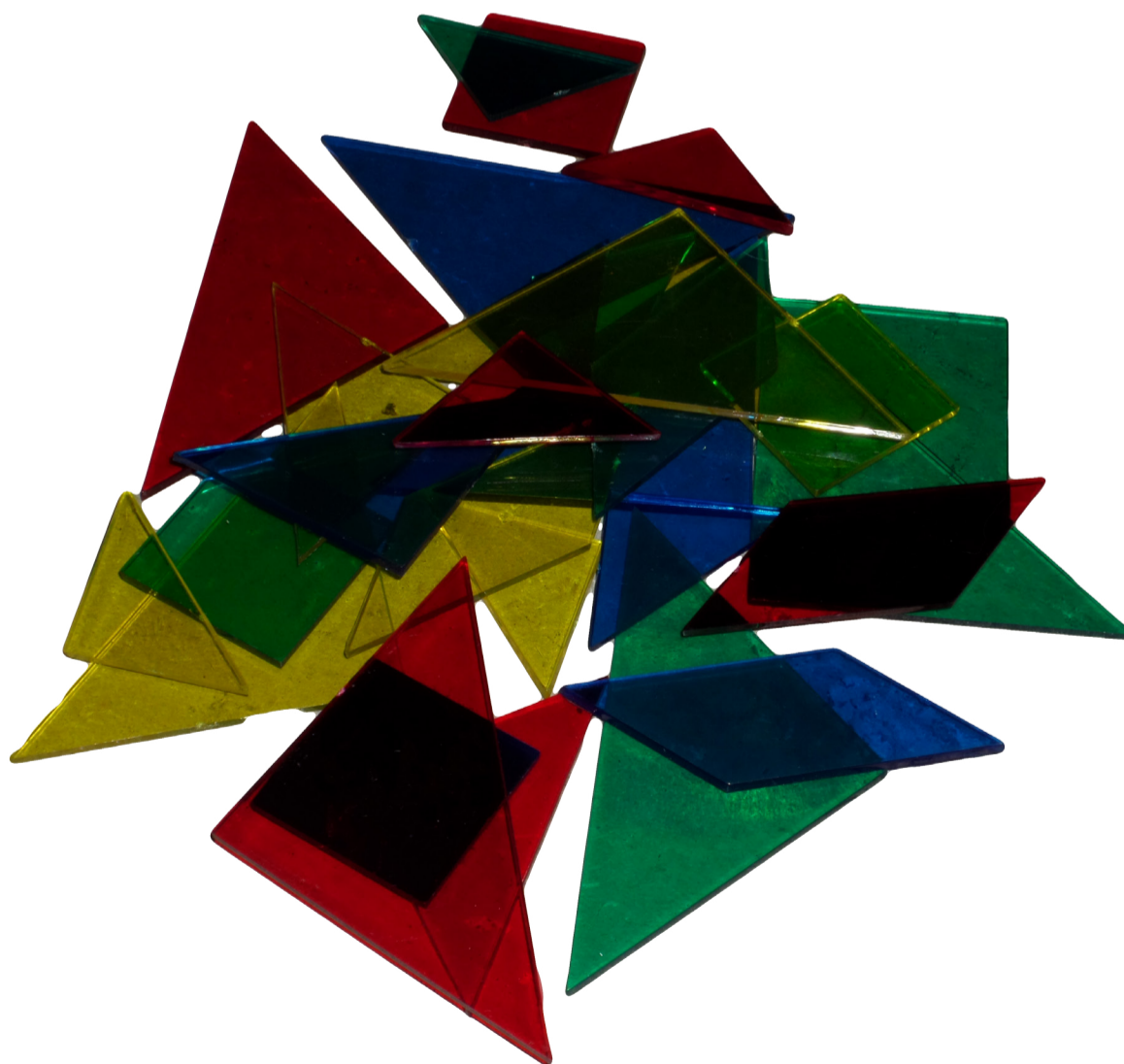
Use tangrams in your classroom to develop shape concepts, problem solving, understanding of equivalents and spatial relationships, eye-hand coordination, fine motor skills, visual discrimination, and memory skills. Large class set includes individual 7-piece tangram sets for students, plus 4 sets of transparent tangrams (28 pieces per set), 16 double-sided tangram cards with activity sheet, 60-page Fractions with Tangrams book, set of 5 tangram stamps, and 32 individual 7-piece tangram sets.

