



WORKBOOKS



Math

Math

Learn and Explore



Meets Common Core standards

Makes learning easy and fun

Builds and boosts key skills



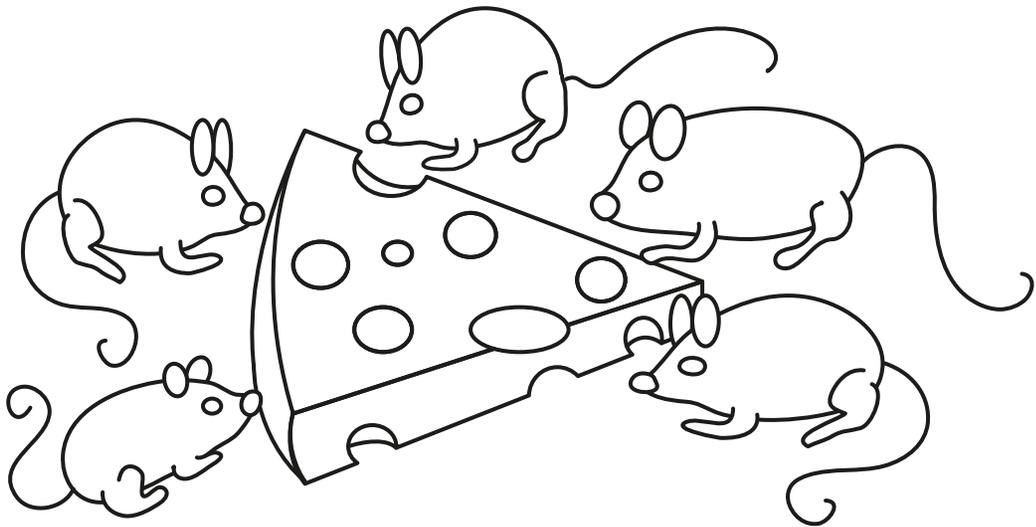
WORKBOOKS



Math

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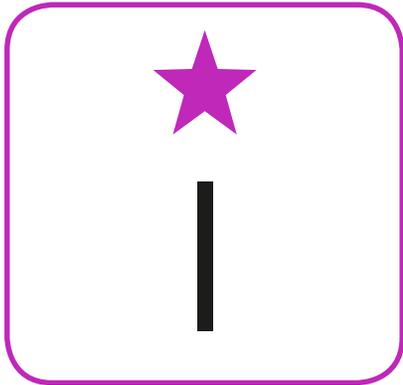


Numbers 1, 2, and 3

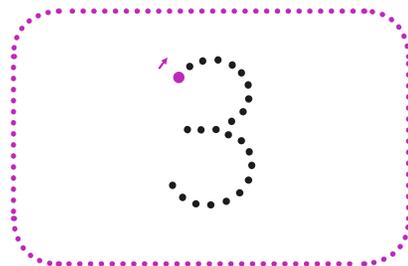
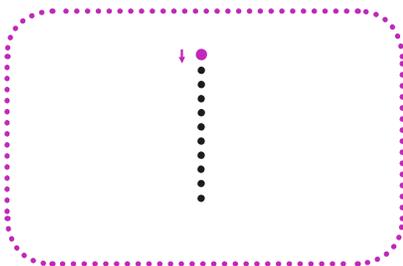
GOAL

Learn the numbers 1, 2, and 3.

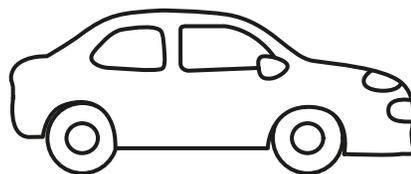
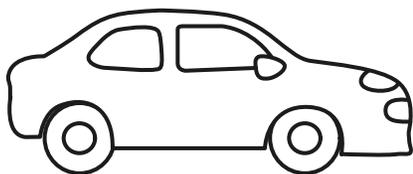
Here are the numbers 1, 2, and 3.



Write the numbers.



Count the cars.



How many cars are there? Circle the correct number.

1

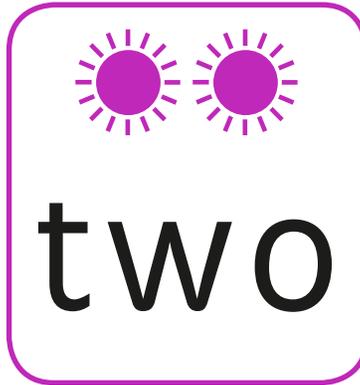
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3

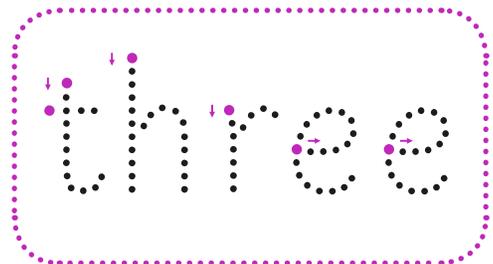
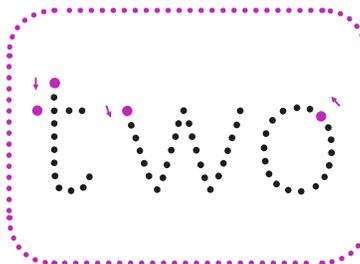
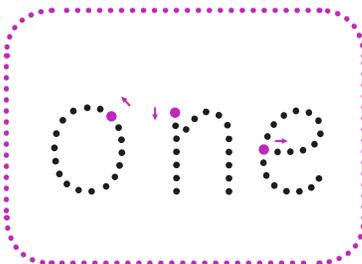


Learn to write number words and count to 3.

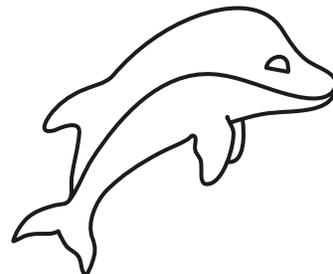
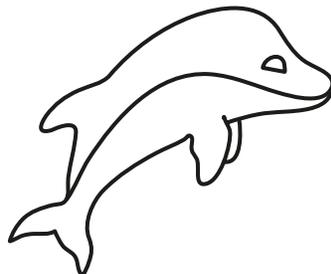
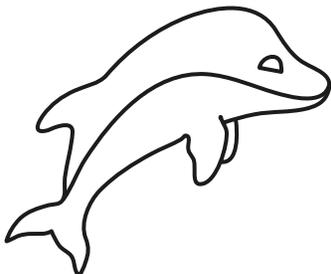
Count the suns and read the number words.



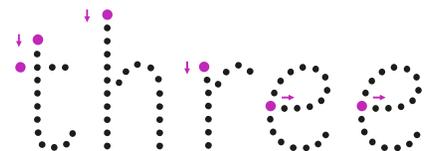
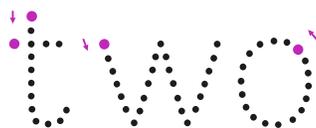
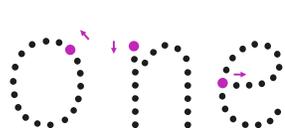
Write the number words.



How many dolphins are there?



Write over the correct number word.





Numbers 4 and 5

GOAL

Learn the numbers 4 and 5.



4 stars

Write the number.

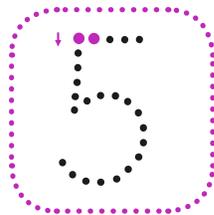
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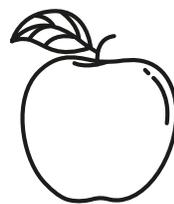
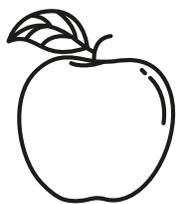
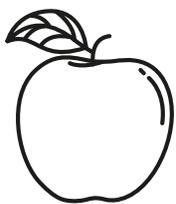
5 stars

Write the number.

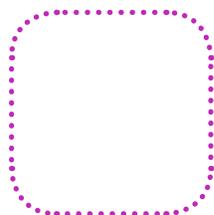
5



Count the apples.

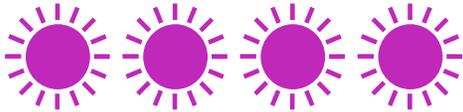


Write the number of apples in the box.





Learn to write number words and count to 5.

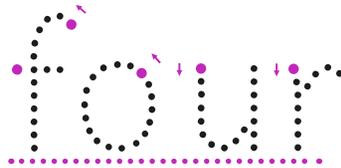


Read the word.

four

Write the word.

four

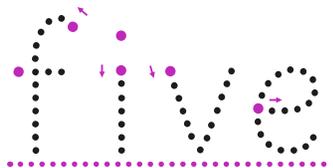


Read the word.

five

Write the word.

five



How many strawberries are there?



Write the number word.





Numbers 6, 7, and 8

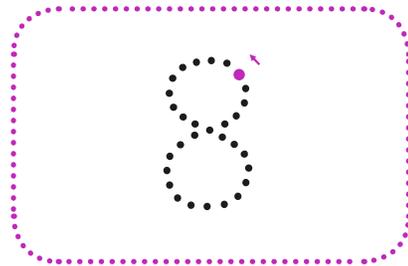
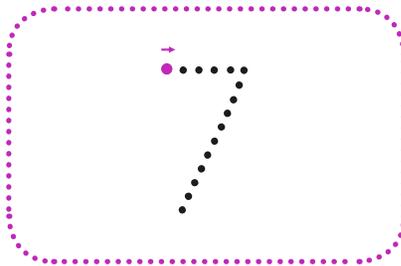
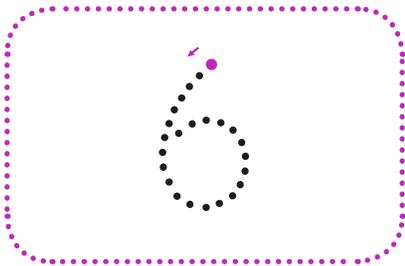
GOAL

Learn the numbers 6, 7, and 8.

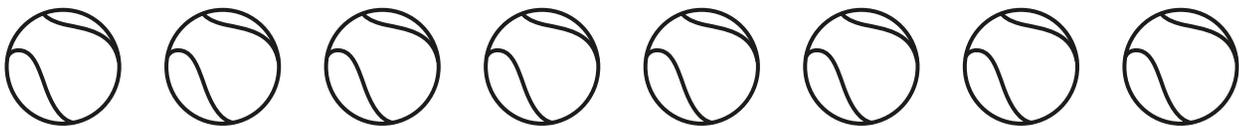
Here are the numbers 6, 7, and 8.



Write the numbers.



Count the balls.



How many balls are there? Circle the correct number.

6

7

8



Learn to write number words and count to 8.

Count the suns and read the number words.

Write the number words.

Write the missing numbers in the boxes.

1	2		4
	6	7	



Numbers 9 and 10

GOAL

Learn the numbers 9 and 10.



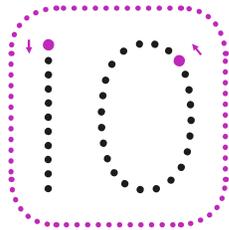
Write the number.

9

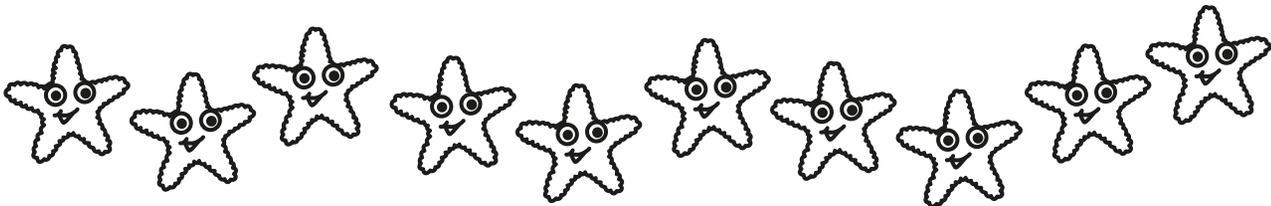


Write the number.

10



Count the starfish.



How many starfish are there?
Circle the correct number.

9 10



Learn to write number words and count to 10.

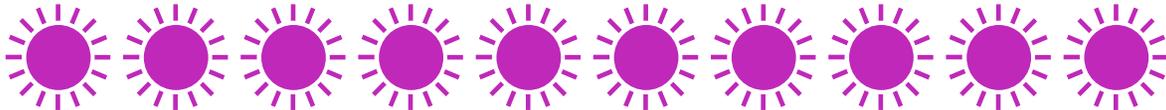
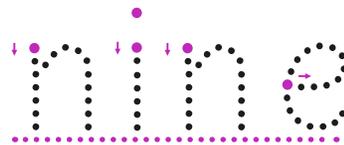


Read the word.

nine

Write the word.

nine

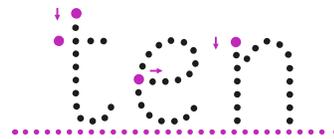


Read the word.

ten

Write the word.

ten



How many frogs are there?



Write the number word.



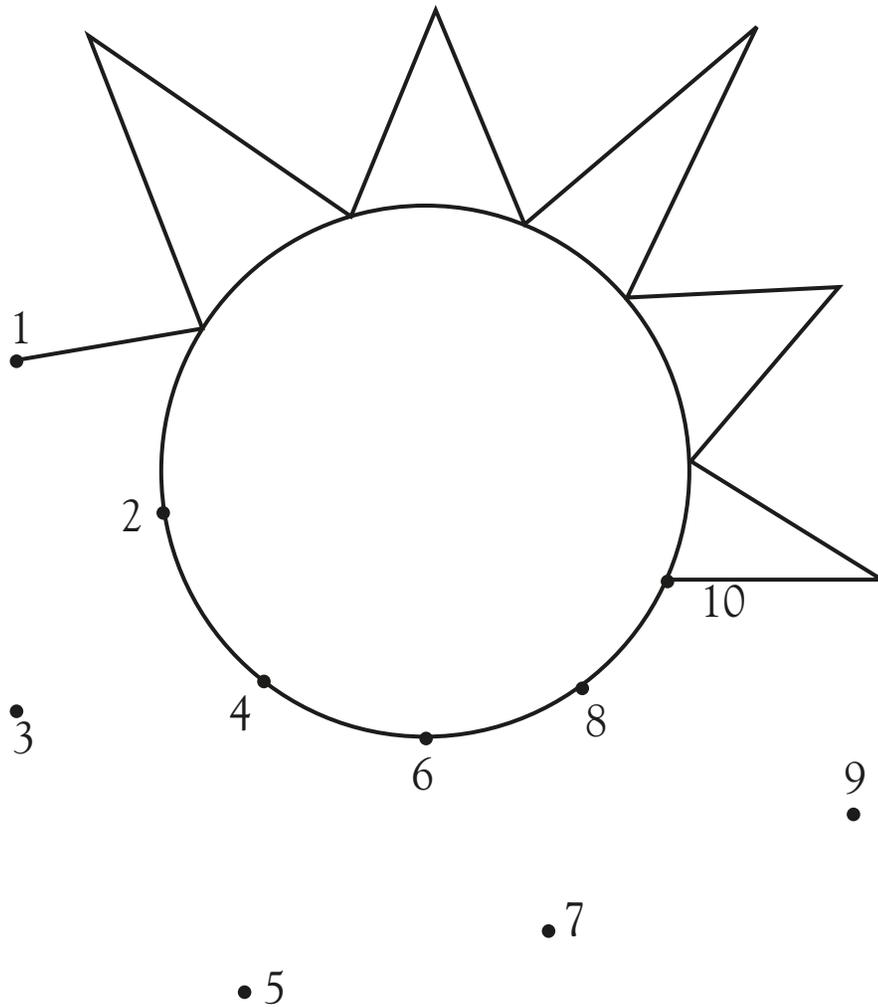


Connect the Dots

GOAL

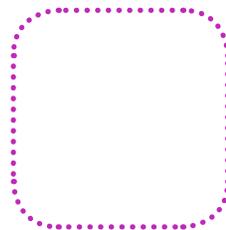
Learn to connect the numbers 1 to 10.

