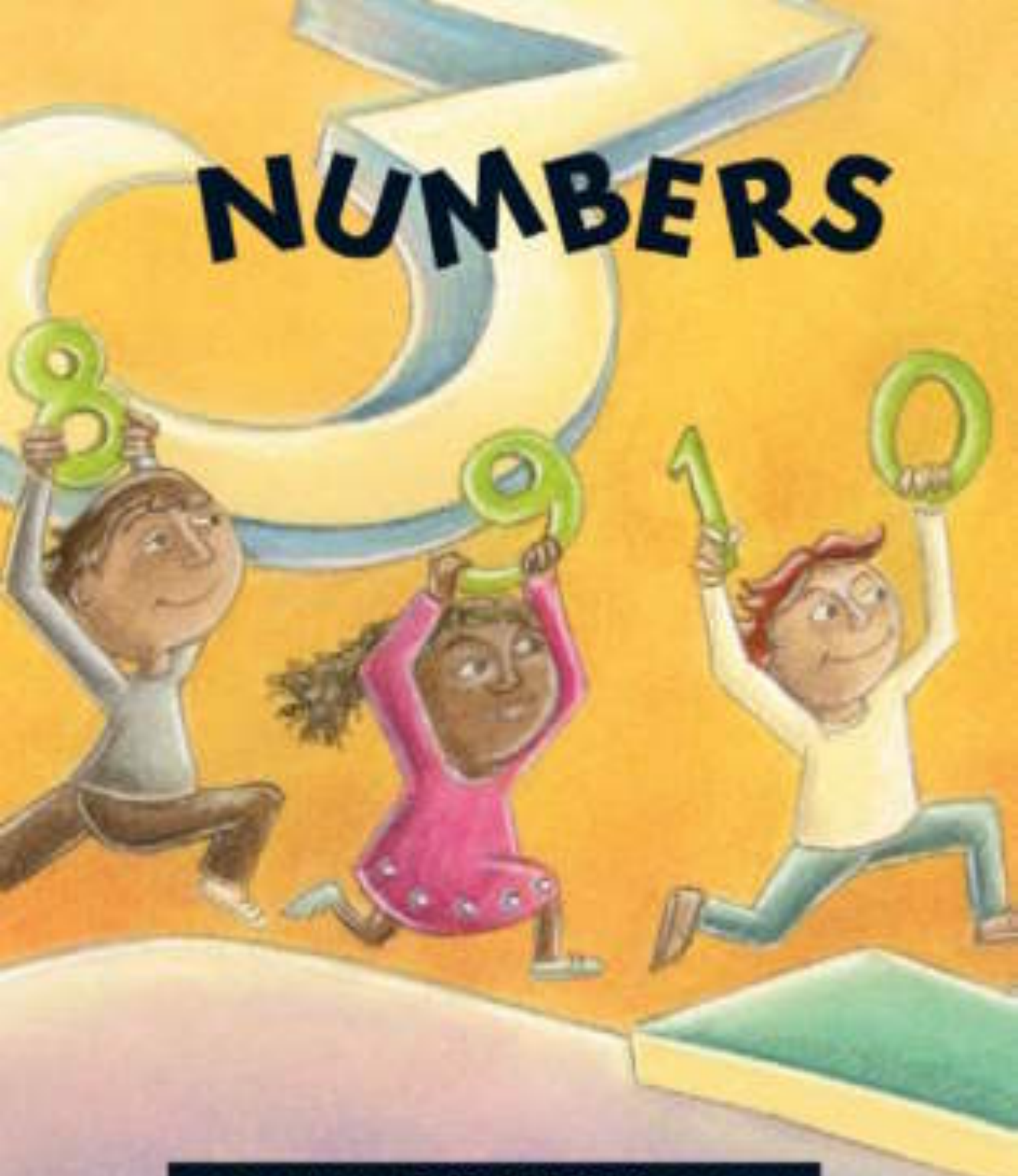
NUMBERS



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NUMBERS

In this book, you will:

discover interesting things about numbers.

learn new words.

answer fun questions.

play counting games.

find more numbers activities at the back of the book.

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Everybody uses numbers every day.

zero

one

two

three

four

five

six

seven

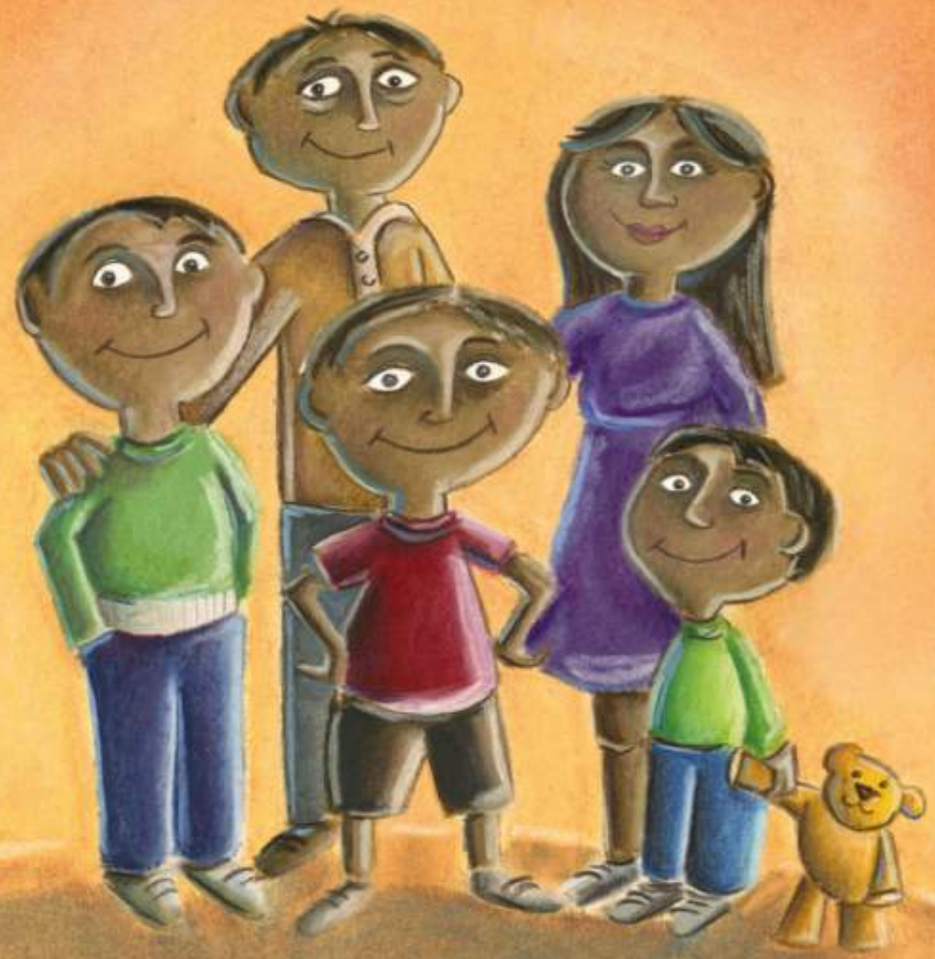
eight

nine

ten

Count to ten. Point to each number on the page as you say it.