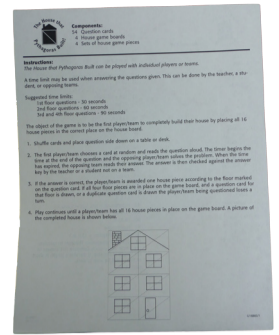




Tangrams

Tangrams aid in the development of shape concepts, problem solving, perception of equivalents and spatial relationships, eye-hand and fine motor coordination, visual discrimination, visual memory, and thinking. These plastic tangrams make 4" squares. Includes four sets (28 pieces) of transparent tangrams, one of each color - red, yellow, blue, and green.





The House that Pythagoras Built

Race to be the first to build your house! Teams must answer questions to place house pieces in the correct spot on the game board and complete their house. Questions increase in difficulty with each floor of the house. Game contains 108 problem cards, 4 house boards, 128 house pieces, and 2 sets of instructions.

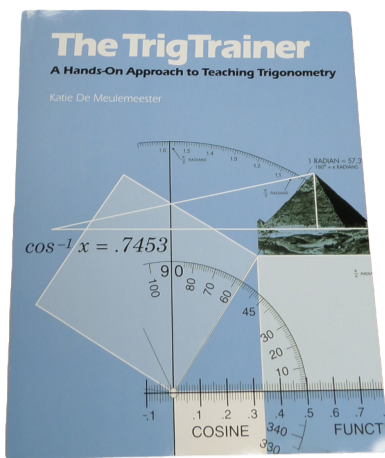




Transparent Counters

Assorted colors make these 3/4" counters perfect for grouping and sorting activities. Set of 250 transparent counters in 6 colors.





TrigTrainer

A trigonometric function generator that provides a hands-on approach to the teaching of trigonometry. The NCTM Standards encourage the use of manipulative devices to be incorporated with calculus in the teaching of basic trigonometry. TrigTrainer helps fulfill this basic requirement by allowing students to explore basic relationships of the sine, cosine, and tangent functions with 2-digit accuracy. Made of high-impact styrene, it measures 8 1/2" X 11". The kit also includes an activity book containing 24 lessons as well as a transparent, projectable TrigTrainer for the overhead.