Start at 1 and connect the dots to 10.



How many rays are there in the picture of the sun?

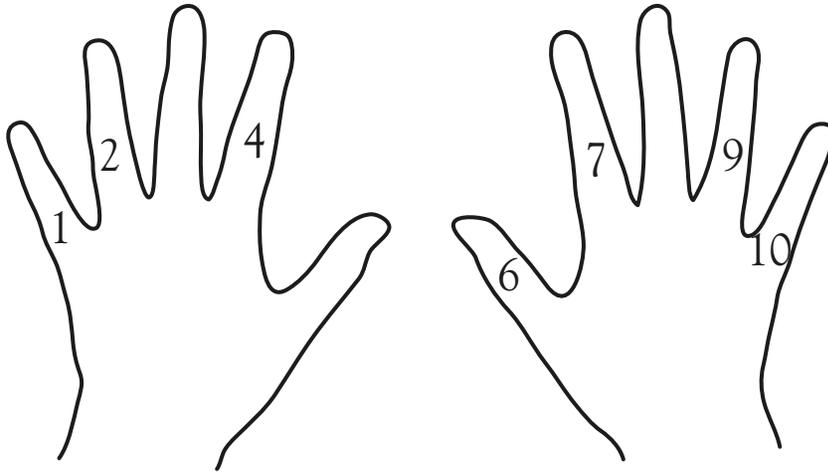
Write the number in the box.



Count from 1 to 10.

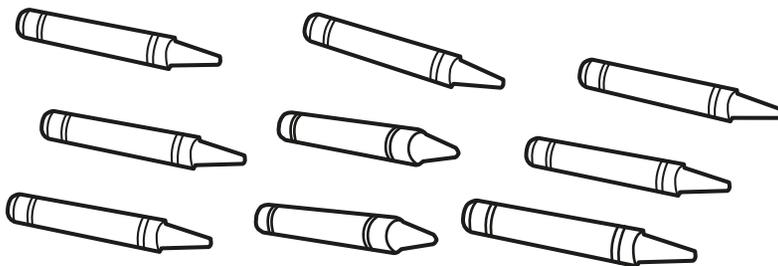
How many fingers are there?

Count the fingers. Write the missing numbers in the boxes.



1	2	<input type="text"/>	4	<input type="text"/>
6	7	<input type="text"/>	9	10

Count the crayons. Write the number word.



.....



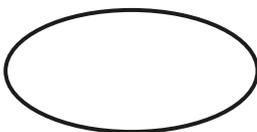
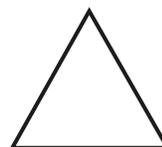
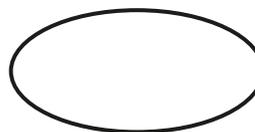
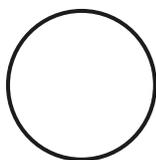
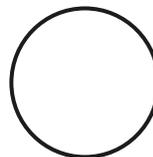
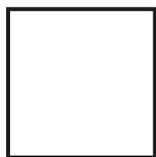
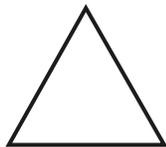
Match the Shapes

GOAL

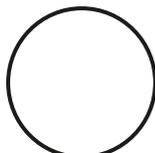
Learn to match the shapes that are the same.



Connect the shapes that are the same.



Circle the shape that matches the shape of a penny.



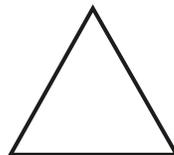
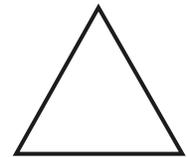
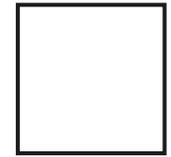
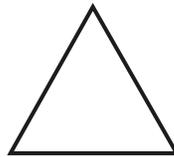
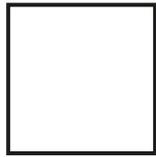
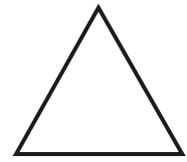
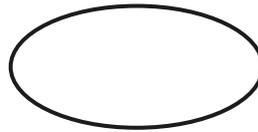
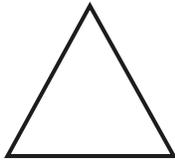
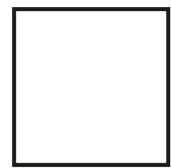
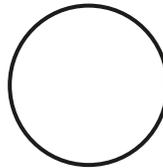
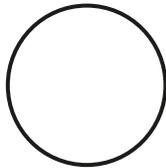
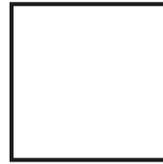
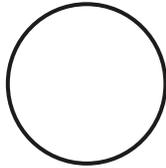


Find the shape that is different.



GOAL

Circle the different shape in each row.

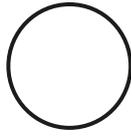




Circles

GOAL

This is a circle.
Learn to find the circles.

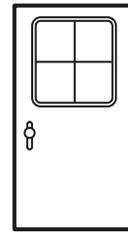
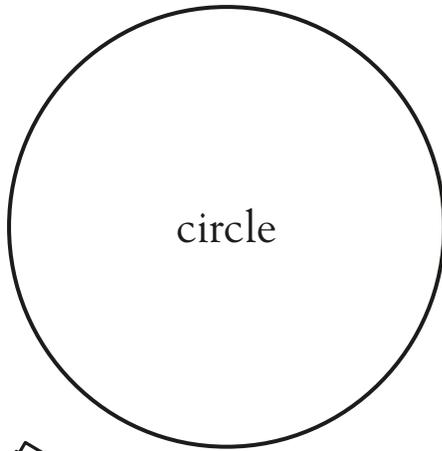
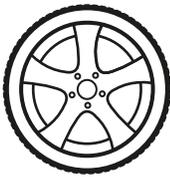


Look at the objects around the circle. Circle the four objects that have the same shape as a circle.



broom

wheel



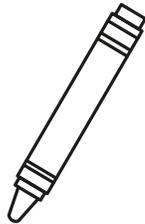
door

pizza



cookie

crayon



ball

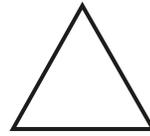
Count the wheels. Write the number word.



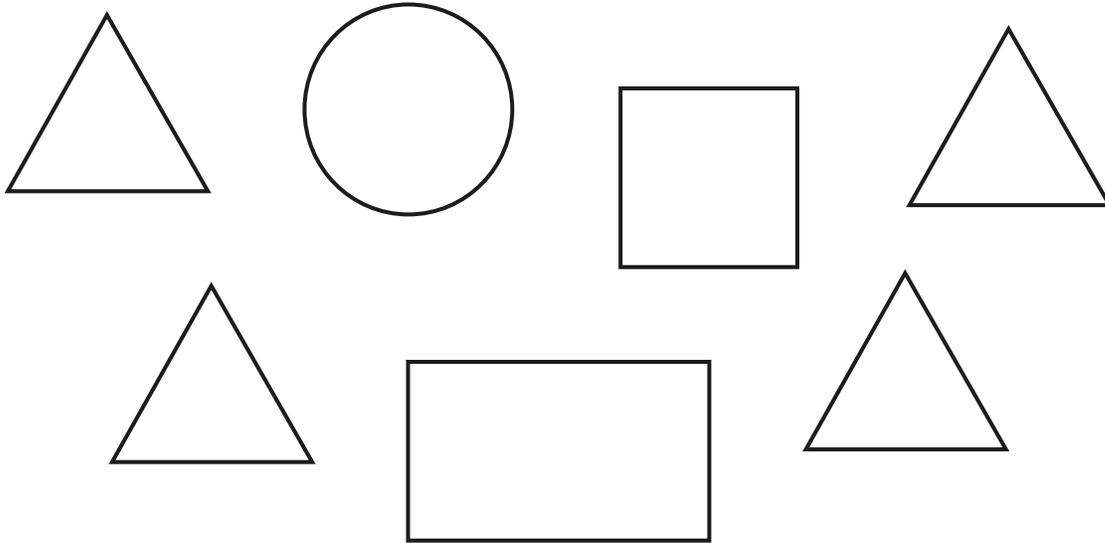
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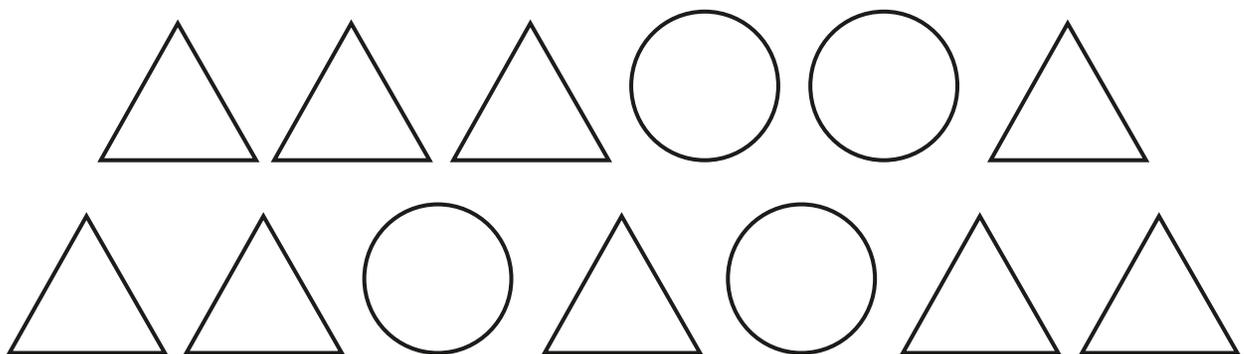
This is a triangle.
Learn to find the triangles.



Look at the shapes. Circle the four triangles.



How many triangles are there?



Circle the correct number.

8

9

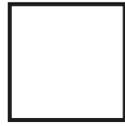
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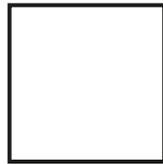
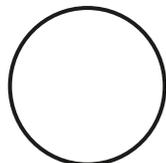
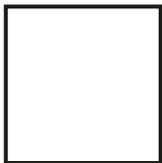
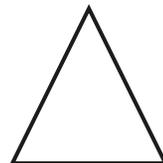
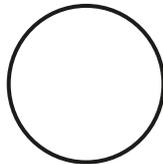
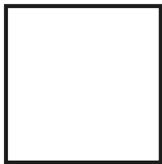
Squares

GOAL

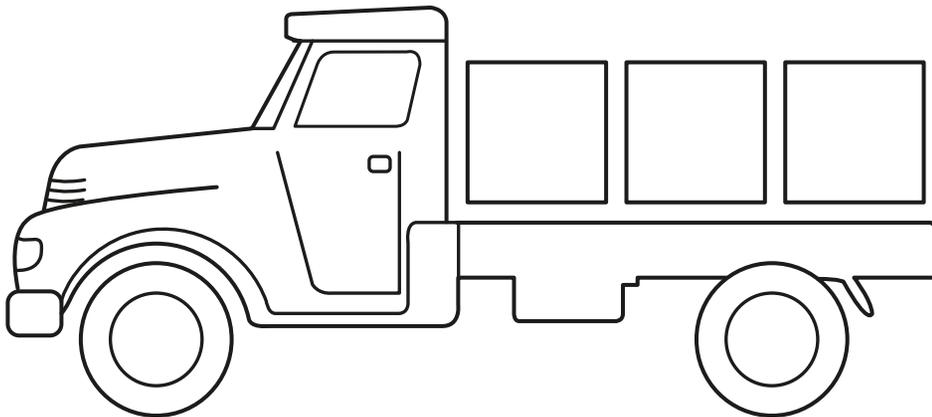
This is a square.
Learn to find the squares.



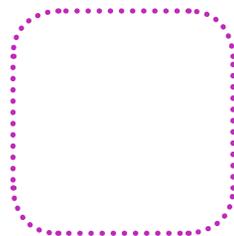
Look at the shapes. Circle the six squares.



Count the squares on the back of the truck.



Write the number.

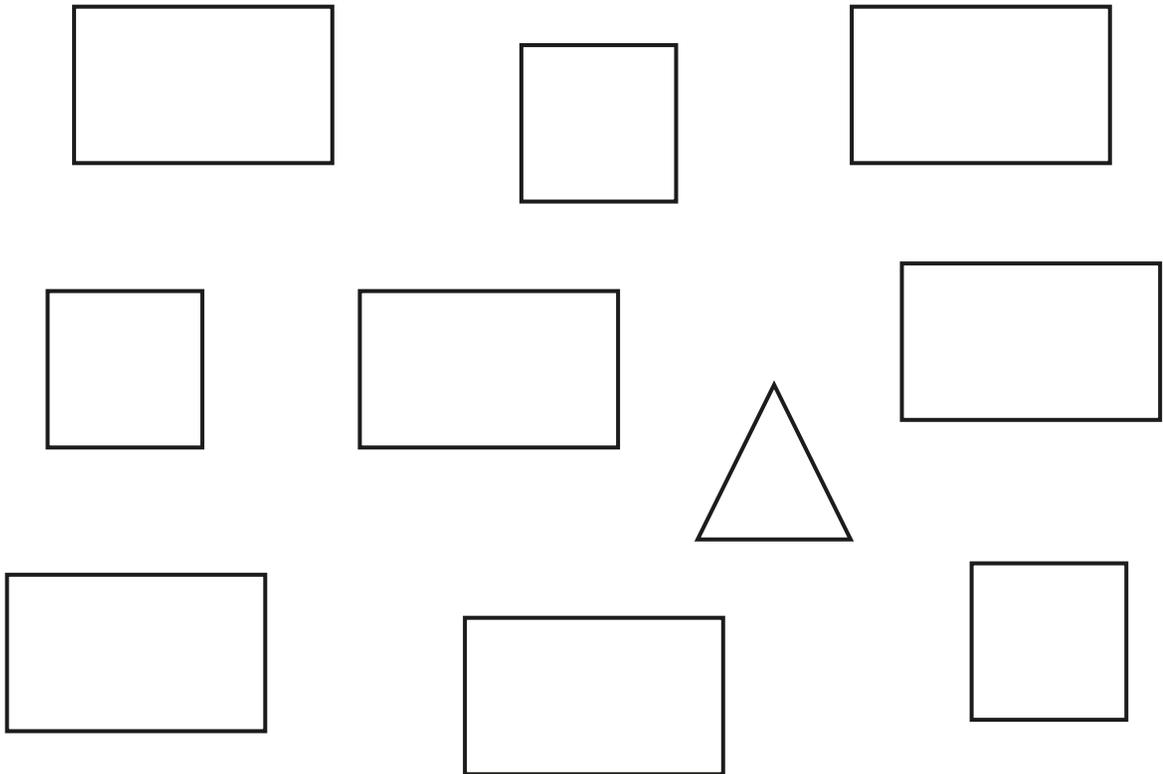




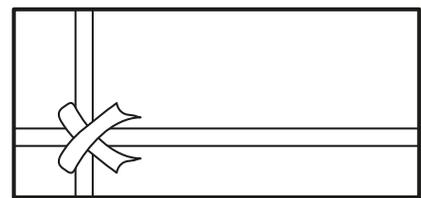
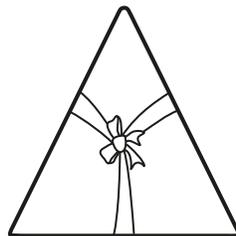
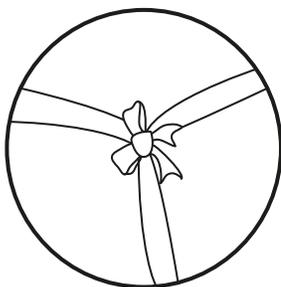
This is a rectangle.
Learn to find the rectangles.



