3X4

by Ivan Brunetti

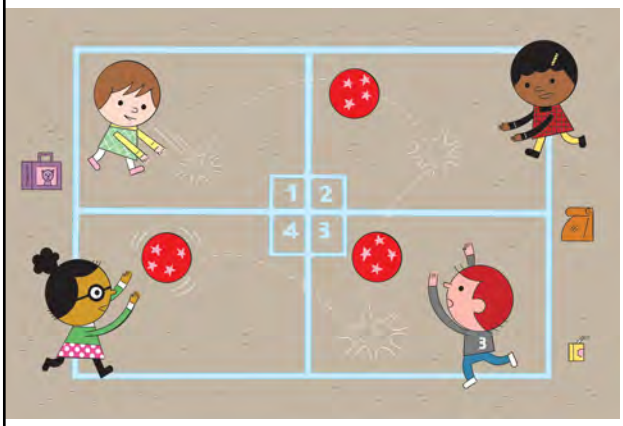
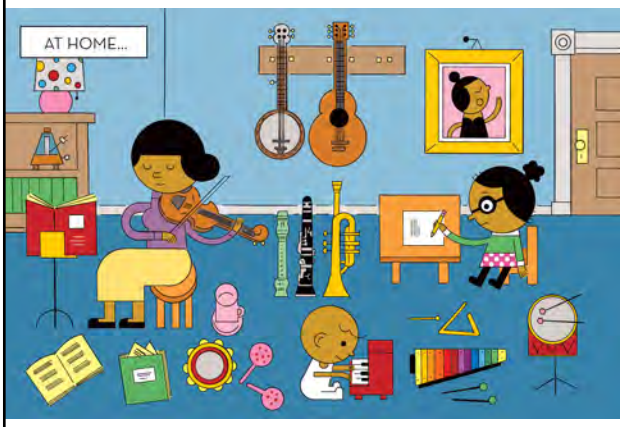
ISBN 978-1-943145-34-8
TOON Level 1
F&P Reading Level = L

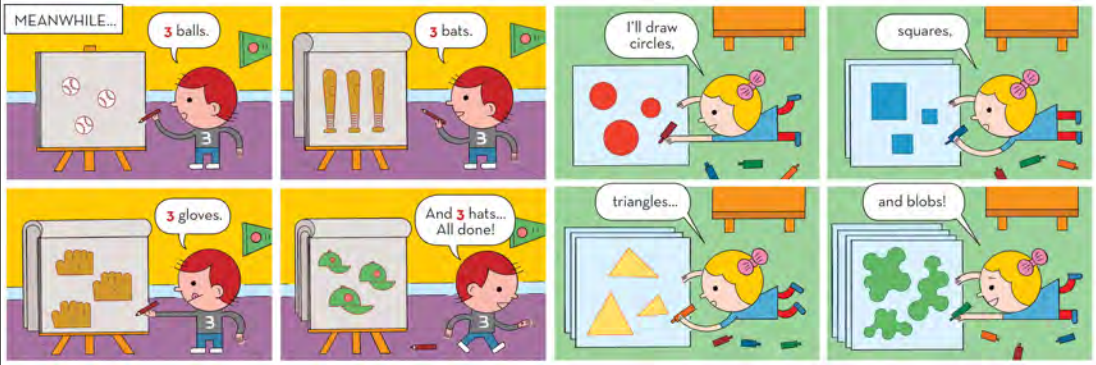
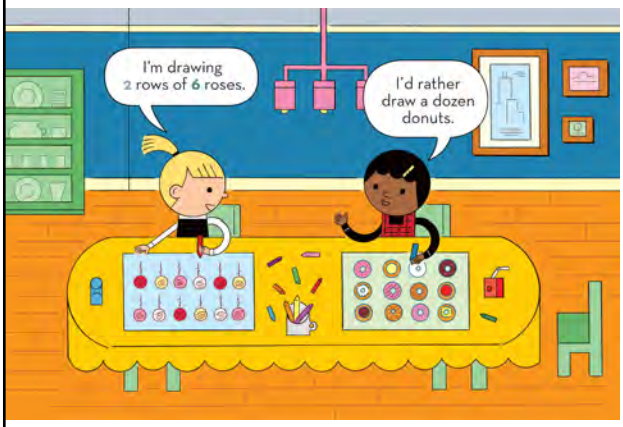
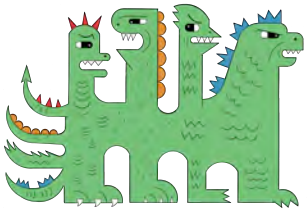
FOR VISUAL READERS
TOON BOOKS®