Various Dice

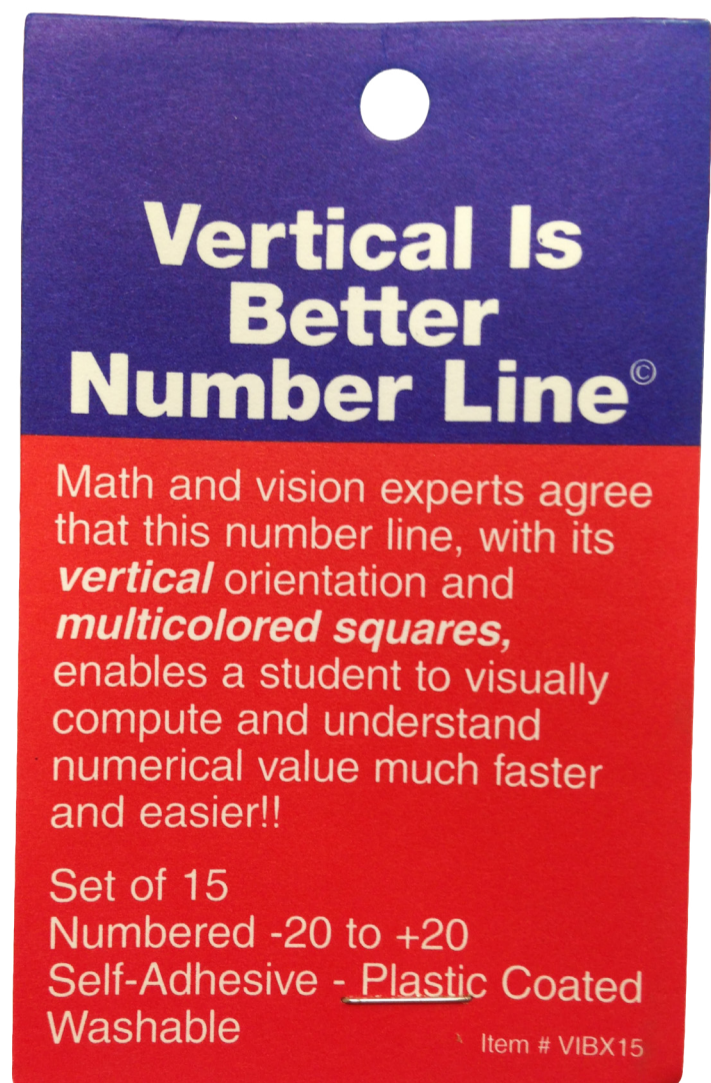
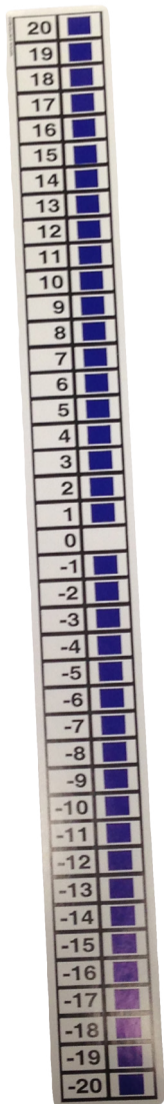
Various types of dice to help with probability.



Vertical is Better!

Desk Number Line

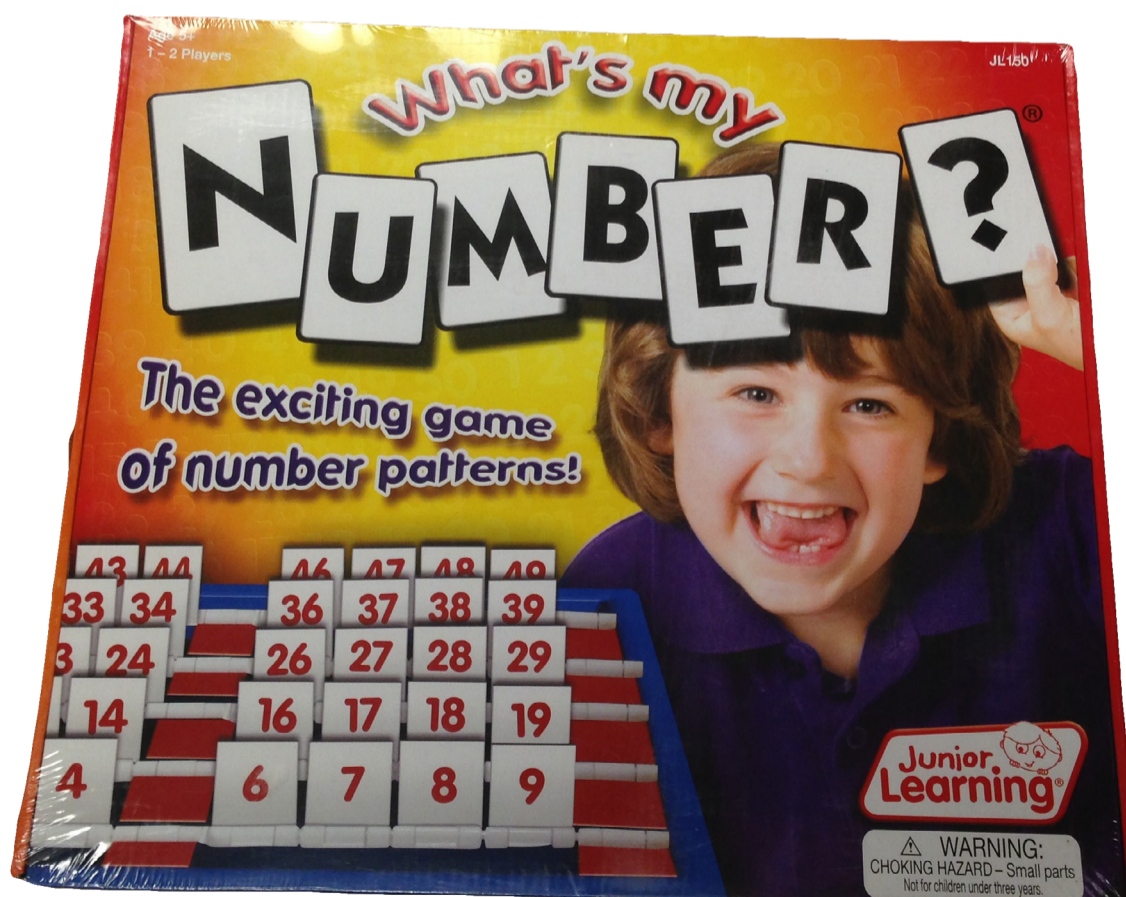
Finally...a number line designed on the vertical! These number lines with vertical orientation accurately represent numerical value--for example, 4 is lower or less than 45, as 20 is higher or more than 19. Also, because a student can visually scan on a vertical plane before they can on a horizontal plane, this unique design allows them to compute with increased accuracy and speed.