Look at the shapes. Circle the six rectangles.



Circle the present that is shaped like a rectangle.





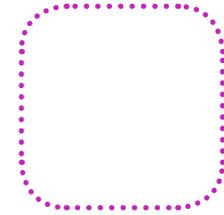
Counting Shapes

GOAL

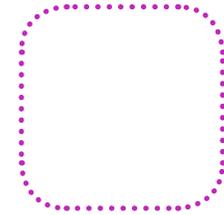
Use shapes to practice counting.

How many shapes are there in each row?
Write the correct number.

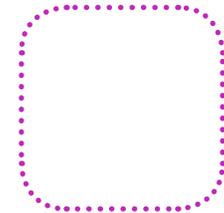
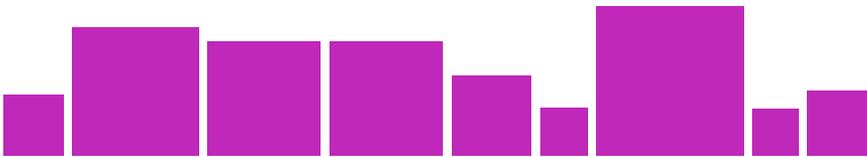
Count the circles.



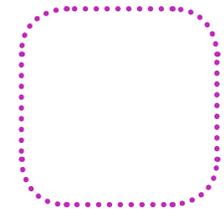
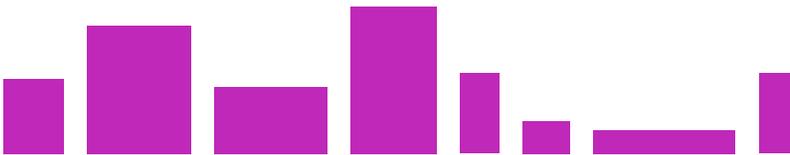
Count the triangles.



Count the squares.

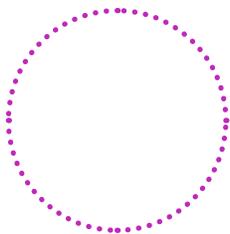


Count the rectangles.

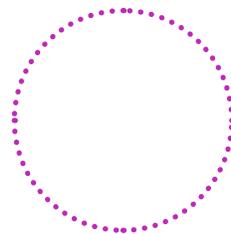


Fill in the circles with the missing numbers.

1



3



5

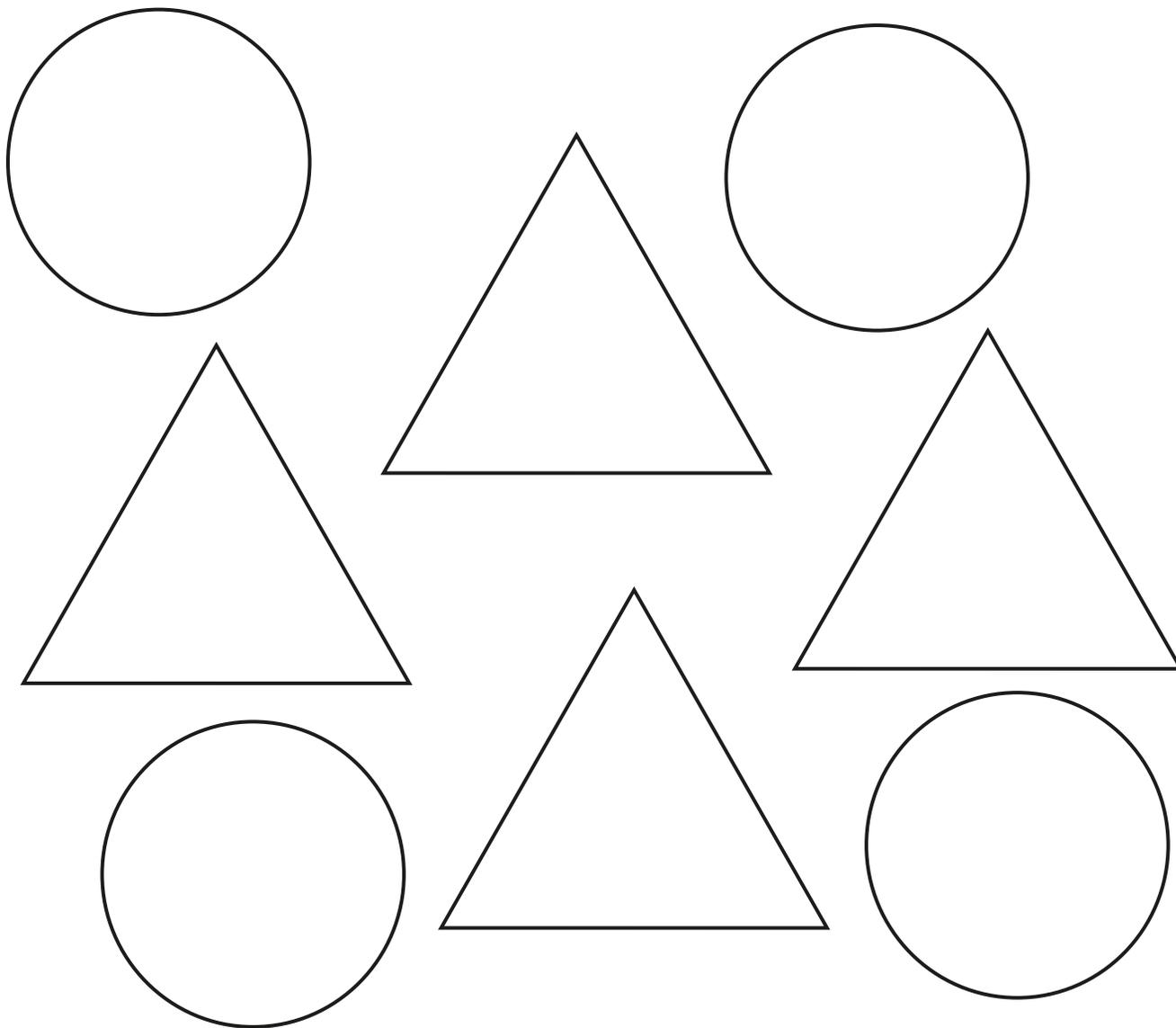


Learn to make patterns with shapes and colors.

GOAL

Look at the shapes.

Color the four circles blue. Color the four triangles red.



Count the number of shapes above.

Write the number word.





Count One More

GOAL

Learn to count one more.



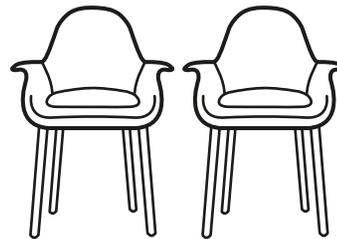
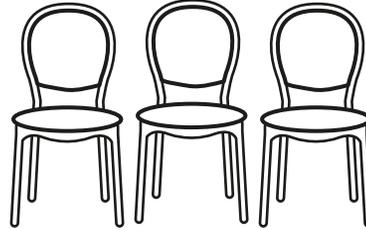
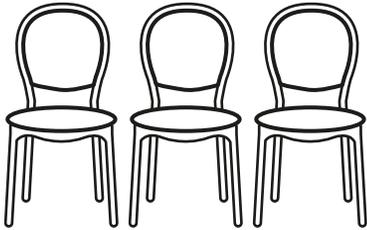
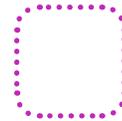
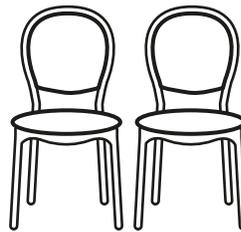
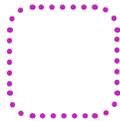
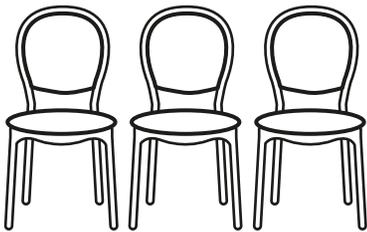
2 chairs



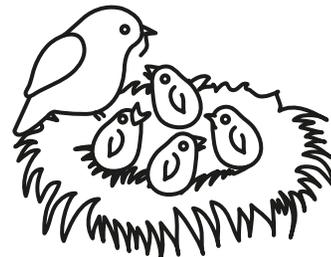
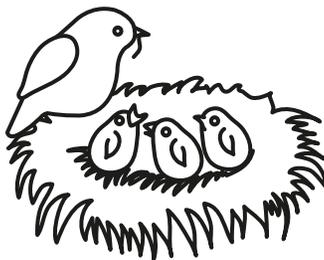
3 chairs



Count the chairs in each group. Put a check (✓) in the box next to the group that has one more chair.



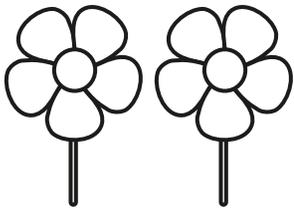
Count the birds in each nest. Circle the nest with one more bird than the other.



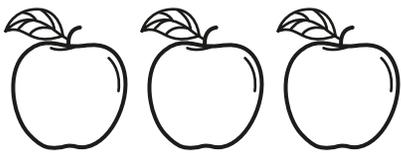


Learn to add one more to a group.

Draw one more object in each row. Then count the objects in each row and write the total number in the box.



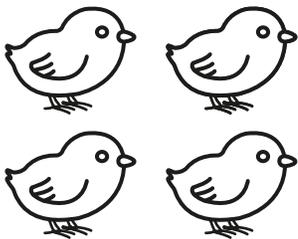
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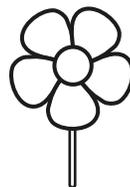
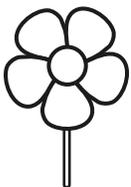
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Add to the pattern by drawing one more picture.



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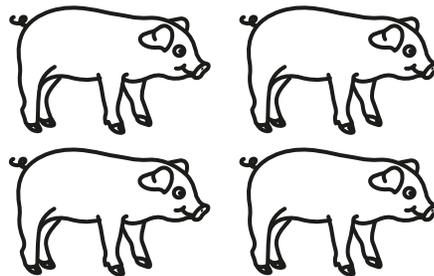
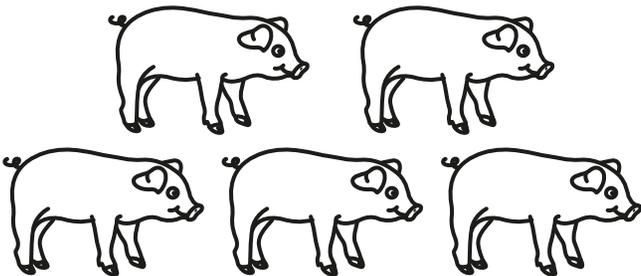
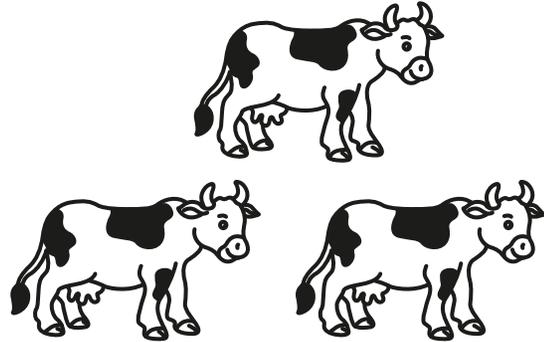
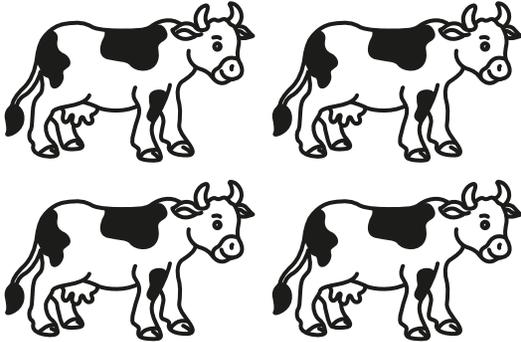


Count One Less

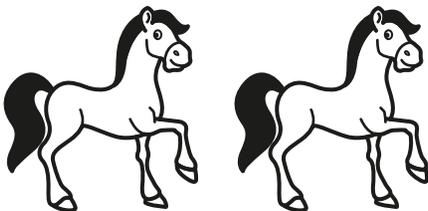
GOAL

Learn to find the groups with one less.

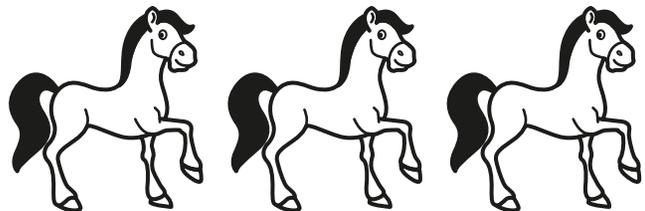
Look at the groups of animals. For each animal, draw a line under the group that has one less.



Count the horses. Circle the correct number.



1 2 3



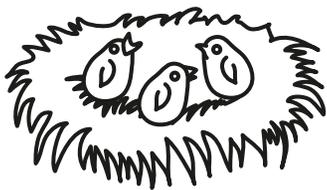
1 2 3



Learn to take one away.



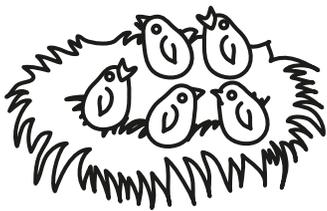
Cross out one bird in each nest to take one away. Count the number of birds left in the nest and circle the correct number. (Note: Do not count the bird you crossed out.)



2 3 4



1 2 3



3 4 5

Take one ant away from the row of ants. Count the ants that are left. Circle the correct number.