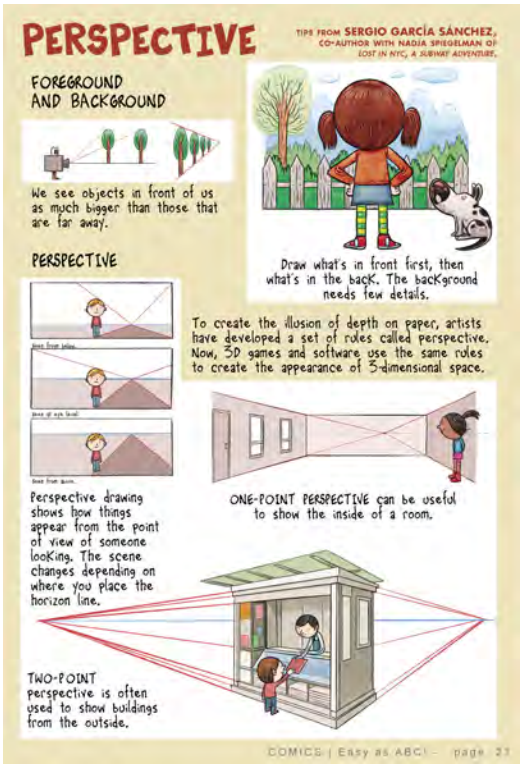
Richard Kutner, New York, NY
Richard Kutner is the head of the TOON Educational Team. He is a translator of both prose and graphic literature with a forty-year background in education. He holds degrees from both New York University and Yale, and was the 2014 recipient of a Hemingway Grant for his work with TOON.

CCSS-aligned Guided Reading Lesson Plan

Overview	Numbers can be made in many different ways. Children will explore this idea and will investigate how the author/artist brings it out in his text and artwork.
Subject	Math
Grade Level	K-1
Suggested Time	40 minutes
Materials	Paper, crayons or pencils OR math manipulatives (blocks, cubes, or disks)
Objectives	Students will investigate how they can make a larger number out of equal sets of smaller numbers. They will study how the author develops this idea in several different ways. They will also learn about even and odd numbers.
Before Reading	Try doing the activity yourself with different even and odd numbers so that you can preempt the children's questions and see where difficulties may arise. Have the children look at the cover of the book. Then say to them:
RI.K.5	Look at the cover of the book. How many people do you see? How many animals? How many houses? How many crayons/pencils do the girls have? What does this make you think the book will be about?
RI.K.6	How many letters are in the author's name, Ivan Brunetti?
RI.K.4, RI.K.5, RI.1.4	From looking at the cover, what do you think 3X4 means? [Students this age have not yet started to learn multiplication.] So you see that X here means "times." If you have 4 things 3 times, how many things do you have all together?

During Reading	
RI.1.7	 Look at the page with the children playing box ball. How many ways of showing 3 or 4 do you see?
RI.K.7, RI.1.7	How many children are in the classroom? How are they grouped at their tables? How many colors are in the color wheel at the top left on page 7?
RI.K.3, RI.1.3	What is the homework assignment that the teacher gives the children?
RI.K.4, RI.1.4	What is a set?
	 
RI.K.7, RI.1.6	Look at the next two pages. Do the children have to make only 3 sets of 4 or 4 sets of 3? Are 4 sets of 3 things and 3 sets of 4 things the same number of things? What about 2 sets of 6 things and 6 sets of 2 things?
RI.K.1, RI.K.3, RI.1.1, RI.1.3	When Annemarie asks her father to name 4 kinds of cars, how many does he name each time?
RI.K.7, RI.1.7	 On page 12, how many musical instruments are there?
RI.K.7, RI.1.7	On page 13, how is Annemarie feeling? How do you know what she's thinking? In comics, a cloud bubble tells what someone is thinking.

	The children approach the homework in different ways. Here are some of them:
	
RI.K.7, RI.1.7	How many panels are on pages 14 and 15? How many things does each child draw on each piece of paper? Does each child draw 12 things all together?
	
