

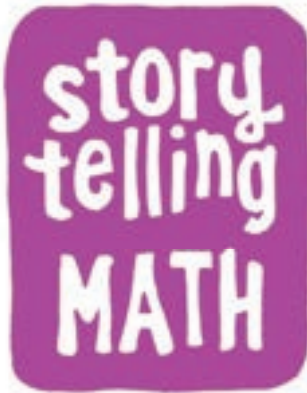
story telling MATH

Activity Guide

Celebrate diversity, math, and the power of storytelling!

Joyful stories and hands-on activities
make it easy for kids and their grown-ups
to explore everyday math together.





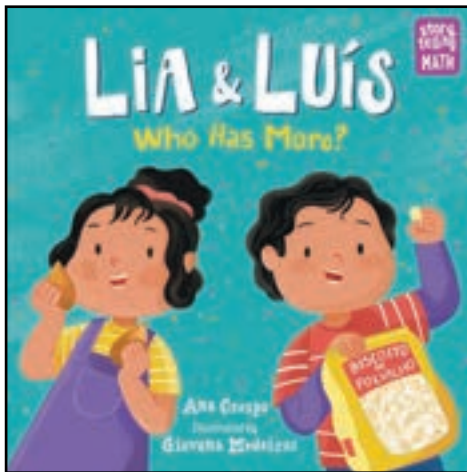
Storytelling Math celebrates children using math in their daily adventures as they play, build, and discover the world around them. Joyful stories and hands-on activities make it easy for kids and their grown-ups to explore everyday math together.

www.charlesbridge.com/storytellingmath

Lia & Luís

Who Has More?

Math activities by Marlene Kliman, TERC



978-1-62354-127-9 HC
978-1-62354-185-9 PB
e-book available

About the Book

Twins Lia and Luís love Brazilian snacks! But when Luís starts bragging that he has more treats, the two begin to argue. How can they tell who has more?

About the Math

Lia and Luís explore the math of comparing and measuring. As they try to figure out who has more, they discover many ways to compare. When they compare by size, Luís appears to have more—his bag is taller, wider, and deeper. When they count, Luís also has more. But when they compare by weight, Lia wins.

When children compare amounts, they build their understanding of quantity, weight, and other measurable features. They also develop a foundation for measuring in school and in daily life.

Sara Cordes, PhD
Associate professor of psychology, Boston College

About the Author

Ana Crespo is the author of several picture books, including *The Sock Thief: A Soccer Story*, winner of an International Latino Book Award. Originally from Brazil, she now lives in Colorado.
www.anacrespobooks.com

About the Illustrator

Giovana Medeiros is the illustrator of *Running on Sunshine* and many other books. Born and raised in Brazil, she is now based in Lisbon, Portugal. www.giovanamedeiros.com



Math Activities

Explore comparing and measuring with these activities!



Build a Bridge

Investigate weight! Help children build a bridge strong enough for a few toy animals to “walk” across. Use just one sheet of paper and two paper cups for the bridge. Encourage children to explore folding the paper to create a stronger bridge. (Have a few pieces of paper available in case children want to try folding paper in different ways.) For more challenge, use toilet paper tubes instead of paper cups.

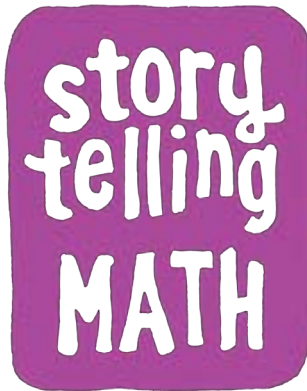
Compare Out Loud

As you go about the day with children, look for opportunities to compare based on size, weight, and amount. “This package contains one hundred cotton balls, but it’s so light! This bag of three oranges is much heavier—and smaller, too.” Invite children to handle the objects and describe what they notice.



Order by Weight

Gather three or four objects of different weights. Include a small, heavy item and a large, light one. Take turns picking up the objects and talking about how heavy or light they feel. Then invite children to try to put them in order by weight.



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BRACELETS for BINA'S BROTHERS

Math activities by Marlene Kliman, TERC



978-1-62354-213-9 HC
978-1-62354-214-6 PB
e-book available

About the Book

Bina wants to give her brothers bracelets with special patterns for the Raksha Bandhan holiday. She wants to make them all by herself, but it's harder than she thought. Can Bina figure it out on her own?