5 6 7

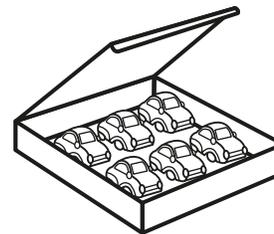
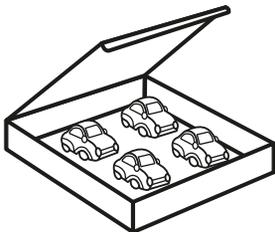
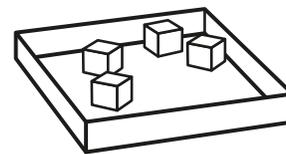
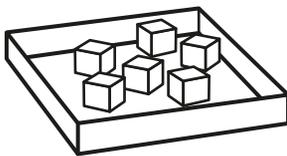
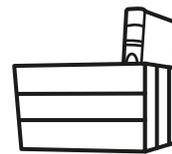
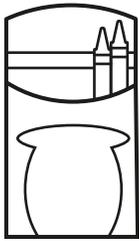


Which Has More?

GOAL

Learn to find the group with more.

Look at each set of boxes. Circle the box that has more.



Count the cars in both boxes above. Circle the total number.

4

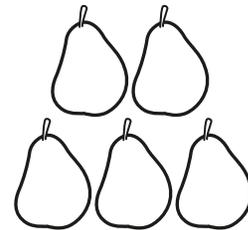
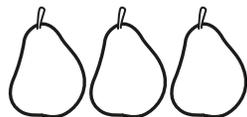
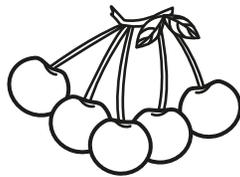
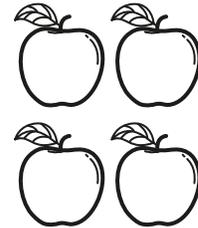
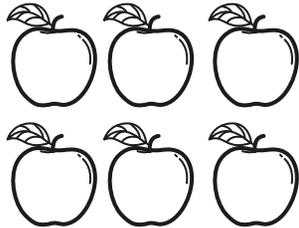
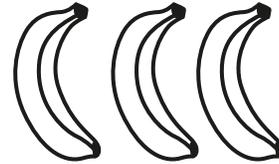
8

10



Learn to find the group with more than another group.

Look at the two groups of fruits in each row.
Circle the group that shows more fruits than the other.



Count the pears in both groups above. Circle the total number.

5

8

10

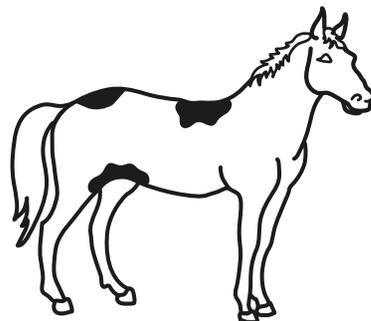
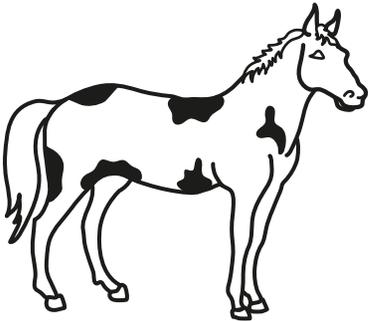
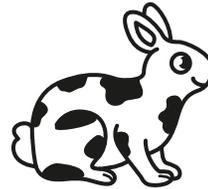
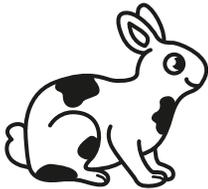
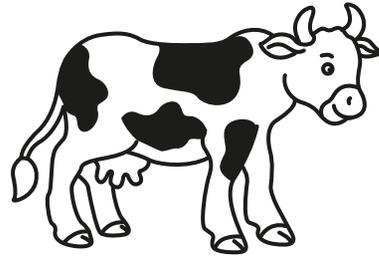
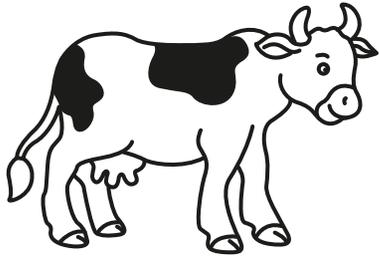


Which Has Fewer?

GOAL

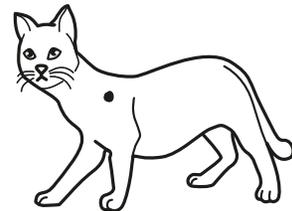
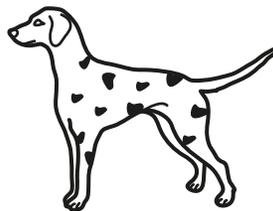
Learn to find the group with fewer.

Look at the animals in each row. Circle the animal that has fewer spots.



Circle the word to complete the sentence below.

fewer more

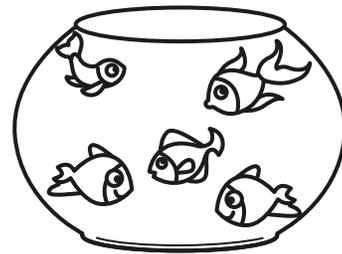
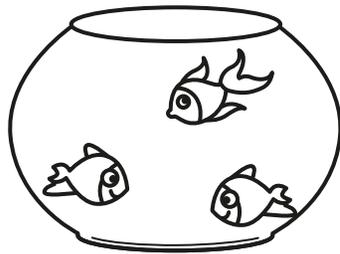


This dog has spots than this cat.

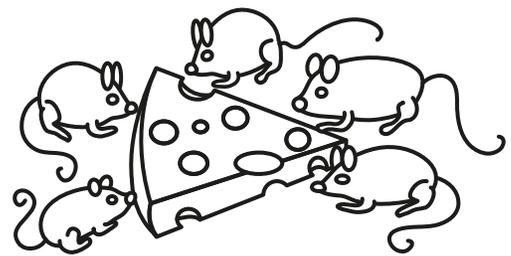
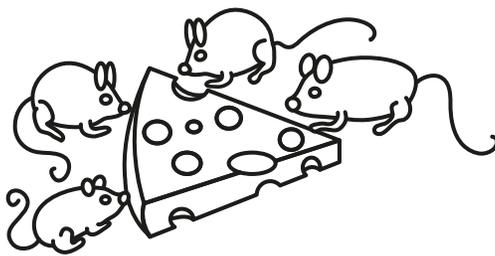


Learn to find a number that is less than another number.

Count the animals in the pictures. Circle the picture with fewer animals than the other and fill in the numbers.



The number is less than the number .



The number is less than the number .

Write a number that is less than 7.

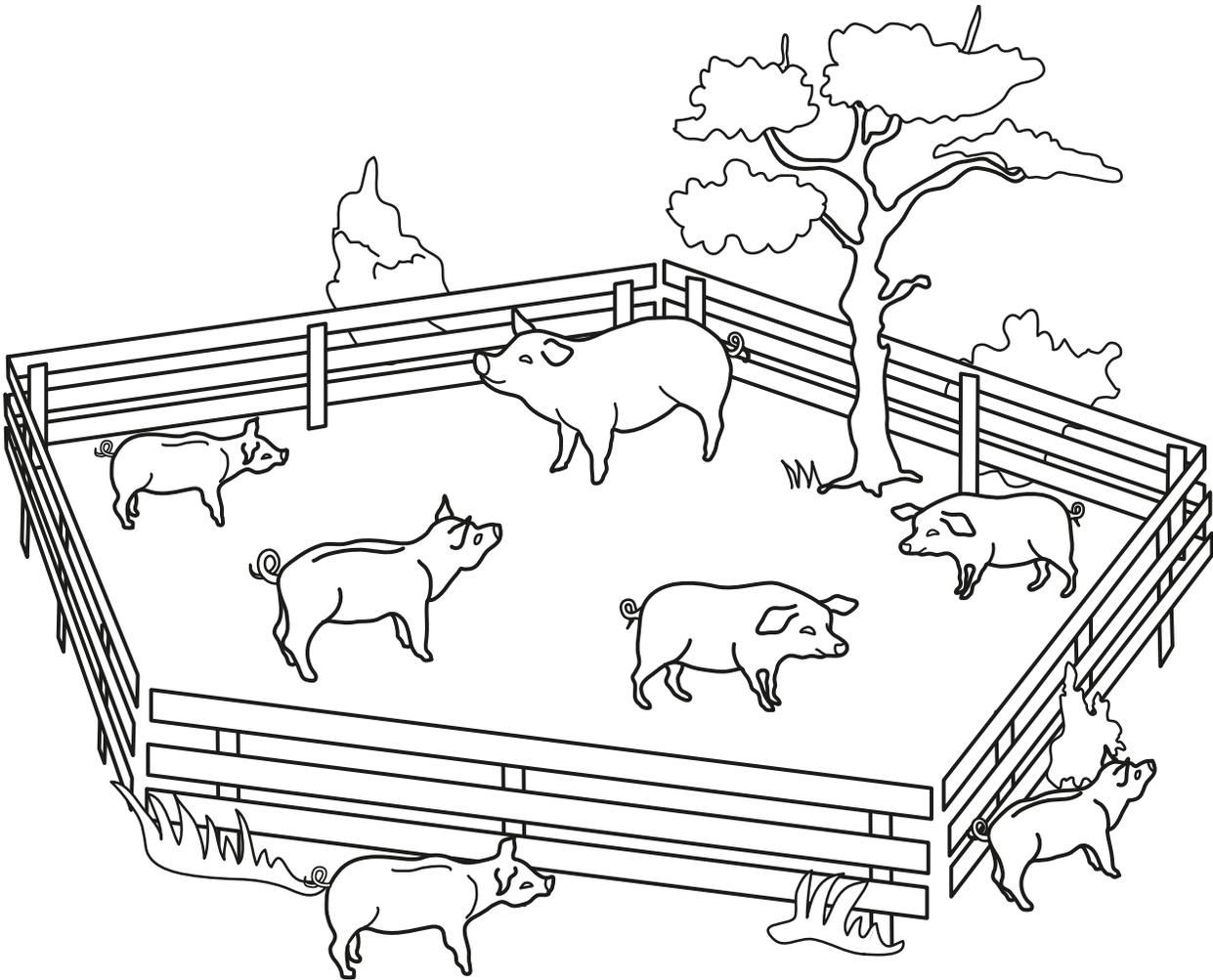


Inside and Outside

GOAL

Location words tell us where things are placed.
Learn to find things inside and outside.

Circle the pigs that are inside the pen. Color the pigs that are outside the pen.



How many pigs are inside the pen? Circle the correct number.

3

4

5



Learn to use the location words *top* and *bottom*.

On which shelf has each object been placed?
Circle the word *top* or *bottom*.



Where is the hat?  top bottom

Where is the toy bear?  top bottom

Where is the cat?  top bottom

Where is the ball?  top bottom

Where is the puppy?  top bottom



Left, Middle, and Right

GOAL

Learn to use the location words *left, middle, and right.*



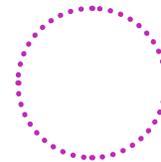
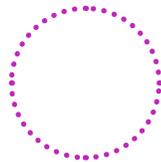
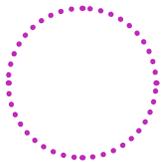
left



middle



right



Who is in the middle? Write the letter **M** in the circle under the person in the middle.

Who is on the right? Write the letter **R** in the circle under the person on the right.

Who is on the left? Write the letter **L** in the circle under the person on the left.

Who is holding the kite?
Put a check (✓) in the correct box.



The girl on the left.



The boy on the right.

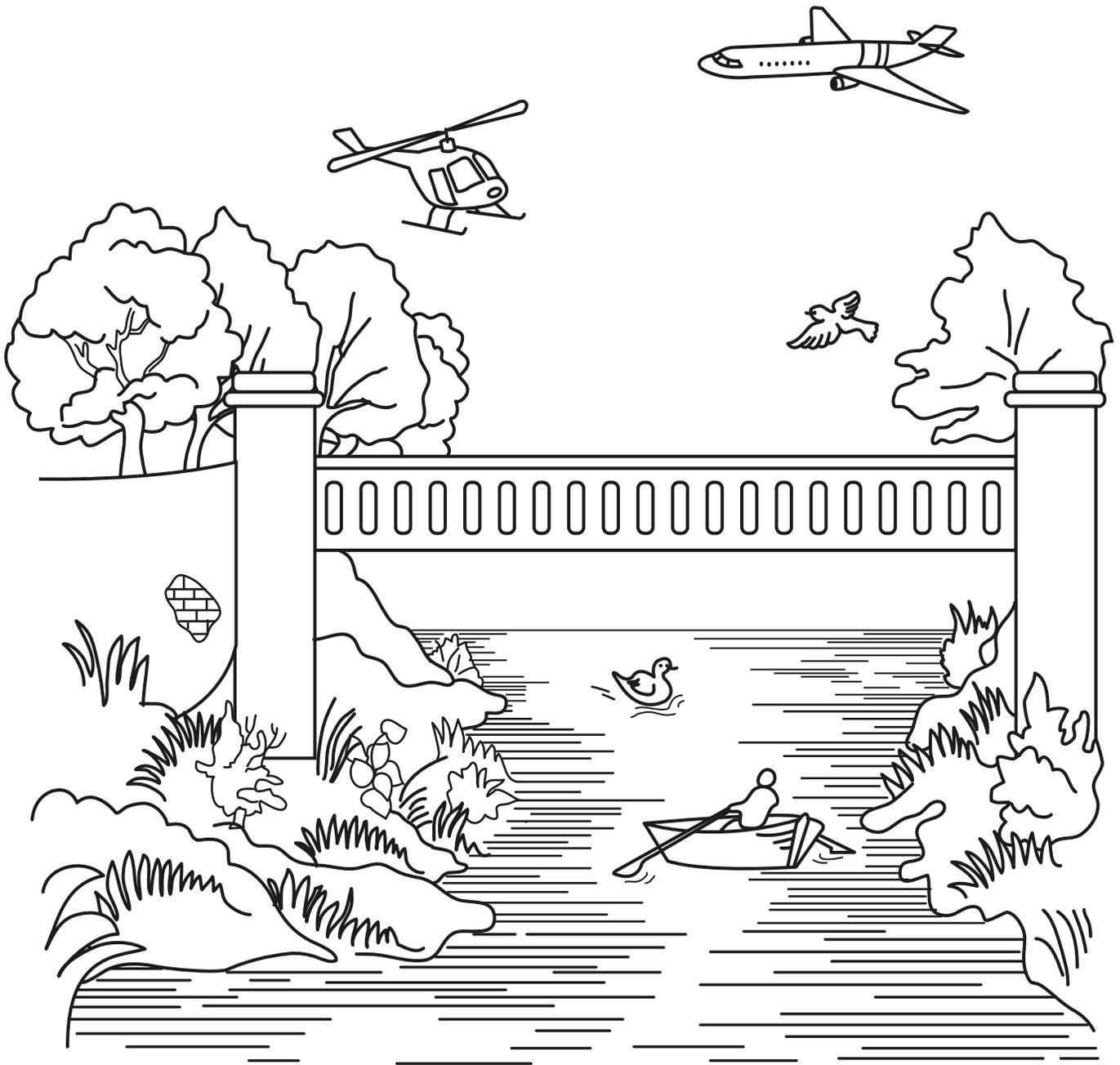




Learn to use location words *above* and *below*.