Numbers tell us many



Diego is six years old.
He has two parents and two brothers.
There are five people in Diego's family.
One brother is older than Diego.
Diego's other brother is younger than Diego.

things we need to know.

Diego started out with three pets.
His pets were a dog, a cat, and a bird.

Diego's cat gave birth to five kittens.
Now Diego has eight pets!

Count all the brothers in Diego's family, including Diego. How many brothers are there all together?

Count Diego's cat and her kittens. How many cats are there all together?

Let's count things in the pictures!

1

One bird sits on a wire.

One boy watches the bird on the wire.

One hat flies through the air in the wind.

One mom sits on a park bench
with a baby.

2

Two birds sit on the wire.

Two girls fly kites on the grass.

Which kite is big? Which is small?

Two dogs sniff something under a tree.

Two kites get tangled up in the air!

3

Three birds sit on the wire.

Three kids do cartwheels across the grass.

How many people are wearing purple?

Three old ladies sit on the park bench.

Three squirrels **scurry** up a tree trunk.

Which squirrel is faster than the others?

4

Four birds sit on the wire.

Four people have a picnic on the grass.

How many bugs are on the picnic basket's handle?

Four **peacocks** watch from the branches of four different trees.

How many apples do you see?

Four big bugs crawl over a picnic basket!

5

Five birds sit on the wire.

Five kids kick a soccer ball.

How many kids are wearing blue shirts?

Five bikes sit under a tree.

How many bikes are green? How many bikes are red?

Five kids eat ice-cream cones.

Are more kids eating chocolate ice cream or strawberry ice cream?

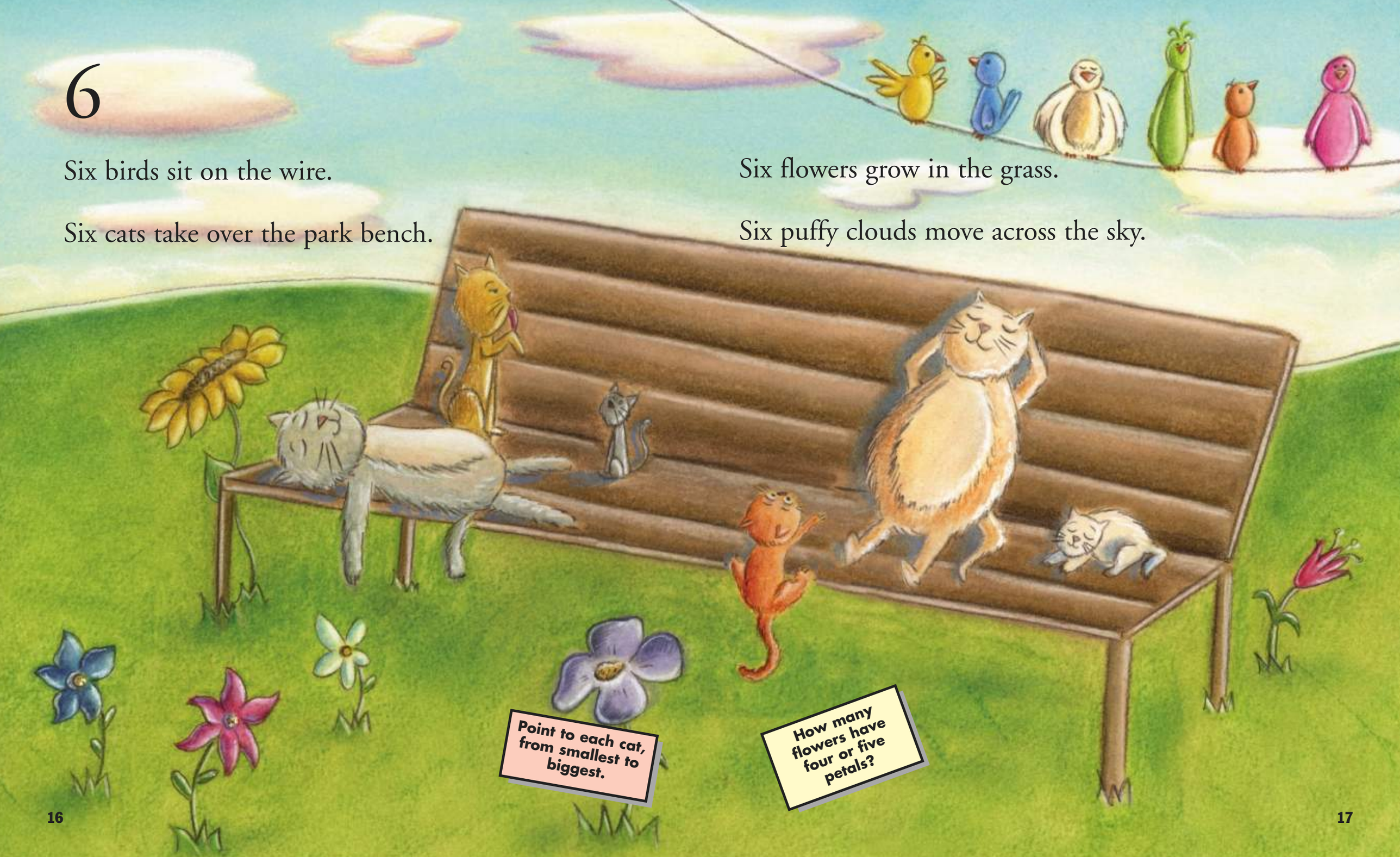
6

Six birds sit on the wire.

Six cats take over the park bench.

Six flowers grow in the grass.

