

3x4 by Ivan Brunetti

AGE LEVEL 6–8 YEARS

About the Story

In this cartoon strip book, the teacher gives his class of young students an apparently simple challenge, namely, to draw 12 things. What should the children draw? All the teacher says is, "It's up to you." The children mostly focus on drawing 3 things, 4 times each, like 3 balls, 3 bats, 3 gloves, and 3 hats. But that's not all they draw. The children have the freedom to explore and experiment with different arrangements of 12 and learn about multiplication. Wait until you see Annmarie's masterpiece at the end!



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About the Math

As the children in the book make their drawings, your child can learn that:

- They can portray the number 12 in many different ways, from one group of 12 objects to 3 groups each with 4 objects.
- The objects can be of any different type, from musical instruments to shapes.
- The written expression 3×4 can refer to some of the pictures in the book.



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Math Talk During Reading

TALK ABOUT DIFFERENT WAYS TO MAKE 12

Joe can't decide whether to draw 3 things 4 times each or 4 things 3 times each to show 12. Does it make any difference? Why not?

TALK ABOUT DIFFERENT ARRANGEMENTS

Julie drew 2 rows, each with 6 roses; Sal drew 3 rows, each with 4 donuts. How are the roses and the donuts the same and different? (The rows are of different lengths and numbers, but the total is 12 in both.)

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

Activity After Reading

HELP YOUR CHILD MAKE DRAWINGS OF ALL THE DIFFERENT WAYS THAT 12 OBJECTS CAN BE ARRANGED EVENLY

Like 2 rows each with 6 eggs, or 6 rows each with 2 eggs. The arrays include 4×3 , 3×4 , 1×12 , and 12×1 . Discuss how they are the same and different.

Words to Learn

sets (groups), circles, squares, triangles, front view, side view, back view

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
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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