GOAL

Look at the bridge. Draw a circle around the three things that are above the bridge. Draw a rectangle around the two things that are below the bridge.



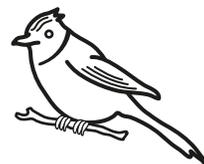
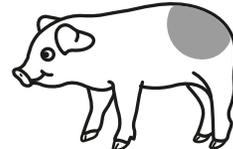
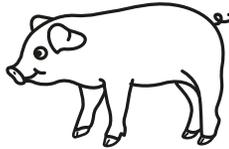
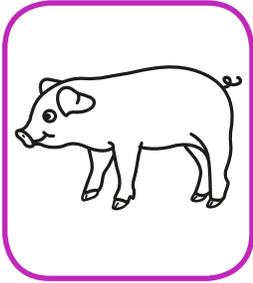
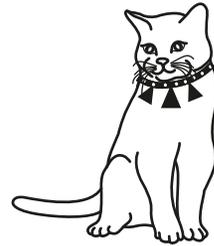
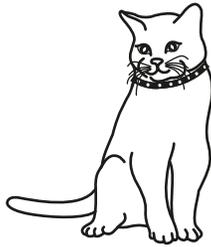


The Same

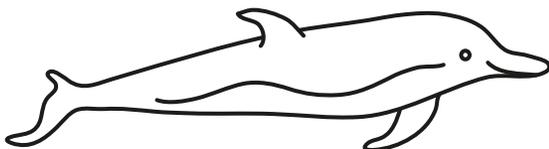
GOAL

Learn to find the things that are the same.

Look at each row of animals. Circle the animal in each row that is the same as the first.



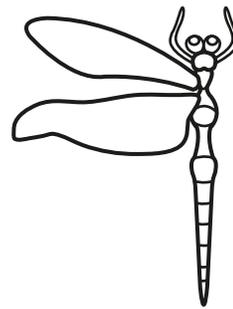
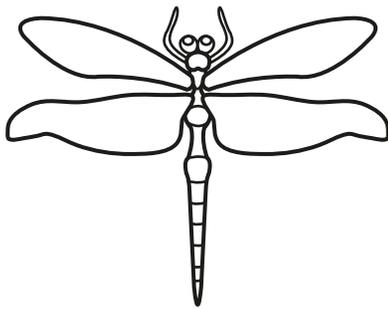
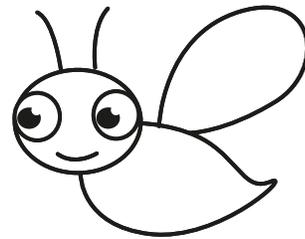
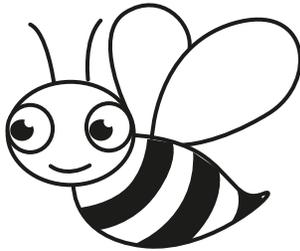
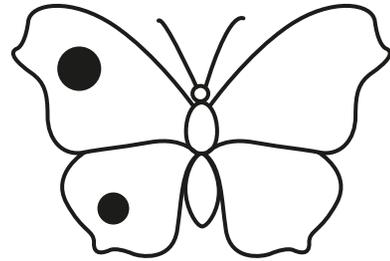
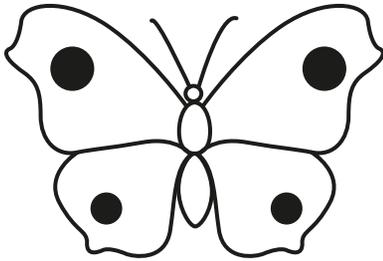
Make the dolphins look the same.



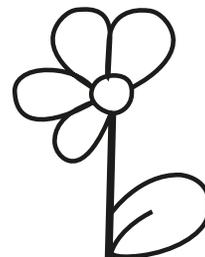
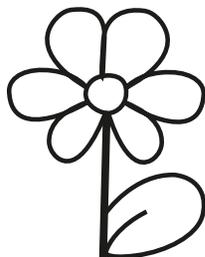


Learn to make things look the same.

Look at the first insect in each row.
Make the second insect the same as the first one.



Make the flower on the right the same as the flower on the left.





Different Numbers

GOAL

Learn to find the numbers that are different.

Look at the numbers in each box. Circle the number that is different from the other numbers.

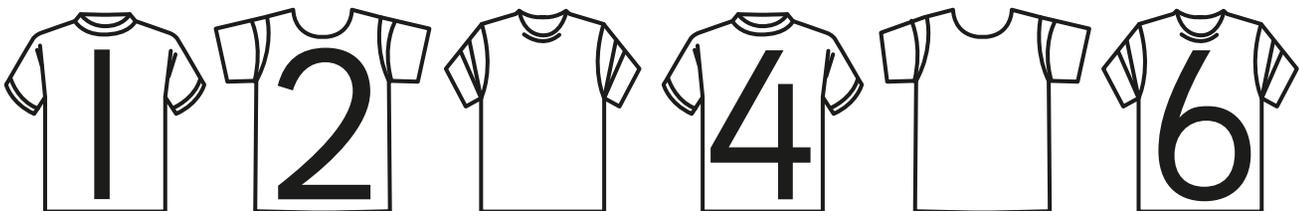
2 2 2 6 2

3 5 3 3 3

8 8 9 8 8

6 9 9 9 9

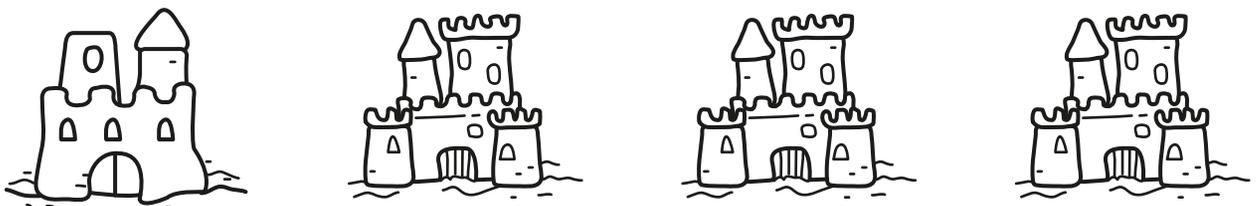
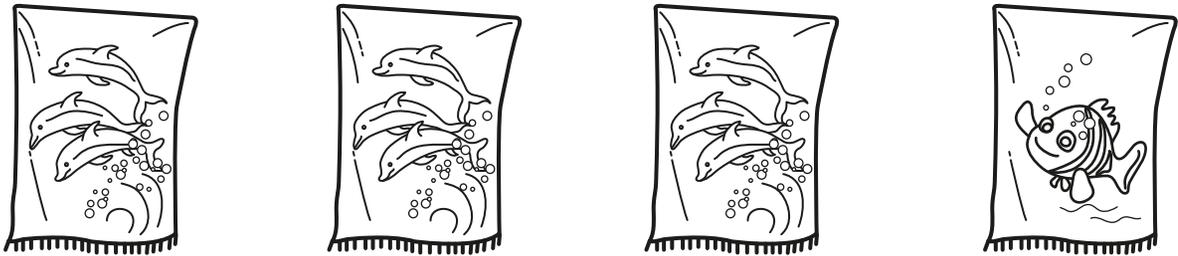
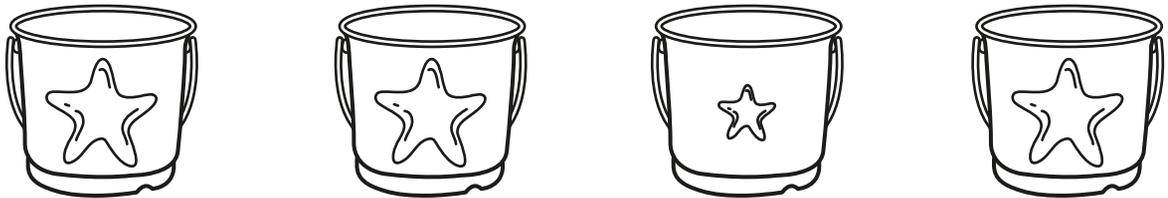
Write the missing numbers on the T-shirts.



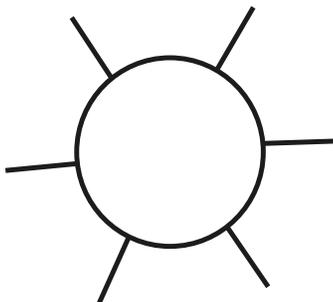


Learn to spot the difference between things.

Circle the picture in each row that is different.



Draw a picture to match the picture below.



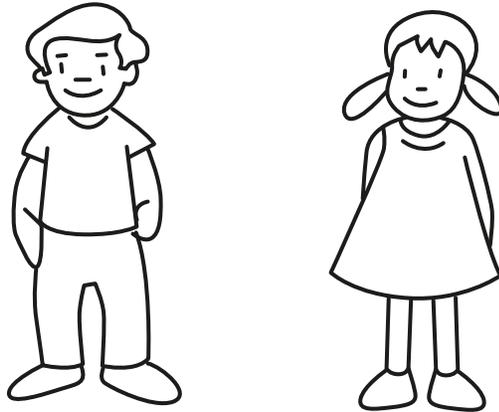
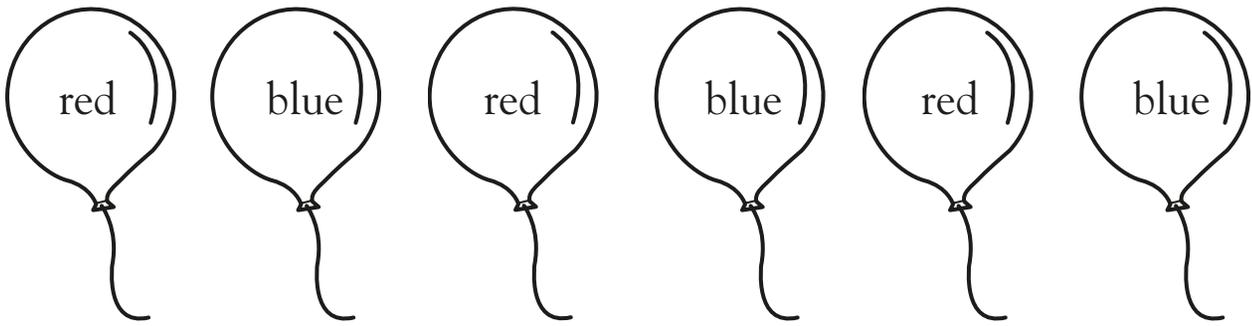


Sort by Color

GOAL

Learn to name and sort colors.

Color the girl's dress red and the boy's shirt blue.
Color the balloons to match the words on them.
Then draw lines from the red balloons to the girl
and from the blue balloons to the boy.



Write the number to answer each question in the box.

How many balloons are red?

How many balloons are blue?



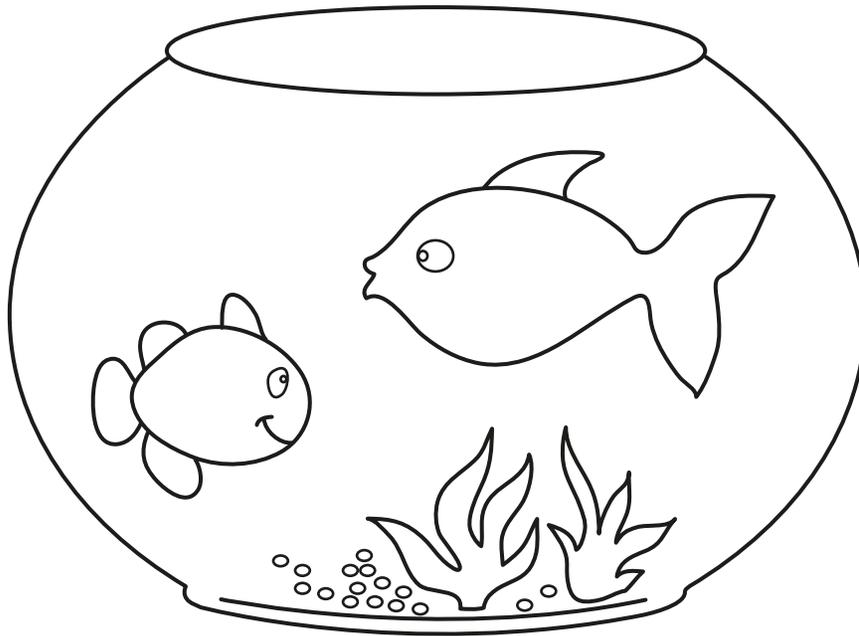
Learn to use a key to color by numbers.

1. Red

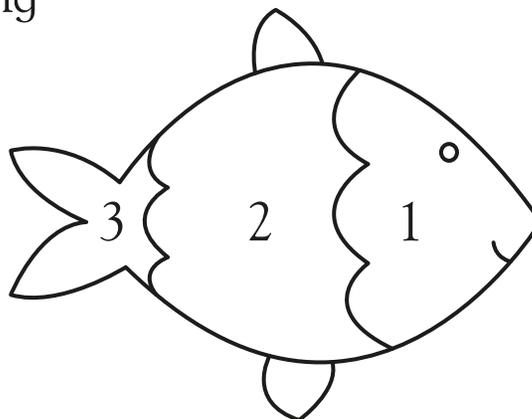
2. Blue

3. Green

Color the small fish red.
Color the long fish blue.
Color the plants green.



Color this fish using
the number and
color key above.



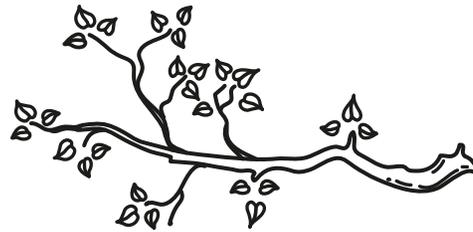
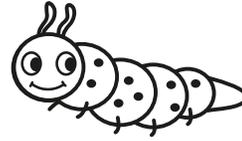
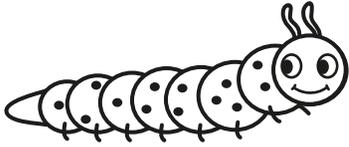


Long and Short

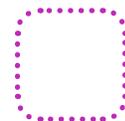
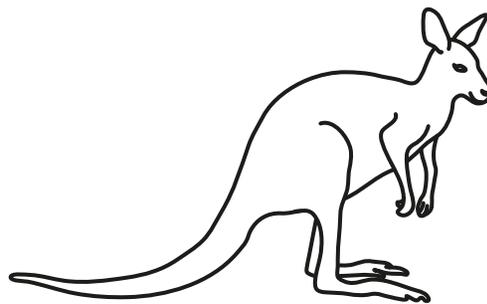
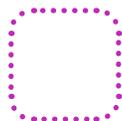
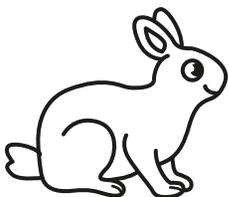
GOAL

The length of things can be long or short.