Six puffy clouds move across the sky.



Point to each cat, from smallest to biggest.

How many flowers have four or five petals?

How many leaves have five points?

7

Seven birds sit on the wire.

Seven kids play a game of hide-and-seek.

Seven backpacks sit on the bench.

Seven big leaves spin in the breeze.

8

Eight birds sit on the wire.

Eight balloons escape into the sky.

Point to the three boats that are close together.

How many boats have sails?

Eight barefoot kids race through the park.

Eight toy boats bob in the pond.

9

Nine birds get wet on the wire.

Nine bright umbrellas keep
the raindrops off.

How many umbrellas are just one color ?

How many umbrellas are more than one color?

Nine fish leap in the pond.

Nine puddles grow big in the rain.

Which puddle looks the biggest?

10

Ten birds are ready to fly home to their nests for the night.

Ten funny dogs run wild through the trees.

Ten kids hurry home to have dinner.

Ten lights go on in ten windows across from the park.

It's getting dark!

How many children are wearing long sleeves?

How many are wearing short sleeves?

Count the windows that are all lit up.

Try counting the birds backwards.
Count the birds from ten to one.

10	9	8	7	6	5	4	3	2	1	0
ten	nine	eight	seven	six	five	four	three	two	one	zero

Zero means none.

No more birds left on the wire.

Nobody sitting on the bench.

Not one person left in the park.

Zero people. Zero birds.

The park is empty for the night.

Look at these funny pictures.

Count the number of feet.
Count the number of shoes.
Is there a shoe for every foot?

Yes, there are four little feet and four silly shoes.
The number of feet is THE SAME AS
the number of shoes.

Which shoes are big? Which shoes are little?

How many dogs are fat? How many dogs are skinny?

Count the number of dogs.

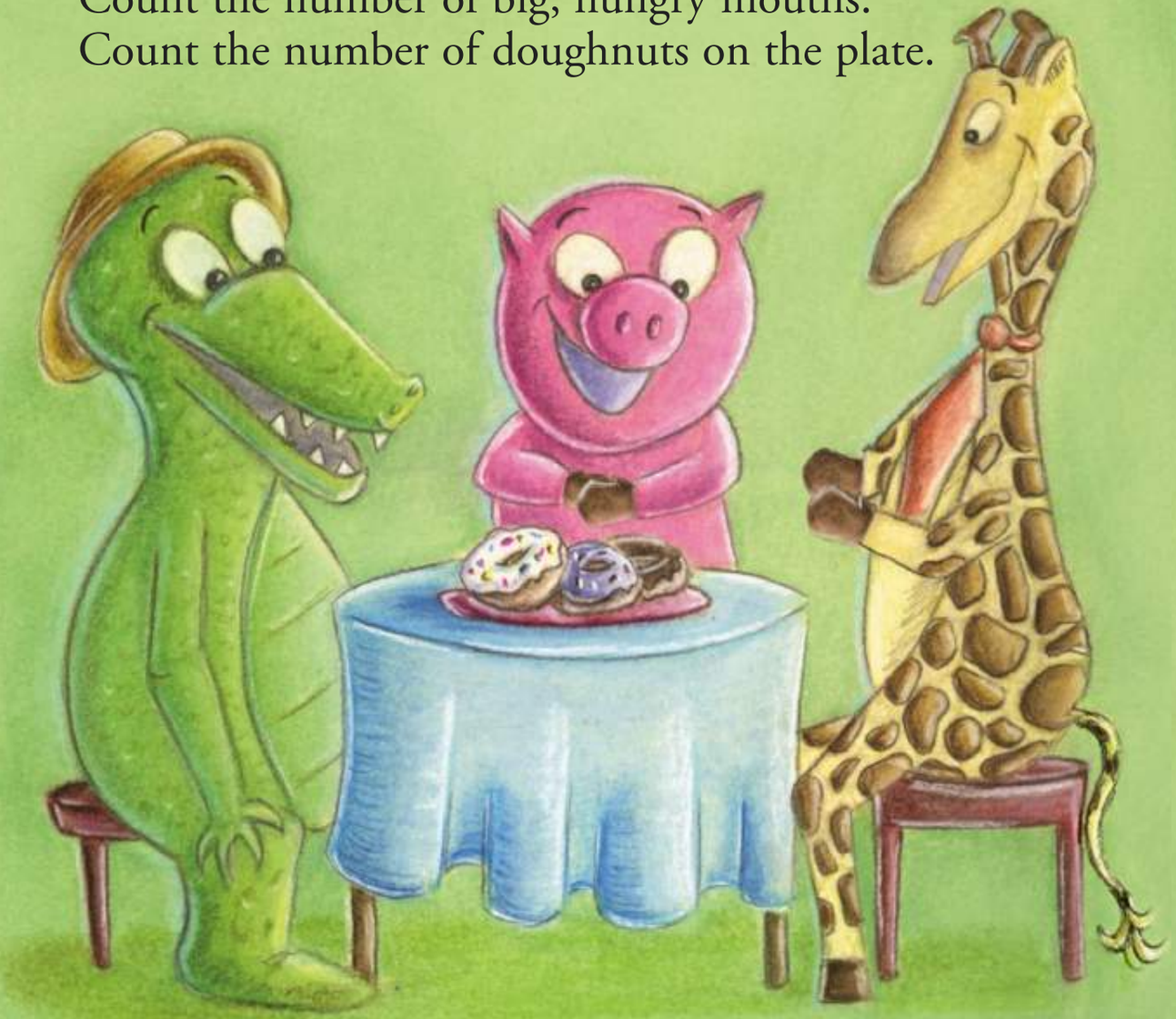
Now count the number of doghouses.

Does each dog have a house?

Yes, the number of dogs is the
same as the number of doghouses.
Each dog has a house.

Which doghouse is the tallest?

Count the number of big, hungry mouths.
Count the number of doughnuts on the plate.

