## MATH STORYBOOK GUIDE

# When Sophie Thinks She Can't by Molly Bang and Ann Stern

AGE LEVEL 5–7 YEARS

## About the Story

This book begins with an insult: Sophie's sister says Sophie is not smart because she can't solve a geometric puzzle. Sophie is devastated: "I can't do ANYTHING!" But Sophie's teacher says, "You haven't figured it out... YET" and encourages the class to keep working. Sophie and her classmates tackle a puzzle involving rectangles. At first they struggle. But they don't give up, and each child thinks hard and uses their own method to solve the problem. Sophie's successful method draws on a vegetable garden. She concludes, "I'm getting SMARTER!"



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## Words to Learn

#### MATH WORDS

rectangle, square, sides, right angle, opposite sides, equal length, parallel, graph paper

## About the Math

As Sophie and her classmates tackle the problem, your child can learn:

- How to develop a "growth mindset"—the attitude that you are not necessarily born with math ability but can get better and better at math with hard work and e ort.
- The di erence between rectangles and squares.
- How a square is a special type of rectangle.
- How to build rectangles out of a given number of squares.



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## Math Talk During Reading

#### TALK ABOUT BEING BORN SMART

What did the teacher mean by flexing the muscles? Did she agree that children are born smart in math? What did she mean by thinking hard? Why is "YET" so important?

### TALK ABOUT RECTANGLES AND SQUARES

Why is a square also a rectangle? (Both have 4 straight sides and 4 right angles.) Is a rectangle always a square? (Not unless all four sides of the rectangle are the same length.) Is Sophie's rectangle really a rectangle? Why?

*Try to come up with some of your own questions and comments, too!* 

## Activity A er Reading

## MAKE YOUR OWN RECTANGLE PUZZLES

With your child, cut out a lot of little squares. Then take 4 and ask your child to make as many di erent rectangles as they can. Then do the same for 6 squares, 8 squares, etc. Write the numbers on the sides of the rectangles, just as Sophie's teacher did.



## Mathical BOOK PRIZE

The Mathical Book Prize recognizes math-inspiring literature for kids ages 2-18. Prize-winning books are selected by a committee of teachers, librarians, mathematicians, and others. To get the Mathical List, plus reading guides, book reviews, and more, see

## mathicalbooks.org

#### PreK WINNERS:

Baby Goes to Market by Atinuke Crash! Boom! A Math Tale by Robie H. Harris Have You Seen My Dragon? by Steve Light Lia & Luis: Who Has More? by Ana Crespo One Fox: A Counting Book Thriller by Kate Read ONE Very Big Bear by Alice Brière-Haquet 8: An Animal Alphabet by Elisha Cooper

#### **GRADES K-2 WINNERS:**

Absolutely One Thing: Featuring Charlie and Lola by Lauren Child

The Animals Would Not Sleep by Sara Levine Max's Math by Kate Bank

Nothing Stopped Sophie: The Story of Unshakable Mathematician Sophie Germain by Cheryl Bardoe

One Big Pair of Underwear by Laura Gehl Pigeon Math by Asia Citro

Sheep Won't Sleep: Counting by 2s, 5s, and 10s by Judy Cox

#### PreK HONOR TITLES:

Animal Shapes by Christopher Silas Neal Count the Monkeys by Mac Barnett Count with Maisy, Cheep, Cheep, Cheep! by Lucy Cousins Goodnight, Numbers by Danica McKellar I Know Numbers by Taro Gomi A Mousy Mess by Laura Driscoll One Happy Tiger by Catherine Rayner One Is a Piñata: A Book of Numbers by Roseanne Greenfield Thong Over in a River: Flowing Out to the Sea by Marianne Berkes Press Here by Hervé Tullet Round by Joyce Sidman 100 Bugs! A Counting Book by Kate Narita

#### **GRADES 2-K HONOR TITLES:**

**Billions of Bricks: A Counting Book about Building** by Kurt Cyrus

Bird Count by Susan Edwards Richmond The Boy Who Loved Math by Deborah Heiligman Cao Chong Weighs an Elephant by Songju Ma Daemicke Counting on Katherine: How Katherine Johnson Saved Apollo 13 by Helaine Becker

Counting the Stars: The Story of Katherine Johnson, NASA Mathematician by Lesa Cline-Ransom

Count on Me by Miguel Tanco

The Girl With a Mind for Math: The Story of Raye Montague by Julia Finley Mosca

How Many Jelly Beans? A Giant Book of Giant Numbers! by Andrea Menotti

Is 2 a Lot?: An Adventure with Numbers by Annie Watson and Rebecca Evans

Lifetime: The Amazing Numbers in Animal Lives by Lola M. Schaefer Shapes, Reshape! by Silvia Borando When Sophie Thinks She Can't by Molly Bang Zero the Hero by Joan Holub 3x4 by Ivan Brunetti

#### HALL OF FAME TITLES:

Hippos Go Berserk! by Sandra Boynton One Grain of Rice: A Mathematical Folktale by Demi The Very Hungry Caterpillar by Eric Carle







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