Look at the pictures in each row. Circle the picture that is long.



Write the letter S next to the animal with the tail that is short.





Learn to find the things that are light or heavy.

Look at the objects on the left. Circle the word *light* if the object is light. Circle the word *heavy* if the object is heavy.



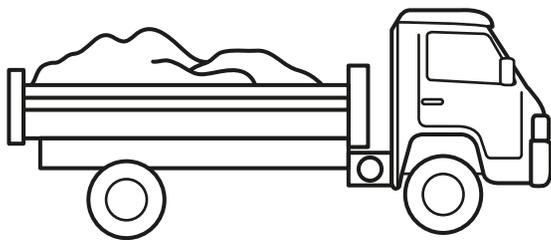
light

heavy



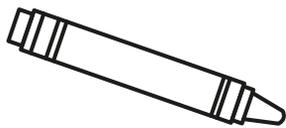
light

heavy



light

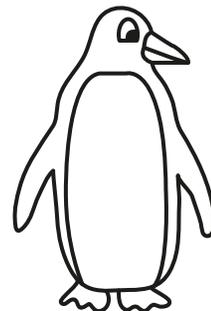
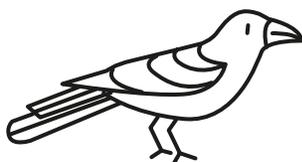
heavy



light

heavy

Circle the bird that is heavy.

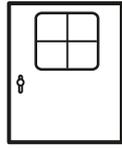




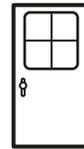
Wide and Narrow

GOAL

Learn to find things that are wide or narrow.

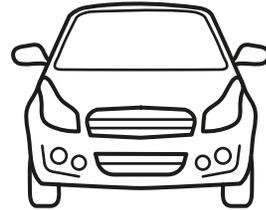


This door is wide.

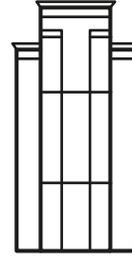


This door is narrow.

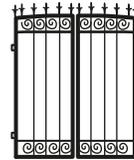
Circle the vehicle that is narrow.



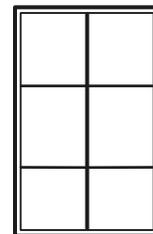
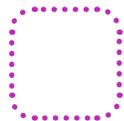
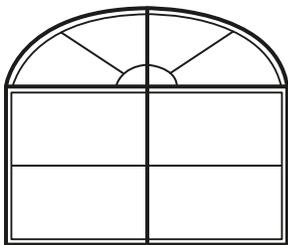
Circle the building that is wide.



Circle the gate that is narrow.

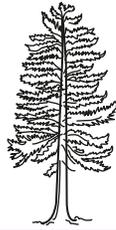


Write the letter W next to the wide window.





Learn to find things that are tall or short.

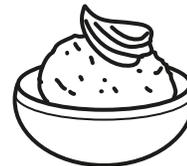
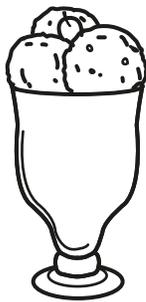
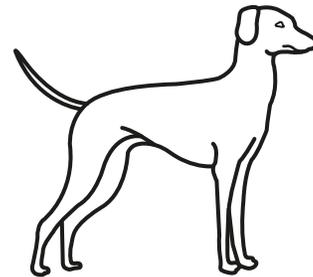
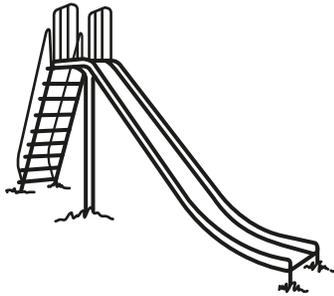


tall

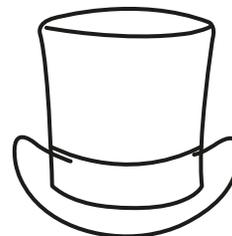


short

Look at the pictures in each row. Circle the object that is short.



Circle the hat that is tall.



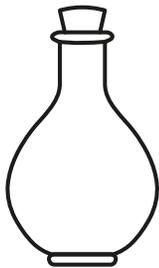
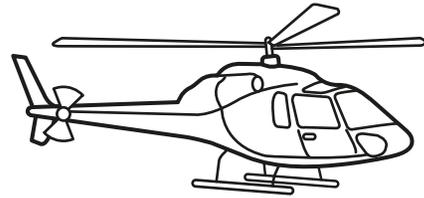
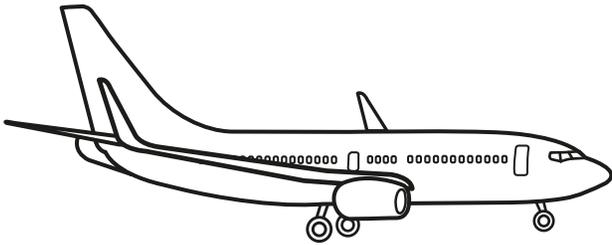
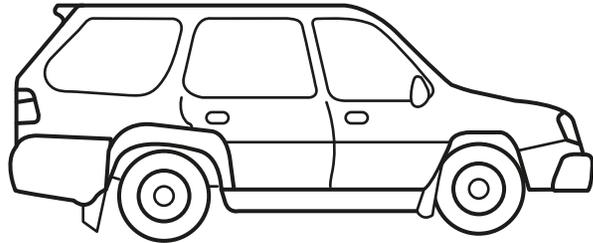
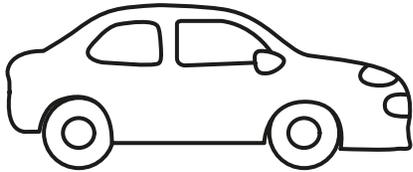


Which Holds More?

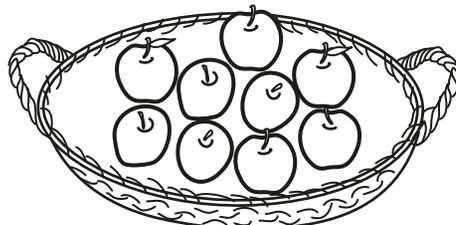
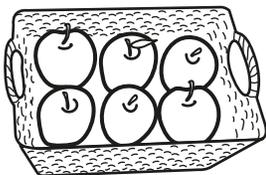
GOAL

Learn to find the objects that can hold more.

Circle the object in each row that will hold more things.



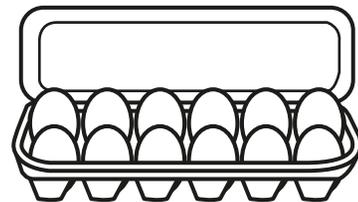
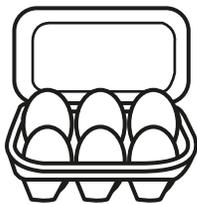
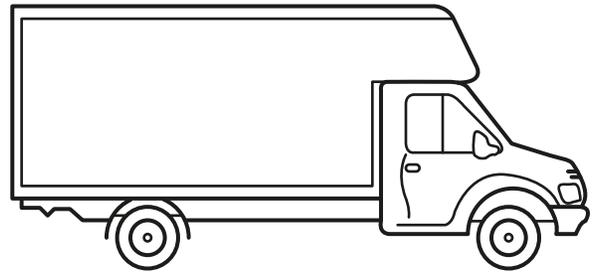
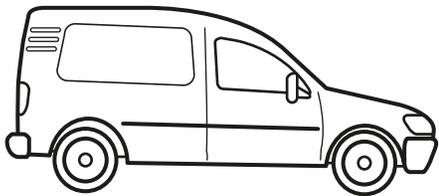
Circle the basket that holds more apples.



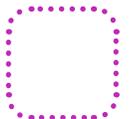
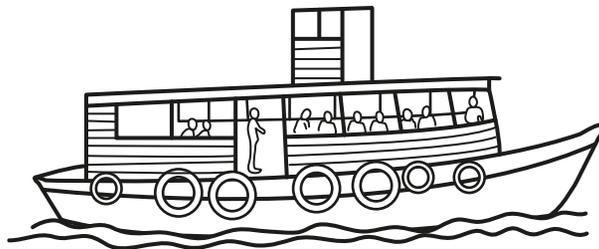
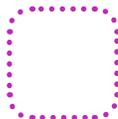


Learn to find the objects that hold less.

Circle the object in each row that holds less.



Write the letter L next to the boat that holds less.





Money

GOAL

Learn the names of money.

Draw a line to connect the coins that are the same.



A penny is 1 cent.



A nickel is 5 cents.



A dime is 10 cents.

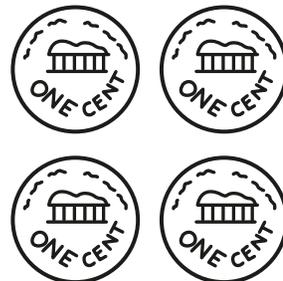


A quarter is 25 cents.



Complete the sentence.

Four pennies is the same as cents.



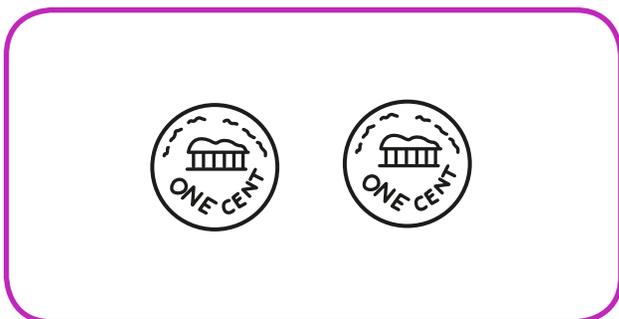


Learn to count pennies.

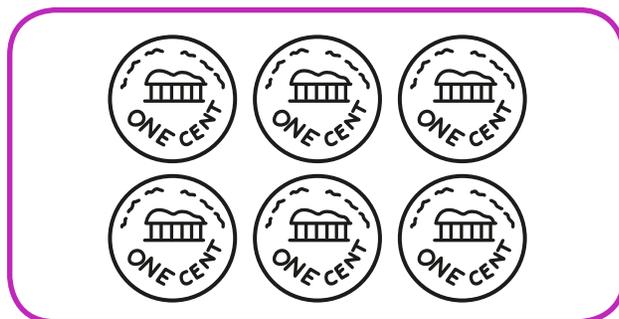


= 1¢ One cent is the same as one penny.

Count the pennies in each box. Circle the correct number of cents.



2 cents 3 cents



4 cents 6 cents

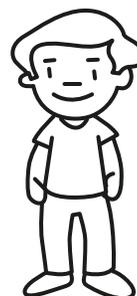


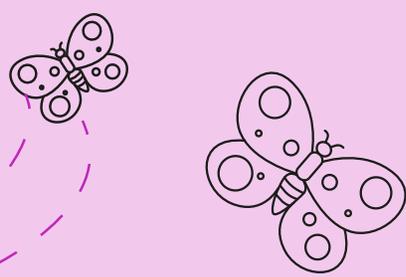
3 cents 4 cents



6 cents 8 cents

Circle the child who has more pennies.





Certificate



Congratulations to

.....

for successfully
finishing this book.

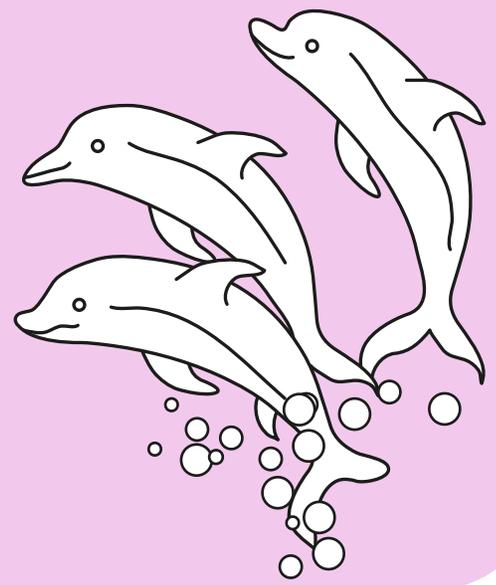
GOOD JOB!

You're a star.



Date

.....



Answer Section with Parents' Notes

This book is intended to introduce mathematics to pre-kindergarten children. The math covered will be similar to the activities they encounter during preschool programs.

Contents

By working through this book, your child will practice:

- reading, writing, and counting to 10;
- associating numbers and words;
- identifying more than, less than, and fewer than;
- recognizing differences and similarities;
- identifying basic shapes and completing patterns;
- comparing the size, length, width, and capacity of objects;
- using positional words, such as *top*, *bottom*, *above*, and *below*;
- adding and subtracting objects by one;
- ordering and comparing numbers up to 10;
- recognizing money and counting coins.

How to Help Your Child

Your child's reading ability may not be up to the level of some of the more advanced math words, so be prepared to assist. Working with your child also has great benefits in understanding how he or she is thinking and where the stumbling blocks may be.

Often, similar problems and concepts will be worded in different ways such as "count one more" and "which has more?" This is intentional and meant to make children aware that the same basic concepts can be expressed in different ways.

When appropriate, use props to help your child visualize the solutions—for example, have a collection of coins to use for the money problems, or find examples of objects to measure around your house.

Build children's confidence with words of praise. If they are getting answers wrong, then encourage them to try again another time.

Good luck, and remember to have fun!

4

★ Numbers 1, 2, and 3

GOAL Learn the numbers 1, 2, and 3.

Here are the numbers 1, 2, and 3.



Write the numbers.



Count the cars.



How many cars are there? Circle the correct number.

1 ② 3

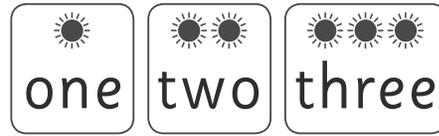
4 1 3 4 5 6 8 9 1 3 4 5 6 8 9 1

5

Read and Write to 3 ★

GOAL Learn to write number words and count to 3.

Count the suns and read the number words.



Write the number words.



How many dolphins are there?



Write over the correct number word.

one two three

1 3 4 5 6 8 9 1 3 4 5 6 8 9 1

5

Young children need to see, say, and write numbers to learn to associate them with objects. Point out that numbers are written from the top. Reinforce meaning by counting objects, such as toy cars, or socks, or numbered blocks.

Many children count by pointing to objects. Let children place a finger on each dolphin as they count aloud across the page. Gradually, they should become accustomed to simply seeing and counting.

6

★ Numbers 4 and 5

GOAL Learn the numbers 4 and 5.

★★★★★ 4 stars

Write the number.

4 4

★★★★★★ 5 stars

Write the number.

5 5

Count the apples.



Write the number of apples in the box.

4

6 1 3 4 5 6 8 9 1 3 4 5 6 8 9 1

7

Read and Write to 5 ★

GOAL Learn to write number words and count to 5.



Read the word.

four

Write the word.

four four



Read the word.

five

Write the word.

five five

How many strawberries are there?