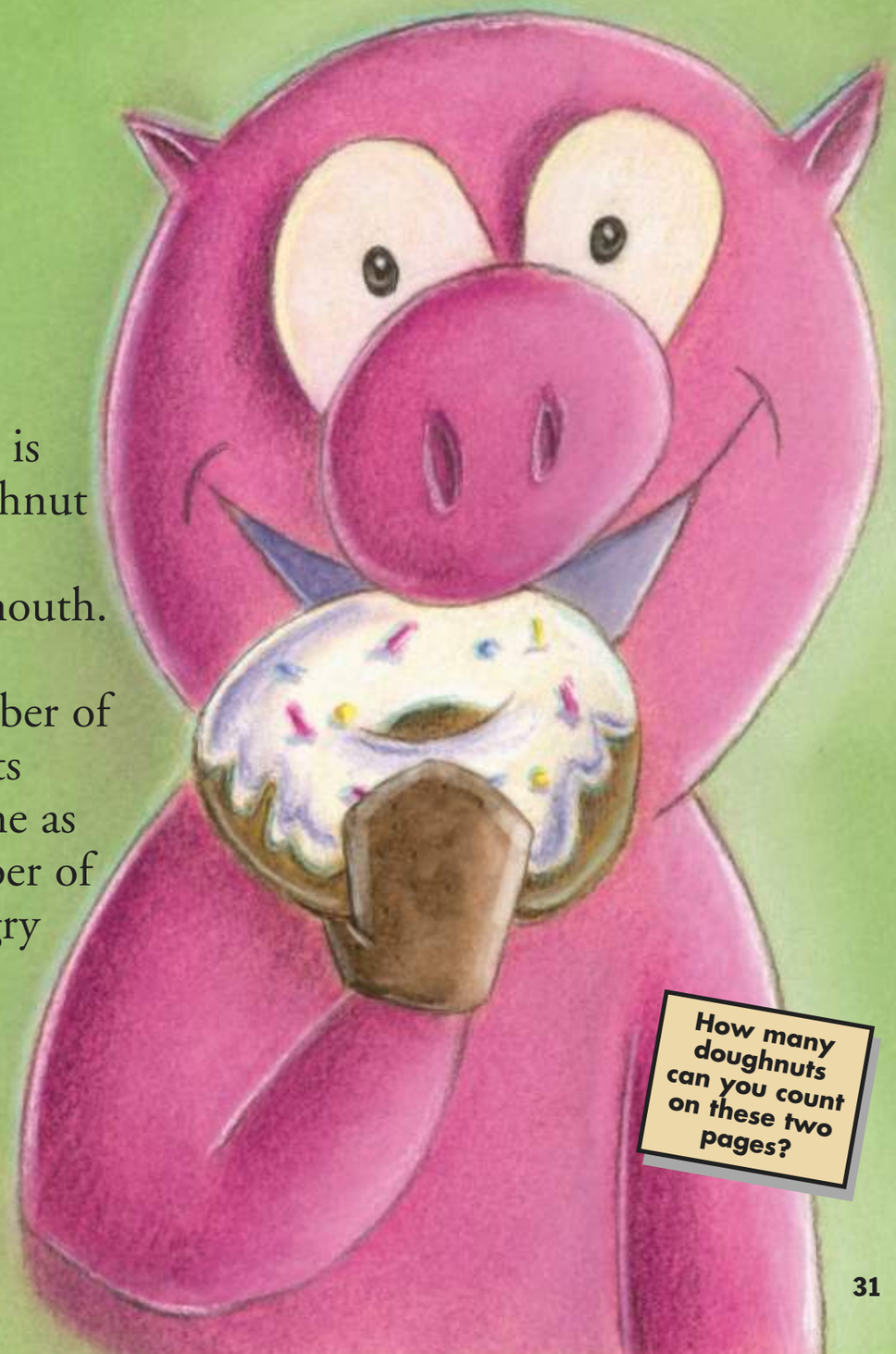


Are the numbers the same? Are there as many doughnuts as there are hungry mouths to eat them?

Yes, there is one doughnut for every hungry mouth.

The number of doughnuts is the same as the number of big, hungry mouths.

YUM!



How many doughnuts can you count on these two pages?

A bunch of monkeys
is having a party!

How many monkeys
can you count
at the party?

Six monkeys have come to the party.
How many red monkeys are at the party?
How many brown monkeys are at the party?

There are four red monkeys at the party. There are two brown monkeys at the party. The number of red monkeys at the party is MORE THAN the number of brown monkeys at the party.

How many party hats can you find in the trees?

There are only five party hats in the trees. The number of monkeys is MORE THAN the number of party hats.

One monkey will not have a party hat!

How many hats are hanging upside down?

If one monkey leaves the party, there will be one hat for every monkey at the party. This is one way to make the number of monkeys the same as the number of hats.

Can you think of another way to make the numbers the same?

But wait! What is that on the ground? One more party hat! Now all six monkeys have party hats to wear.

How many party hats have polka dots?

How many hats are pointed?

Adding a hat is another way to make the number of monkeys the same as the number of hats.

The baboon band is playing tonight at the monkeys' party.

Count the number of baboons in the band.

There are three baboons in the baboon band.
There are four musical instruments.

Now count the number of musical instruments that you see.

Which baboon looks the largest? Which looks the smallest?

How many drums can you count?

How many instruments have strings?

The number of baboons is LESS THAN the number of musical instruments.

Three baboons. Four musical instruments.

What is one way to make the number of baboons the same as the number of musical instruments?

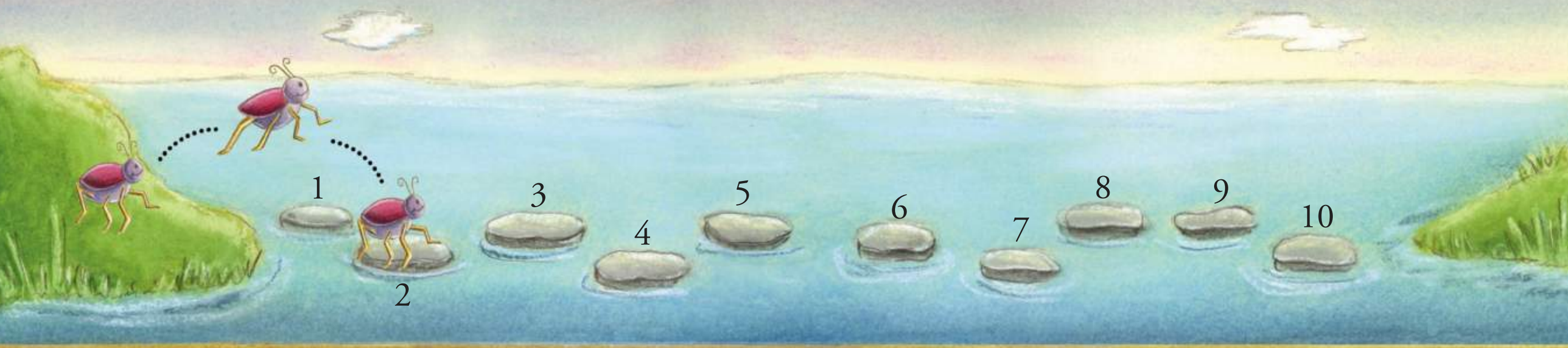
How many baboons are sitting down?