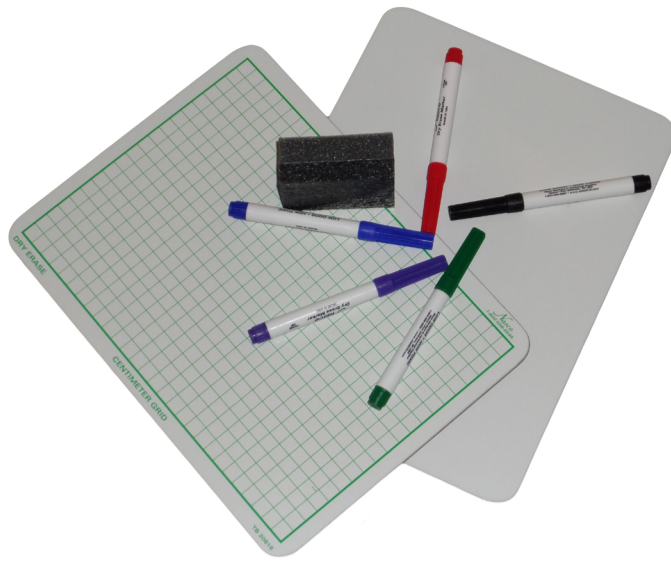




What's My Number? Game

Help students learn to count from 1 to 50 with this exciting number patterns game. Students will love the interactive nature of the game board as they ask questions and flick down numbers to best predict their opponent's number. Can also be used for visual demonstrations of number patterns. Includes 1 game board, 50 number cards, 10 question cards, and activity guide.





Whiteboard Class Set

Double-sided board - one side has printed inch grid (27 cm x 37 cm); the other side is blank. Overall board size is 11-1/2" x 15-1/2". Kit includes: 30 dry-erase double-sided boards, 40 cone-tip markers (10 each of black, purple, and blue) (5 each of red and green), 30 washable student erasers.



Whiteboard Writing Set

These high-quality measurement instruments are designed with easy-to-read graduations and convenient handles for use on chalkboards or whiteboards. Set includes transparent protractor, triangle set, T-square, and compass.



Micron Created Family Math Night Kit

Created by the Micron Technology Foundation, this kit has all the materials needed to host a family math night at your school.

Materials for 150 students and their parents. Early, middle, and upper elementary activities, as well as gym math activities.
44 distinct activities.



Cannot be used in a classroom for lessons.