Write the number word.

five

1 3 4 5 6 8 9 1 3 4 5 6 8 9 1

7

Reinforce how to write a numeral. If necessary, describe the small steps involved in forming each numeral.

Many preschool children can count up to five, and can recognize the number that represents their age. Ask them to hold up fingers to represent numbers as you say them. If necessary, show them the correct fingers and have them try again.

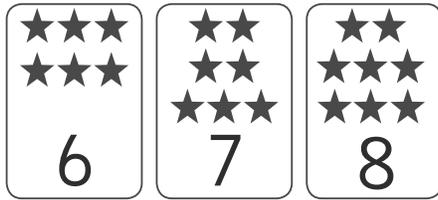
8

★ Numbers 6, 7, and 8

GOAL

Learn the numbers 6, 7, and 8.

Here are the numbers 6, 7, and 8.



Write the numbers.



Count the balls.



How many balls are there? Circle the correct number.



8

1 2 3 4 5 6 8 9 1 2 3 4 5 6 8 9 1 2

Help children by describing the shapes in numbers. Point out that the number 6 has a loop, or small circle at the bottom. The number 7 is made up of two lines. Describe the number 8 as one small circle over another small circle.

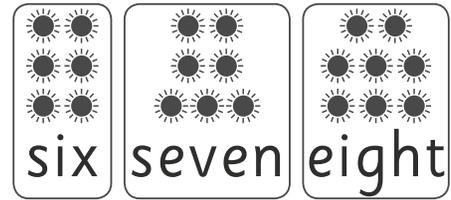
9

Read and Write to 8 ★

GOAL

Learn to write number words and count to 8.

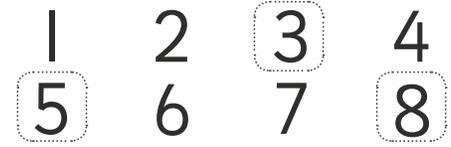
Count the suns and read the number words.



Write the number words.



Write the missing numbers in the boxes.



9

1 2 3 4 5 6 8 9 1 2 3 4 5 6 8 9 1 2

Practice the sequence of numbers by asking children what comes after 6, what comes after 7, etc. Many children also benefit from hands-on activities. Let them move cards or blocks into place to show the correct order of numbers.

10

★ Numbers 9 and 10

GOAL

Learn the numbers 9 and 10.



Write the number.



Write the number.



Count the starfish.

How many starfish are there?
Circle the correct number.

10

1 2 3 4 5 6 8 9 1 2 3 4 5 6 8 9 1 2

Counting to a rhythmic beat helps some children learn. Have children hit a drum or an empty box ten times, as you count aloud with them. Then ask them to listen as you pound the drum nine times. Ask: "How many beats did you hear?"

11

Read and Write to 10 ★

GOAL

Learn to write number words and count to 10.



Read the word. nine

Write the word.



Read the word. ten

Write the word.



How many frogs are there?



Write the number word. nine

11

1 2 3 4 5 6 8 9 1 2 3 4 5 6 8 9 1 2

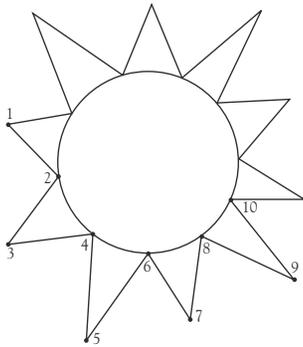
The counting activity on this page involves three groups of objects. Grouping objects can help show children how items in sets, or groups, can be added. Point out how two groups, each of five suns, add up to ten, or two groups, one of five frogs and the other of four frogs, add up to nine.

12

★ Connect the Dots

GOAL Learn to connect the numbers 1 to 10.

Start at 1 and connect the dots to 10.



How many rays are there in the picture of the sun?

Write the number in the box.

10

12 1 3 4 5 6 8 9 1 3 4 5 6 8 9 12

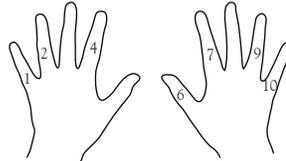
Reinforce numbers and sequencing. Guide children in counting in sequence by having them read the numbers aloud as they connect the dots in order. Point out the picture created by the lines. Review by having children reread the numbers of the dots.

13

Counting ★

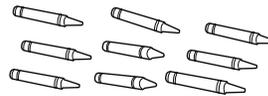
GOAL Count from 1 to 10.

How many fingers are there?
Count the fingers. Write the missing numbers in the boxes.



1 2 3 4 5
6 7 8 9 10

Count the crayons. Write the number word.



nine

1 3 4 5 6 8 9 1 3 4 5 6 8 9 13

Use this activity to review counting from 1 to 10. For added practice, write the numbers from 1 to 10 on sticky notes or index cards, then mix them up and have children place them in the correct order.

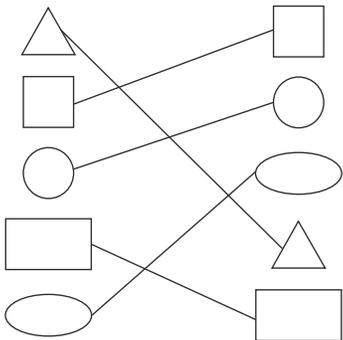
14

★ Match the Shapes

GOAL Learn to match the shapes that are the same.



Connect the shapes that are the same.



Circle the shape that matches the shape of a penny.



14 1 3 4 5 6 8 9 1 3 4 5 6 8 9 12

Encourage children to associate shapes with things they see every day. Ask: "What things are shaped like a circle?" (clocks, plates, etc.); "What objects are square?" (a slice of bread, a pizza box, etc.)

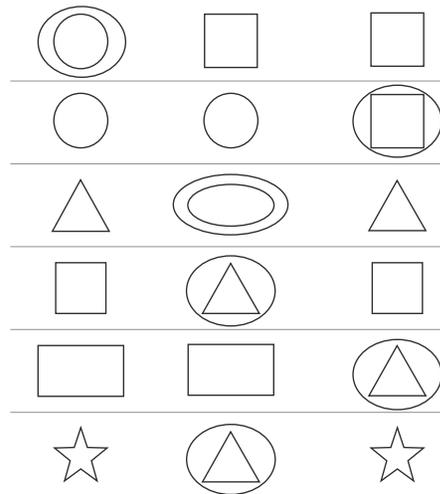
15

Different Shapes ★

GOAL Find the shape that is different.



Circle the different shape in each row.



1 3 4 5 6 8 9 1 3 4 5 6 8 9 15

Also, encourage children to use the names of shapes by playing a riddle game. Ask: "What shape has three sides?"; "What shape goes around and around?"; "What shape has four sides that are equal in length?"

16

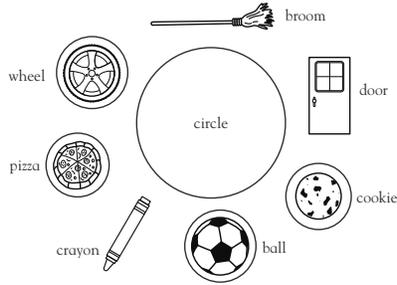
★ Circles

GOAL

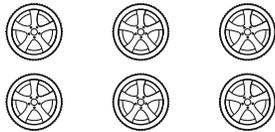
This is a circle.
Learn to find the circles.



Look at the objects around the circle. Circle the four objects that have the same shape as a circle.



Count the wheels. Write the number word.



six

16

1 2 3 4 5 6 8 9 1 2 3 4 5 6 8 9 1 2

Guide children in describing circles by asking them to compare circles and squares. Ask: "What has a round shape?"; "What has four straight sides?"; "Is the shape the same shape, whether it's big or small?"

17

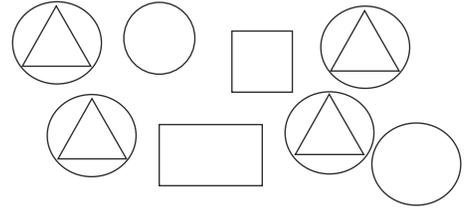
Triangles ★

GOAL

This is a triangle.
Learn to find the triangles.



Look at the shapes. Circle the four triangles.



How many triangles are there?



Circle the correct number.

8

9

10

17

1 2 3 4 5 6 8 9 1 2 3 4 5 6 8 9 1 2

Engage children in drawing triangles. Help reinforce the shape by pointing out that a triangle has three sides. Explain that it is different from a square, which has four sides. Ask children to name familiar objects that are shaped like a triangle, such as a slice of pie or pizza.

18

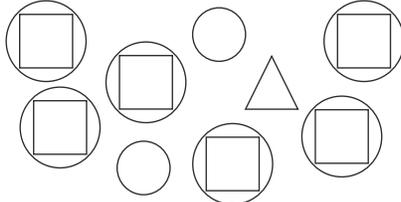
★ Squares

GOAL

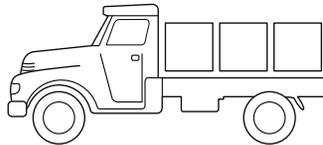
This is a square.
Learn to find the squares.



Look at the shapes. Circle the six squares.



Count the squares on the back of the truck.



Write the number.

3

18

1 2 3 4 5 6 8 9 1 2 3 4 5 6 8 9 1 2

Point out that any shape may come in different sizes and be placed in a different position, but the shape remains the same. Demonstrate this by drawing different sized squares, or use different sized tiles or sticky notes.

19

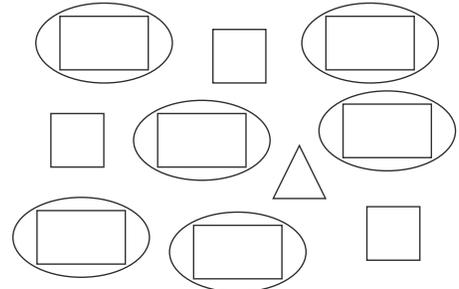
Rectangles ★

GOAL

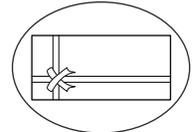
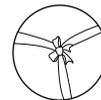
This is a rectangle.
Learn to find the rectangles.



Look at the shapes. Circle the six rectangles.



Circle the present that is shaped like a rectangle.



19

1 2 3 4 5 6 8 9 1 2 3 4 5 6 8 9 1 2

Show children how a rectangle is different from a square. Cut out squares and rectangles from colored paper. Use the shapes to point out that both have four sides, but the sides of a rectangle are not all equal in length.

★ Counting Shapes

GOAL

Use shapes to practice counting.

How many shapes are there in each row?
Write the correct number.

Count the circles.



5

Count the triangles.



7

Count the squares.



9

Count the rectangles.



8

Fill in the circles with the missing numbers.



Reinforce numbers, counting, and shapes. Provide children with a crayon and a piece of drawing paper. Write a number, such as 2, and draw a shape next to it. Show the children, and ask them to draw the shape that number of times.

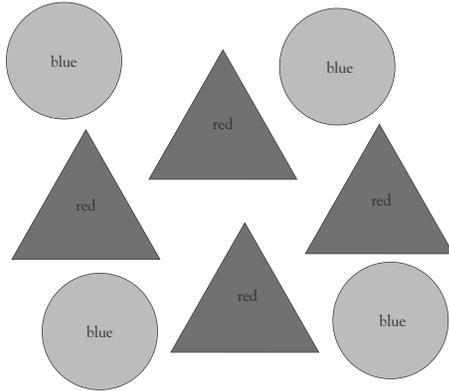
Color the Shapes ★

GOAL

Learn to make patterns with shapes and colors.

Look at the shapes.

Color the four circles blue. Color the four triangles red.



Count the number of shapes above.
Write the number word.

eight

Guide children in coloring all the circles first, and then all the triangles. Point out that making the same shapes the same color helps group them together into sets. This can make it easier to count the total number of objects, by adding the numbers in each set together.

★ Count One More

GOAL

Learn to count one more.

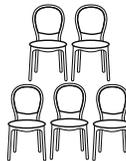


2 chairs



3 chairs

Count the chairs in each group. Put a check (✓) in the box next to the group that has one more chair.



Count the birds in each nest. Circle the nest with one more bird than the other.



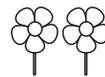
Use the activity on this page to talk about the game of musical chairs. Ask: "How many chairs do you need when five children are playing musical chairs?"; "How many chairs do you need when one more child plays musical chairs?"

Add One ★

GOAL

Learn to add one more to a group.

Draw one more object in each row. Then count the objects in each row and write the total number in the box.



3



4



2



5

Add to the pattern by drawing one more picture.



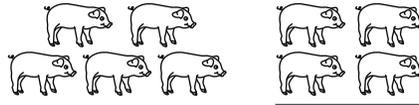
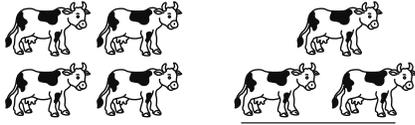
With children, count aloud groups of blocks. Write the number on a card next to each group. Add one block to each group. Review the number on the card. Ask: "How many are there now?" Can children answer without recounting?

★ Count One Less

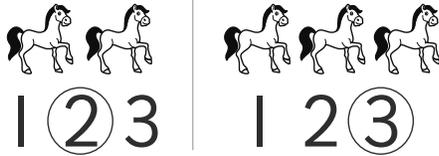
GOAL

Learn to find the groups with one less.

Look at the groups of animals. For each animal, draw a line under the group that has one less.



Count the horses. Circle the correct number.



Illustrate the concept of one less. Show children a group of crayons. Take one crayon away, and explain that there is now one less crayon. Count the items before and after removing one to demonstrate the change in number of crayons.

Take Away One ★

GOAL

Learn to take one away.



Cross out one bird in each nest to take one away. Count the number of birds left in the nest and circle the correct number. (Note: Do not count the bird you crossed out.)



Take one ant away from the row of ants. Count the ants that are left. Circle the correct number.



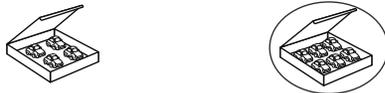
Reinforce children's understanding of taking away by telling simple stories. For example: "Jane had three apples. John took one apple. How many apples does Jane have now?" Draw simple pictures if necessary.

★ Which Has More?

GOAL

Learn to find the group with more.

Look at each set of boxes. Circle the box that has more.



Count the cars in both boxes above. Circle the total number.



Ask children to look at the boxes in each example carefully and to predict which box has more. Explain that counting the objects is not necessary to find out which has more. It is something they can observe by comparing the two boxes.

More Than ★

GOAL

Learn to find the group with more than another group.

Look at the two groups of fruits in each row. Circle the group that shows more fruits than the other.



Count the pears in both groups above. Circle the total number.



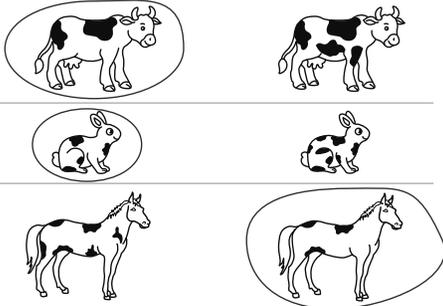
Teach children how to estimate; help them understand that counting is not always necessary to determine *more than*.