Bring in another baboon to play in the band!
This is one way to make the numbers the same.

Now the number of band members is the same as the number of musical instruments.

How many monkeys are wearing hats?

Or, take away one of the instruments. This is another way to make the number of band members the same as the number of instruments.



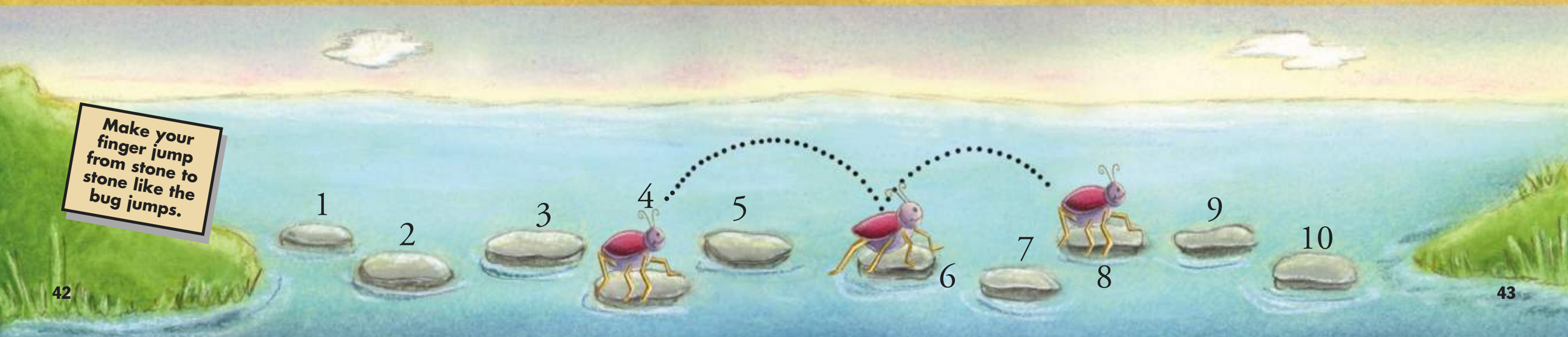
A jumping bug wants to cross the stream. She can jump two stones at a time.

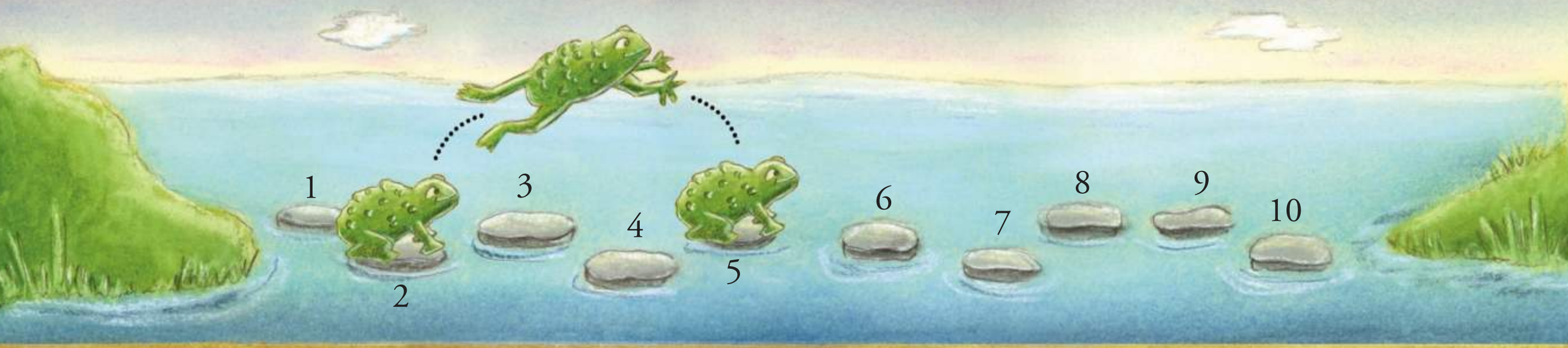
She starts at the edge of the stream. What number stone will she land on first?

The jumping bug jumped two stones. So she will land on stone number two.

The jumping bug is sitting on stone number four. If she jumps two more times, what number stone will she be on?

This time she will land on stone number eight.

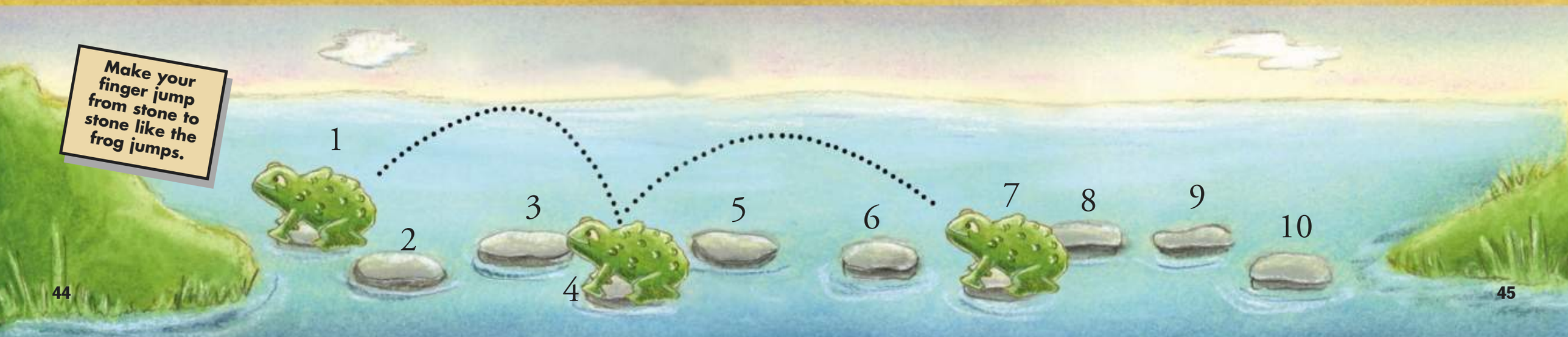




A bright green frog can jump the stones three at a time. He is sitting on stone number two. If he makes one jump, what number stone will he land on?