About the Math

Bina makes a special bracelet for each of her brothers. She recognizes that although the colors differ, each bracelet has an "every-other-one" (alternating) pattern. Children who can create, describe, and compare patterns do better in math.

As children explore patterns, encourage them to compare and contrast. "How are these patterns alike? How are they different?" Ask them to explain how they can tell if something is a pattern.

Bethany Rittle-Johnson
Professor and Anita S. and Antonio M. Gotto Chair in Child Development,
Vanderbilt University

About the Author

Rajani LaRocca is the author of *Seven Golden Rings: A Tale of Music and Math*. She was born in India, raised in Kentucky, and now lives in the Boston area. www.rajaniarocca.com

About the Illustrator

Chaaya Prabhat is a graphic designer, illustrator, and lettering artist. She lives and works in Chennai, India. www.chaayaprabhat.com



Math Activities

Explore patterns with these activities!

Share the Pattern

Choose three words to repeat, such as "yummy purple slime." Then take turns saying the words "yummy," "purple," "slime," "yummy," "purple," "slime," and so on. Keep going for a few rounds. Then ask, "How did you know what word to say when it was your turn?"



Double the Pattern

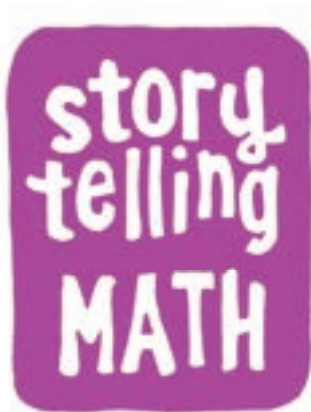
Come up with a two-part sound pattern (tap a kitchen pot, tap a pot lid). Everyone repeats the pattern a few times. Then double it (pot, pot, lid, lid). Try doubling it again! Or try this with an action pattern (clap, jump).



Make My Pattern

One person secretly draws a pattern and then describes it aloud. "Two purple dots, a yellow dot—repeat." The others try to draw the pattern from the description. Compare what each person drew. Take turns secretly drawing and describing patterns.



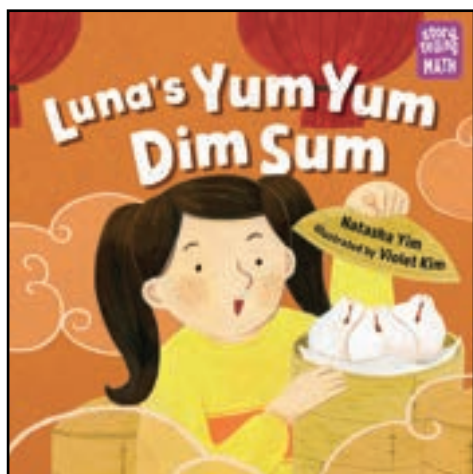


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Luna's Yum Yum Dim Sum

Math activities by Marlene Kliman, TERC



978-1-62354-130-9 HC
978-1-62354-199-6 PB
e-book available

About the Book

On Luna's birthday the family goes out for Chinese dim sum. There are six fluffy pork buns for Luna and her two brothers to share. But then *splat!* Luna drops one. How can three children share five buns fairly?

About the Math

As children find ways to divide up amounts fairly, they begin to make sense of division, fractions, and the notion of parts and wholes. For example, as Luna and her brothers look for a way to share equally, they cut buns in half and consider cutting a half into two or three parts. They recognize that half of a half is a small part and that a half divided into three yields even smaller parts.

As children decide how to share, encourage them to explain their thinking. Although they may not yet use the words *division* and *fraction*, they are learning about those concepts!

Angela Chan Turrou
Senior Researcher and Teacher Educator,
UCLA Graduate School of Education

About the Author

Natasha Yim was born in the Year of the Tiger in Malaysia, grew up in Singapore and Hong Kong, and now lives in California. She is the author of many picture books, including *Goldy Luck and the Three Pandas*. Her favorite dim sum is egg custard tarts.

About the Illustrator

Violet Kim was born in the Year of the Ox in South Korea, studied illustration at Rhode Island School of Design, and now lives in Taiwan. She is the illustrator of *The Little Gray Bunny* and many other picture books. Her favorite dim sum is shrimp dumplings.