★ Which Has Fewer?

GOAL

Learn to find the group with fewer.

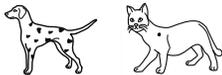
Look at the animals in each row. Circle the animal that has fewer spots.



Circle the word to complete the sentence below.

fewer

more



This dog has spots than this cat.

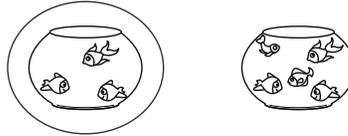
Review the word “fewer” by using props such as crayons or blocks. Place groups of crayons in two small baskets. Ask: “Which box has fewer crayons?” and “How do you know?” With children, count the crayons to confirm the answer.

Less Than ★

GOAL

Learn to find a number that is less than another number.

Count the animals in the pictures. Circle the picture with fewer animals than the other and fill in the numbers.



The number **3** is less than the number **5**.



The number **4** is less than the number **5**.

Write a number that is less than 7.

3

Answers may vary

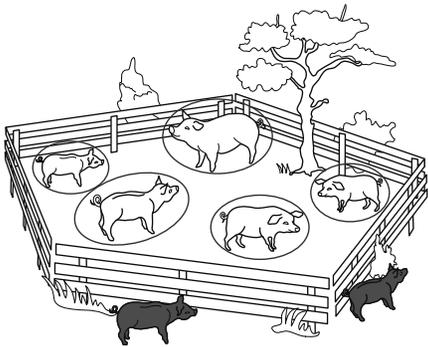
The activity on this page will help children see objects along with numbers. This will reinforce the concept of quantities and numbers, and help them begin to see the meaning of “less than” through objects and numbers.

★ Inside and Outside

GOAL

Location words tell us where things are placed. Learn to find things inside and outside.

Circle the pigs that are inside the pen. Color the pigs that are outside the pen.



How many pigs are inside the pen? Circle the correct number.

3

4

5

Engage children in learning position words through literature. Read a book such as *A Snowy Day* by Ezra Jack Keats. It’s about a boy who ventures out into the snow and returns home. Ask: “Where did Peter go?”; “What did he bring inside?”

Top and Bottom ★

GOAL

Learn to use the location words *top* and *bottom*.

On which shelf has each object been placed? Circle the word *top* or *bottom*.



Where is the hat? **top** bottom

Where is the toy bear? **top** bottom

Where is the cat? top **bottom**

Where is the ball? **top** bottom

Where is the puppy? top **bottom**

This activity helps teach children the meaning of the words “top” and “bottom”—words they probably already use in conversation. Point out the words in the text. The pattern on each shelf will help them to distinguish one shelf from the other.

★ Left, Middle, and Right

GOAL

Learn to use the location words *left, middle, and right.*



L



M



R

Who is in the middle? Write the letter **M** in the circle under the person in the middle.

Who is on the right? Write the letter **R** in the circle under the person on the right.

Who is on the left? Write the letter **L** in the circle under the person on the left.

Who is holding the kite?
Put a check (✓) in the correct box.



The girl on the left.

The boy on the right.

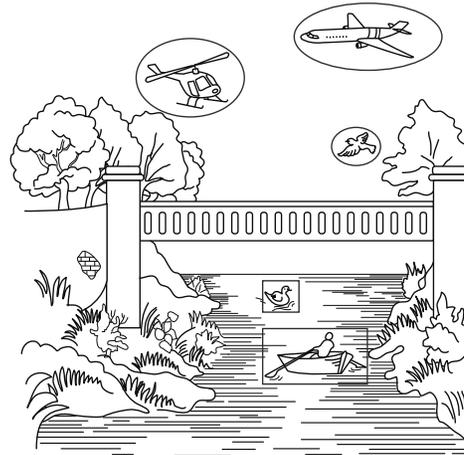
Use stuffed animals, dolls, or small toys to reinforce location words. You may want to introduce other words, such as “behind” or “in front of.” To reinforce “left” and “right,” you may want to trace children’s hands on a sheet of paper and label each one.

Above and Below ★

GOAL

Learn to use location words *above and below.*

Look at the bridge. Draw a circle around the three things that are above the bridge. Draw a rectangle around the two things that are below the bridge.



Many children learn by talking and moving. Ask children to raise their hands, and say, “My hands are above me.” Ask them to look down, and say, “The ground is below me.” Have them describe other things above and below them.

★ The Same

GOAL

Learn to find the things that are the same.

Look at each row of animals. Circle the animal in each row that is the same as the first.



Make the dolphins look the same.



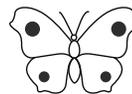
Encourage children to discuss details of the pictures. Review their responses and ask what is different about each picture. This will reinforce their visual discrimination skills—noticing and identifying things that are different.

Make the Same ★

GOAL

Learn to make things look the same.

Look at the first insect in each row. Make the second insect the same as the first one.



Make the flower on the right the same as the flower on the left.



Understanding what is the same and different is a key skill that will help children comprehend math concepts, including sorting and classifying. The act of drawing and making objects the same helps reinforce observation skills.

★ Different Numbers

GOAL

Learn to find the numbers that are different.

Look at the numbers in each box. Circle the number that is different from the other numbers.

2 2 2 **6** 2

3 **5** 3 3 3

8 8 **9** 8 8

6 9 9 9 9

Write the missing numbers on the T-shirts.



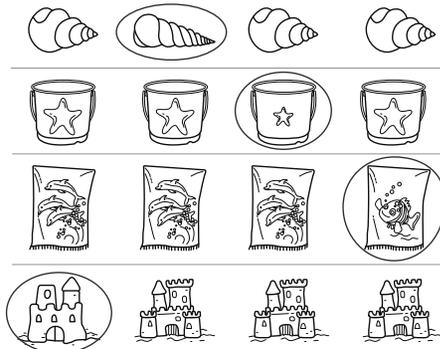
Children learn with hands-on props. Write the numbers 1–20 on a number chart. Then write the numbers on the top of recycled water-bottle caps or other items. Have children place the caps in the correct section of the chart.

Different Objects ★

GOAL

Learn to spot the difference between things.

Circle the picture in each row that is different.



Draw a picture to match the picture below.



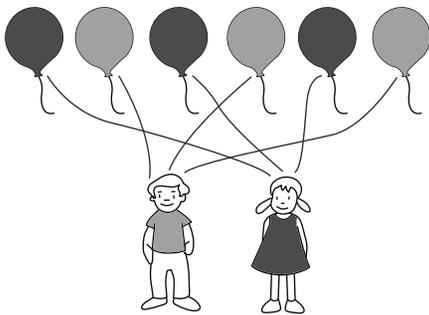
Recognizing different objects helps build math and inquiry skills. Children should be able to identify the different objects and also to describe what is different about them. Reinforce this skill by asking: “What is different about the object?”

★ Sort by Color

GOAL

Learn to name and sort colors.

Color the girl's dress red and the boy's shirt blue. Color the balloons to match the words on them. Then draw lines from the red balloons to the girl and from the blue balloons to the boy.



Write the number to answer each question in the box.

How many balloons are red?

3

How many balloons are blue?

3

Keep sorting simple. Use the same objects and solid colors. Increase the level of difficulty, by using different objects and shapes, and colors. For example, ask children to sort a collection of buttons, or paper shapes, or plastic blocks.

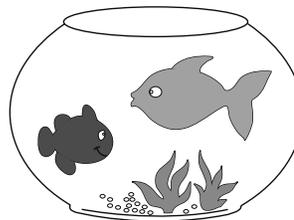
Color by Numbers ★

GOAL

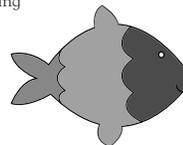
Learn to use a key to color by numbers.

- 1. Red
- 2. Blue
- 3. Green

Color the small fish red.
Color the long fish blue.
Color the plants green.



Color this fish using the number and color key above.



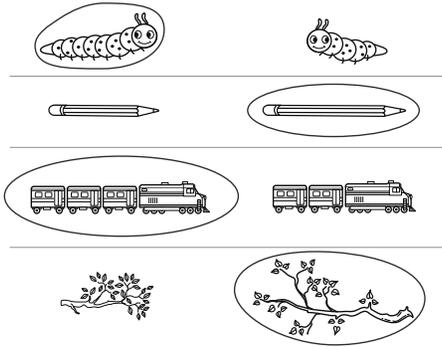
Coloring by numbers reinforces how to follow directions and how to use a key. If children need help associating numbers with the colors, make a color dot next to each number to help guide them.

★ Long and Short

GOAL

The length of things can be long or short.

Look at the pictures in each row. Circle the picture that is long.



Write the letter S next to the animal with the tail that is short.



40 1 2 3 4 5 6 8 9 1 3 4 5 6 8 9 1 2

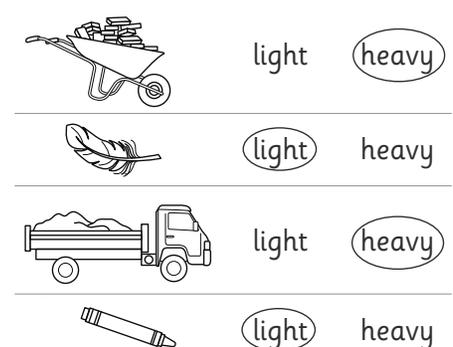
Extend the lesson to a study of nature. Ask: "Do giraffes have a long neck or a short neck?"; "Do turtles have long legs or short legs?" Display different kinds of leaves and flowers with long and short stems, and ask children which is long and which is short.

Light and Heavy ★

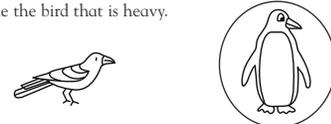
GOAL

Learn to find the things that are light or heavy.

Look at the objects on the left. Circle the word *light* if the object is light. Circle the word *heavy* if the object is heavy.



Circle the bird that is heavy.



41 1 2 3 4 5 6 8 9 1 3 4 5 6 8 9 1 2

Talk about how we determine how much something weighs. Ask: "How does the doctor know how much you weigh?"; "How do you know how much a bag of potatoes weighs at the grocery store?" Scales are tools that tell you how much something weighs.

★ Wide and Narrow

GOAL

Learn to find things that are wide or narrow.



This door is wide.



This door is narrow.

Circle the vehicle that is narrow.



Circle the building that is wide.



Circle the gate that is narrow.



Write the letter W next to the wide window.



42 1 2 3 4 5 6 8 9 1 3 4 5 6 8 9 1 2

These exercises help build spatial reasoning in children—a skill that research says is necessary in understanding geometry, art, and other subjects. Build this skill with puzzles. As children seek pieces that fit, use the terms "wide" or "narrow."

Tall and Short ★

GOAL

Learn to find things that are tall or short.

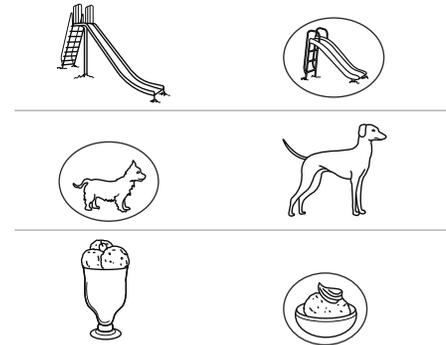


tall

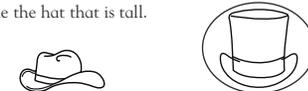


short

Look at the pictures in each row. Circle the object that is short.



Circle the hat that is tall.



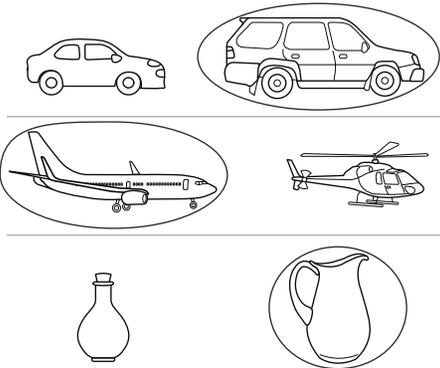
43 1 2 3 4 5 6 8 9 1 3 4 5 6 8 9 1 2

Teaching children to measure involves introducing new vocabulary words, such as "tall" and "short." This activity reinforces these concepts. Share with children a tool used for measuring, such as a ruler or tape measure.

★ Which Holds More?

GOAL Learn to find the objects that can hold more.

Circle the object in each row that will hold more things.



Circle the basket that holds more apples.

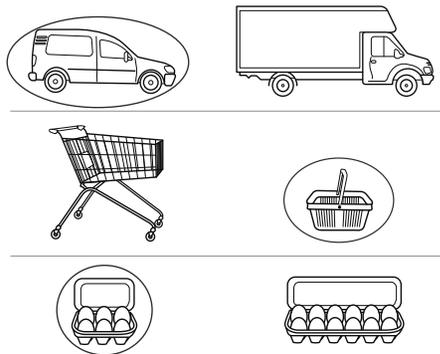


Most children can apply their knowledge of the world to determine how much an object can hold. To introduce the topic, review situations they can understand. Ask: "Can you fit 20 rocks in a tiny cup?" No, but you can fit them in a large pail.

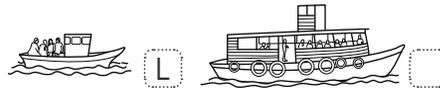
Which Holds Less?

GOAL Learn to find the objects that hold less.

Circle the object in each row that holds less.



Write the letter L next to the boat that holds less.

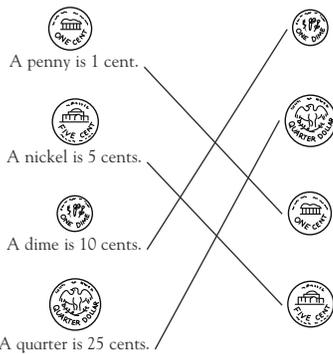


Identifying the capacity of containers is a helpful strategy in teaching early measurement skills. Teach this when using pans, bowls, or measuring cups. Have children place them in order from what holds less to what holds more.

★ Money

GOAL Learn the names of money.

Draw a line to connect the coins that are the same.



Complete the sentence.

Four pennies is the same as 4 cents.



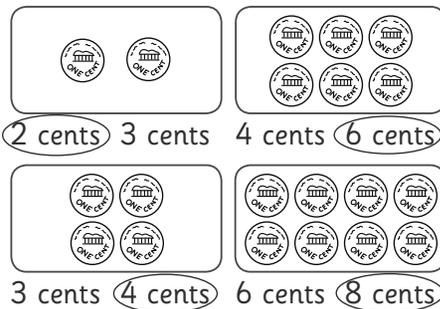
Let children sort coins into different colored containers labeled "pennies," "nickels," and so on. Then use words to describe differences in the coins. For example: "The penny is a copper or brownish-orange color"; "the dime is small and thin"; "the quarter is silver like the dime and nickel, but larger."

Count the Pennies

GOAL Learn to count pennies.

= 1¢ One cent is the same as one penny.

Count the pennies in each box. Circle the correct number of cents.



Circle the child who has more pennies.



On each of six index cards, write a different number followed by a cent sign, up to and including 20 cents. Place the cards in a row. Engage children in counting pennies and matching the correct number of pennies to what is written on each card.