The frog jumps three stones. He will land on stone number five. If the frog jumps forward again, which number stone will he land on next?

If the frog is sitting on stone number seven and he jumps back two times, what number stone will he land on? He will land on stone number one!



Jen is at the beach looking for seashells. She already has one big, pink seashell. She finds another! It is a striped seashell.

One pink seashell plus one striped seashell makes two seashells. Jen has two seashells.

We can **add** two numbers together with signs that look like these:

1 + 1 = 2

+ means *add* or *join together*. It is called a **plus sign**.

= means *is the same as*. It is called an **equal sign**.

Jen's brother Liam is looking for seashells too.
He finds one shell buried in the sand.
If Jen and Liam put their seashells together,
how many seashells will they have?

Jen's two seashells plus Liam's one seashell equals three seashells all together.

We can write this in two ways:

2 + 1 = 3

or

1 + 2 = 3

Adding 1 + 2 is the same as adding 2 + 1.
They both equal 3!

Kevin has five candy worms lying on the table.
Kevin gives three candy worms to his friend Michiko.
How many candy worms does Kevin have left?

Five candy worms take away three candy worms equals two candy worms. Kevin has two candy worms and Michiko has three.

We can **subtract**, or take away, one number from another with signs that look like these:

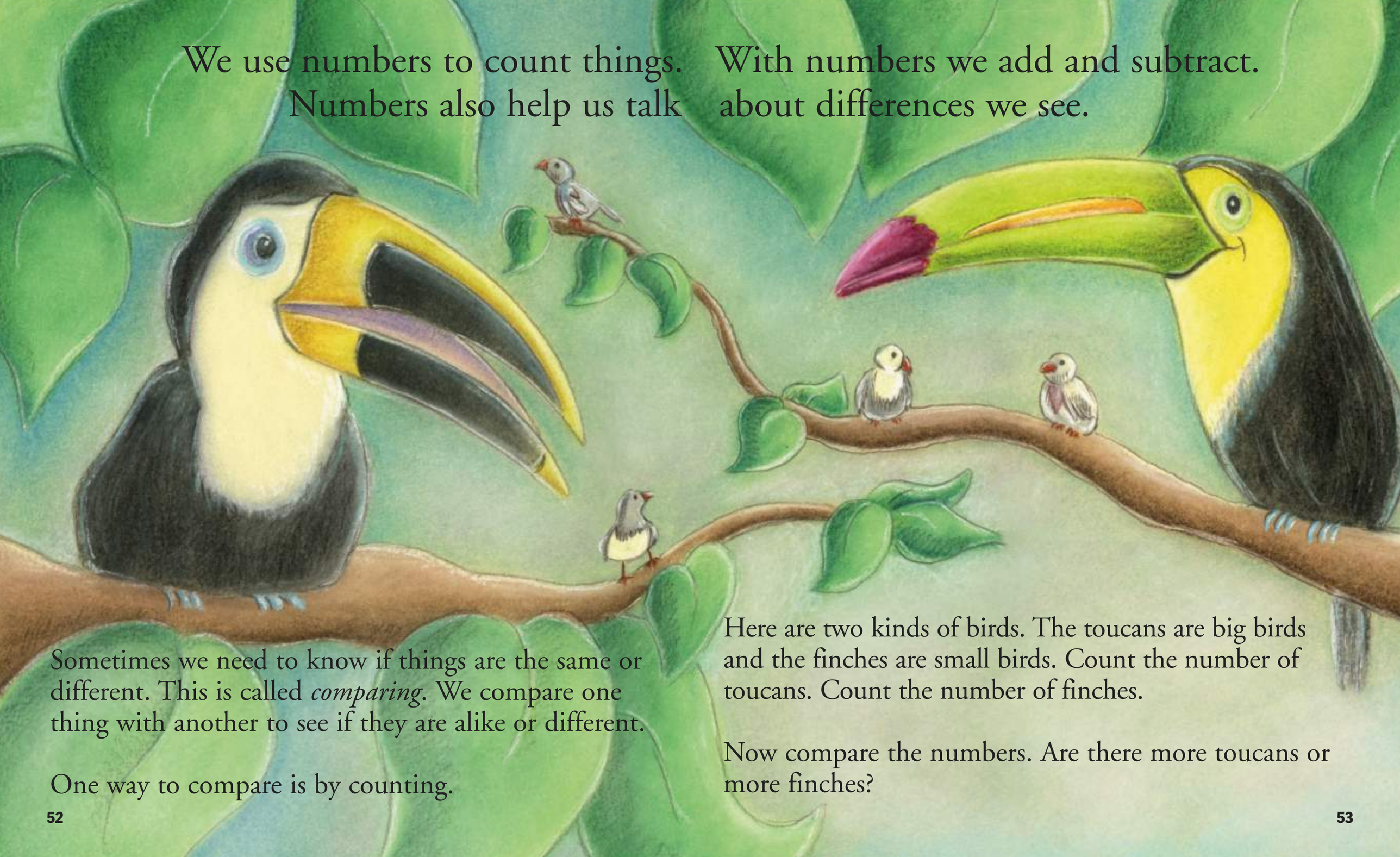
$$5 - 3 = 2$$

– means *subtract* or *take away*. It is called a **minus sign**.
= means *is the same as*. This is the equal sign again.

If Kevin keeps three candy worms for himself, how many will Michiko get?

(If you have trouble subtracting, use your hand to cover up three of the candy worms on the other page. Then count the candy worms that are left.)

We use numbers to count things.
Numbers also help us talk about differences we see.



Sometimes we need to know if things are the same or different. This is called *comparing*. We compare one thing with another to see if they are alike or different.

One way to compare is by counting.