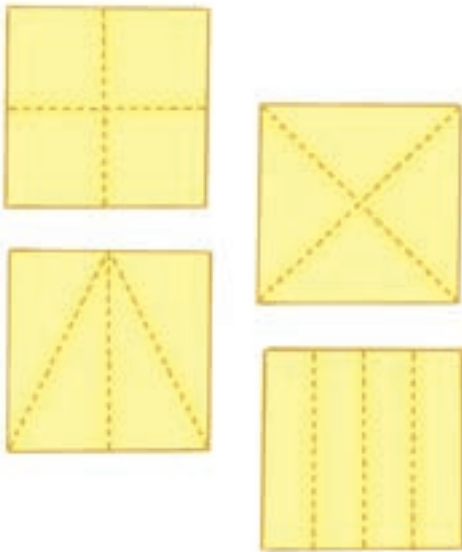


Math Activities

Explore division and fractions with these activities!

Dim Sum Division

Invite children to pretend they're at a dim sum restaurant. Put out a plate with fewer bao than people. (The bao can be real or play dough.) Before children take any food, ask them to decide together: "How can we share the buns fairly?" When everyone has agreed, serve and eat!



Fold into Four

Help children explore dividing by four. Ask: "How many ways can we fold a piece of paper into four equal parts? How can we tell that each part is the same size?" Try it with different-size pieces of paper.

Half and Half

As you go about the day with children, point out opportunities to find halves:

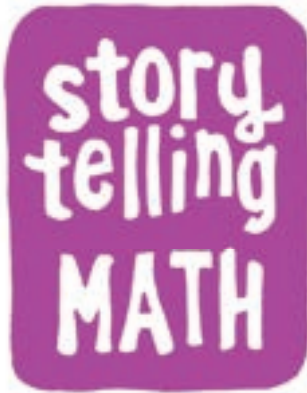
"How can we cut this sandwich into two equal pieces?"

"Give your cousin half the stickers in the pack."

"How can the two of us divide up the lemonade equally?"

Encourage children to explain their thinking.





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The Animals Would Not Sleep!

Math activities by Marlene Kliman, TERC



978-1-62354-128-6 HC
978-1-62354-197-2 PB
e-book available

About the Book

It's bedtime for Marco and his stuffed animals, but the animals have other ideas. When Marco tries to put them away, they fly, swim, and slither out of their bins. Can Marco sort the animals so everyone is happy?

About the Math

Marco wants to organize his animals so they are comfortable at bedtime. He first sorts them by how they move. He then sorts by color and size. Different ways of sorting yield different results. When he sorts by color, friends Zebra and Giraffe are tearfully separated. When he re-sorts by size, they are reunited. In the end Marco finds a solution that works for everyone.

As children explore sorting, they are thinking mathematically. They learn that they can sort sets—or organize data—in different ways. They also discover that the way they choose to sort matters.

Karen Economopoulos

Co-Director of the Investigations Center for Curriculum and Professional Development, TERC

About the Author

Sara Levine is a veterinarian, educator, and author whose picture books include *Flower Talk* and *Bone by Bone*. She lives in Cambridge, Massachusetts. www.saralevinebooks.com

About the Illustrator

Marta Álvarez Miguéns has illustrated many picture books, including *Dinosaur Lady* and *Shark Lady*. She lives in Spain. www.martalvarez.com





The Animals Would Not Sleep!

Math Activities

Explore sorting and classifying with these activities!



Secret Sort

Play a sorting game with six to ten objects. One person sorts the objects into two groups but doesn't tell anyone how they sorted. The others guess how the objects were sorted. They keep going until they figure it out. Next time, someone else sorts.



Secret Selection

Sharpen observation skills with a game based on "Twenty Questions." Lay out five to ten objects. One person secretly chooses an object. The others ask yes-no questions to rule out as many items as possible. For example, a guesser might ask, "Is it red?" If the answer is no, the person who chose the object removes all the red items. Keep going until only the secret selection remains.



Guess Our Lineup

Try this game with five to ten people. Two people leave the room, while the others pick a category to line up by. It should be something everyone can easily compare or count, like height, hair length, or number of pockets. When everyone is in order, the two people return to the room and try to figure out how the group has lined up.