RI.K.1, RI,1.1	What does the boy realize on page 16? What does he finally decide (page 17)?
RI.K.1, RI.K.3, RI.K.7, RI.1.1, RI.1.3, RI.1.7	 How do the girls on page 19 decide to do the homework assignment? What is a "dozen"? Can you name a kind of food that is sold by the dozen? (If they say eggs, ask them how they're arranged in the box.) Notice that the boy on pages 24-25 makes his homework assignment into one monster. 
RI.K.1, RI.1.1	Why do you think Annemarie gets a ribbon at the end?

	Visual Expression:
RI.K.7, RI.1.6, RI.1.7	There are groups of things hidden all through this book. Can you find them? Hint: How many bananas are in the bowl on the top of page 17? How many pieces of fruit are in the bowl on page 18?
RI.K.6, RI.K.7, RI.1.6, RI.1.7	Look at pages 14 and 15. Why do you think Ivan Brunetti made 4 panels with 3 things in each?
	Geometry:
RI.K.1, RI.K.3, RI.1.1, RI.1.3	Geometry is a kind of math that deals with shapes, lines, and angles. Ivan Brunetti uses many different geometric shapes throughout this book. How many can you find? Do you know their names?
RI.K.1, RI.K.3, RI.1.1, RI.1.3	Many things are organized in lines or rows in the book. See how many you can find.
RI.K.6, RI.K.7, RI.1.7	 Artists often use *perspective* to show how things appear from the point of view of someone looking. Look at the examples on the page to the left [page 27 of *Comics: Easy as ABC!*].
	 Ivan Brunetti, the author and artist of *3x4,* came up with his own way of showing space. Notice that the lines on the floor of the kitchen on page 17 stay the same distance apart from one another and look as though they'll never meet. Lines like this are called *parallel* lines. Where do you see parallel lines in your classroom? Outdoors? In your home?

After Reading	Draw 12 things divided into sets of the same number as many ways as you can. (Some children may realize that they can do 12 sets of 1 and 1 set of 12.) Children can use blocks, cubes, or other manipulatives rather than drawing. Manipulatives are better, because children can move them around to adjust the number of things in each set. *(There should be 4 sets of 3, 3 sets of 4, 2 sets of 6, 6 sets of 2, [1 set of 12, and 12 sets of 1]):* XXX XXX XXX XXX XXXX XXXX XXXX XXXXXX XXXXXX XX XX XX XX XX XX X X X X X X X X X X X X XXXXXXXXXXXX Take one drawing or block away and try to do the same thing. What happens? Now do the same with 10. (Advanced children can try to do the same thing with 18.) A number that you can divide into two equal sets is called an *even* number. 10, 12, and 18 are even numbers. Even numbers have 0, 2, 4, 6, or 8 in the ones' place. Is 16 an even number? Is 17? A number that you can't divide into two equal sets is called an *odd* number. 3, 9, and 15 are odd numbers. Odd numbers have 1, 3, 5, 7, or 9 in the ones' place. Is 19 an odd number? Is 14? Test this: Make a drawing of an odd number of things and see if you can divide it into sets of the same number of things (<u>equal</u> sets). [Children may not yet have learned the concept of *equal*.] **<u>Enrichment: Prime Numbers</u>** Some odd numbers, like 15, can be divided into sets of the same number other than 1 and themselves (3 sets of 5, and 5 sets of 3). Some odd numbers, like 7, cannot be divided into sets of the same number. (7 can be made only by 1 set of 7 or 7 sets of 1.) Numbers that cannot be made into sets of anything but themselves or 1 are called *prime* numbers. 3, 5, 7, 11, 13, 17, and 19 are prime numbers. Prime numbers are all odd except 2, the smallest prime number. 2 is the only even prime number.

12 in Other Languages

Do you speak another language? How do you say 12 in that language? Can you count all the way to 12?

How do we use the number 12 in our everyday lives?

There are 12 numbers on a clock, 12 months in a year, 12 eggs in a dozen, 12 signs of the zodiac, 12 notes (half steps) in a musical scale.

Here is a website with other uses of the number 12: https://en.wikipedia.org/wiki/12_(number), where they show how 12 is written in some other languages:

١٢	Arabic	១២	Khmer	ԺԲ	Armenian
১২	Bangla	ΔII	Attic Greek		
יב	Hebrew	∩II	Egyptian		
१२	Indian & Nepali	十二	Chinese and Japanese		
கஉ	Tamil	XII	Roman and Etruscan		
๑๒	Thai	IIX	Chuvash		
౧౨	Telugu	۱۲	Urdu		
ιβ′	Ionian Greek	൧൨	Malayalam		