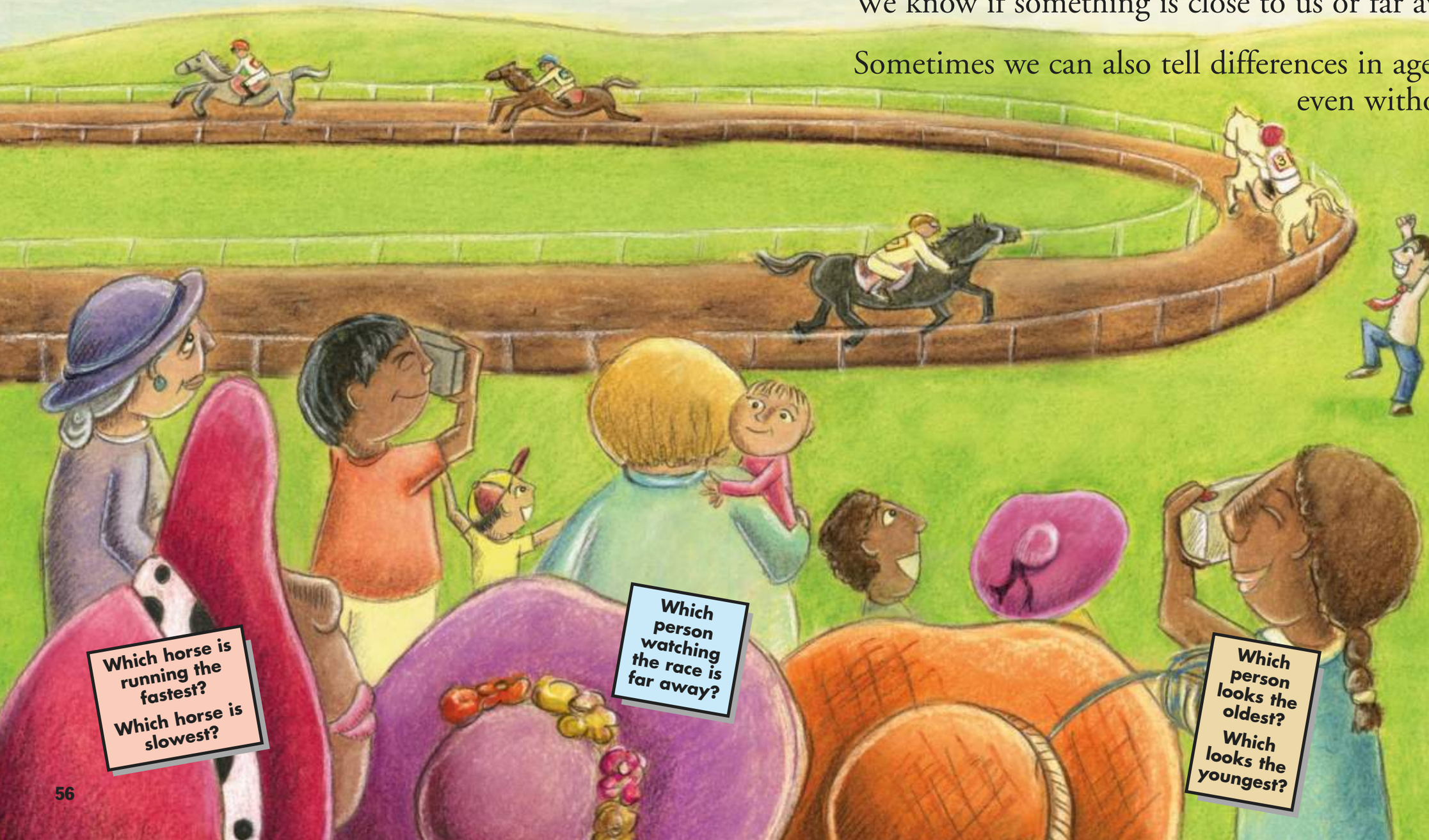
Here are two kinds of birds. The toucans are big birds and the finches are small birds. Count the number of toucans. Count the number of finches.

Now compare the numbers. Are there more toucans or more finches?

There are two toucans. There are four finches.

The group of finches is bigger than the group of toucans. If you said there were more finches than toucans, you were right!

Sometimes we do not have to count to compare different things. Sometimes we can just look at things and see their differences.



We can tell the difference between big and small, tall and short, fast and slow.

We know if something is close to us or far away.

Sometimes we can also tell differences in age, even without numbers.

We can tell these things just by looking. We can also tell by using numbers if we want to!

Let's count and compare!

Jan has some stones arranged in a row.
Katya has all her stones in a circle.
Count each one's stones.

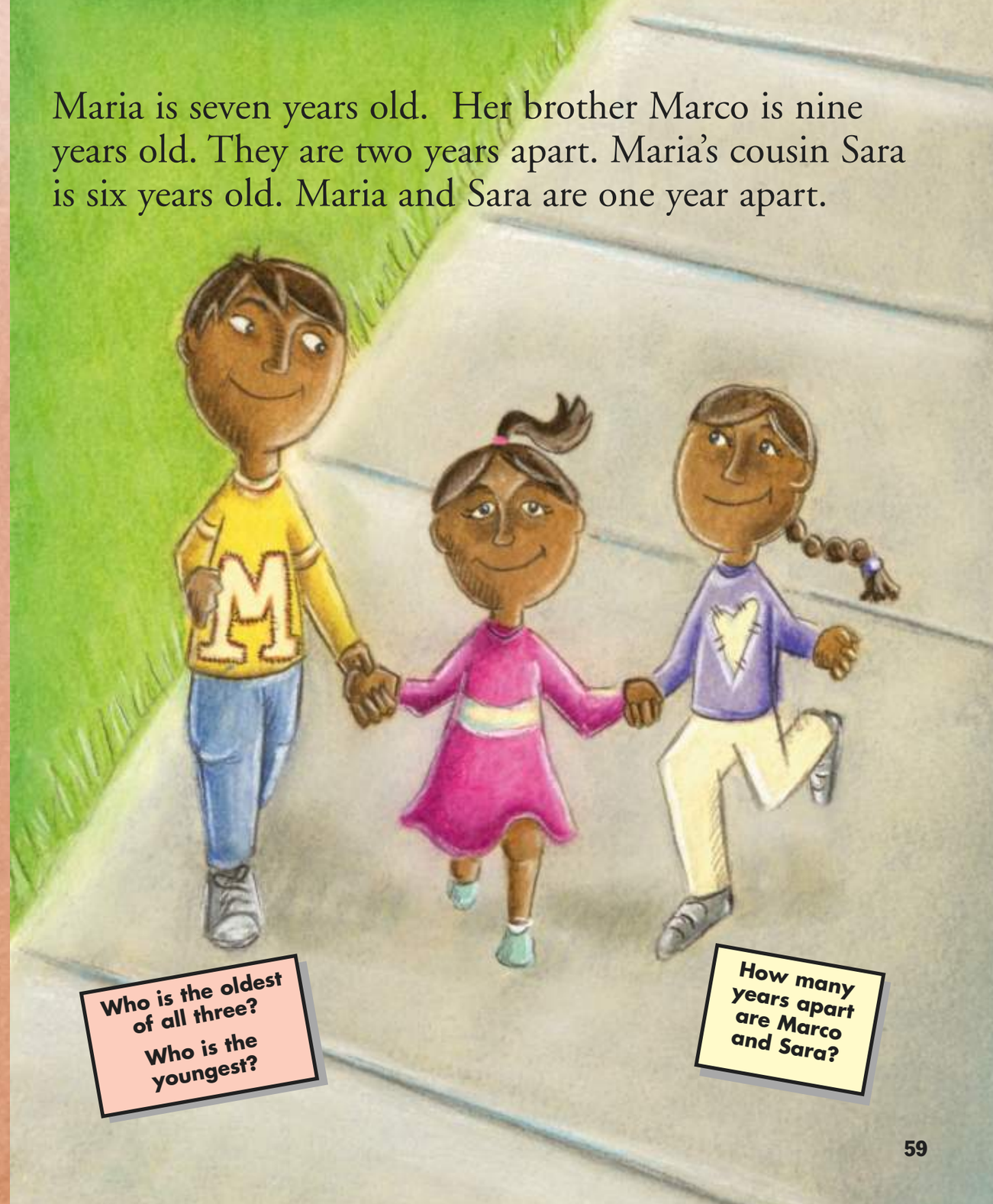
They both have the same number of stones.
Each one has seven stones.

Katya gives two of her stones to Jan.
Who has more stones now?

How many stones does Jan have?

How many stones does Katya have?

Maria is seven years old. Her brother Marco is nine years old. They are two years apart. Maria's cousin Sara is six years old. Maria and Sara are one year apart.



Who is the oldest of all three?

Who is the youngest?

How many years apart are Marco and Sara?

We count with numbers.
We use numbers to talk about
how old we are and how tall we are.

Telephone numbers and addresses are made of numbers.
Numbers help us tell time. They are used for many
other important things too.

Knowing about numbers helps us every day.

Learning about numbers is so much fun too!

10

NUMBERS GLOSSARY

add (ad) to put two or more numbers together so that you end up with a larger number

equal sign (EE kwal syne) a symbol meaning that different things are the same in size, number, or amount

minus sign (MY nuss syne) a symbol that means to take away one number from another

peacocks (PEE cox) birds that belong to the pheasant family and whose tail feathers form a beautiful fan when spread out

plus sign (pluhs syne) a symbol that means to add two or more numbers together

scurry (SKUR ree) to run quickly or to hurry

subtract (sub TRAKT) to take away a number from a larger number so that you end up with a smaller number

Fun Ways to Learn about NUMBERS

Sticks and Stones Collection

1

Go for a walk with a friend. As you walk, collect stones and small, fallen twigs and branches. When you get home, count how many you have of each. Try arranging your stones in a line from the smallest size to the largest. Do the same with the twigs and branches. Try arranging them in other ways too: in groups of two or three to practice adding, for example. Glue them to heavy paper and number them using a crayon to practice writing numbers.

You can also play without going outside. Try collecting different-sized things like buttons, coins, pens, and pencils instead.

Good Guesses

2

Play this guessing game with a group of friends. Get a large jar. Pick one person to put several small objects into the jar—such as marbles, coins, small stones, jelly beans, or even toy dinosaurs. That person should count exactly how many of the things he or she is putting into the jar, but not let anyone else know how many there are.

Now everyone else takes a good look at the jar. Then the person in charge of the jar removes it from sight. How many items are in the jar? Each guesser writes down the number he or she thinks is right. The person whose guess comes closest to the real number wins!

Name Those Numbers

3

Here is a good way to practice your numbers—and to see them in your mind! Partner up with a friend or family member. Using your finger, "write" a number on your friend's back and see if he or she can "see" what it is. If the guess is correct, keep going. When your friend guesses wrong, trade places and you take a turn guessing what number he or she is drawing on *your* back.

You can make the game a little harder by writing an arithmetic problem on the other person's back instead. For instance, you could do an addition or subtraction problem. Example: Write a 5 on the person's back, then an addition sign, then a 2. See if the person can tell if you are adding or subtracting. If they said "seven" for the sum above, they would be right!

Helping Children Get the Most out of the NUMBERS Volume

Even before children are ready to learn formal adding and subtracting, numbers and measurements are an important part of their learning. Young children quickly understand how to separate and combine groups of objects. By doing so, they also begin to learn that a number remains constant no matter how objects are arranged. Playing in this way also helps them begin to understand the concepts of "adding to," "taking away," and other important numbers-related principles. The activities on the previous page will help increase their grasp of these concepts.

Sticks and Stones Collection. This activity is great for young children just learning to count and to understand that objects can be ordered sequentially based on size. If your children play this game indoors, provide them with buttons and pencils or even an assortment of different objects. Ask them to separate the objects according to size, making a line of smallest to largest. Encourage your child to count out loud. You might also try separating the objects into two groups and asking questions such as "Which pile has more stones (or buttons, etc.)?" For the youngest children, simply have them group the objects into categories by size, color, or shape. Categorizing and sorting like this helps the child see patterns and relationships between objects, which is important for later mathematical skills.

Good Guesses. Older children will have fun playing this game with their friends, but younger ones will like it too, even if they aren't yet ready to estimate numbers or grasp the concept. Put the objects in the jar yourself if all the children want to guess. Make sure there are enough objects in the jar so that it won't be too easy to count them all at a glance. But also make sure that the number is not so high as to take too much time to count them all. For small children who can't yet write numbers, write down their guesses yourself. After everyone has guessed, encourage them to take the objects out of the jar and count them themselves.

Name Those Numbers. This activity helps children practice writing numbers in a way that is fun and engaging. It's also a great activity for children who learn best through tactile (touching) or kinesthetic (moving) types of activities. Older children may be able to play this game without much help. If the one guessing keeps getting the answers right, suggest that the two players switch places after two or three right answers. Playing the game yourself with younger children is a fun and gentle way to guide them to "visualizing" and "feeling" the numbers they are learning about.

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