

Explore Counting and Writing to 10



Learning Target

- Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

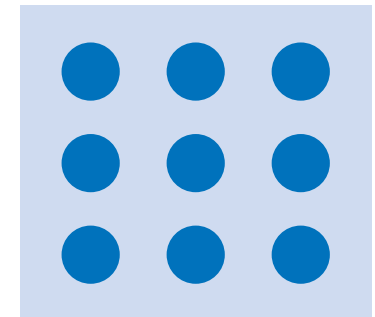
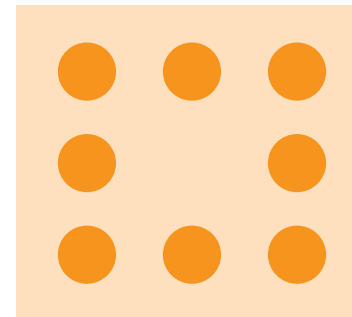
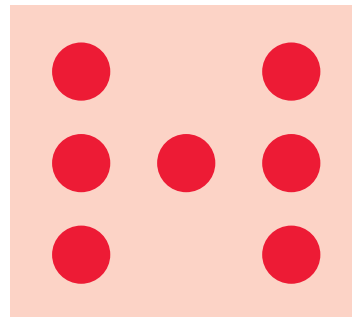
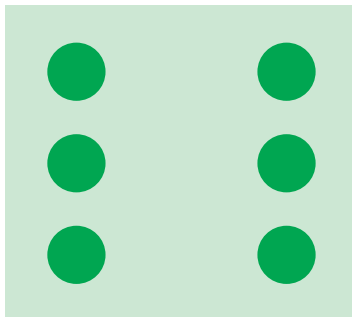
SMP 1, 2, 3, 4, 5, 6, 7

Try It



Math Toolkit

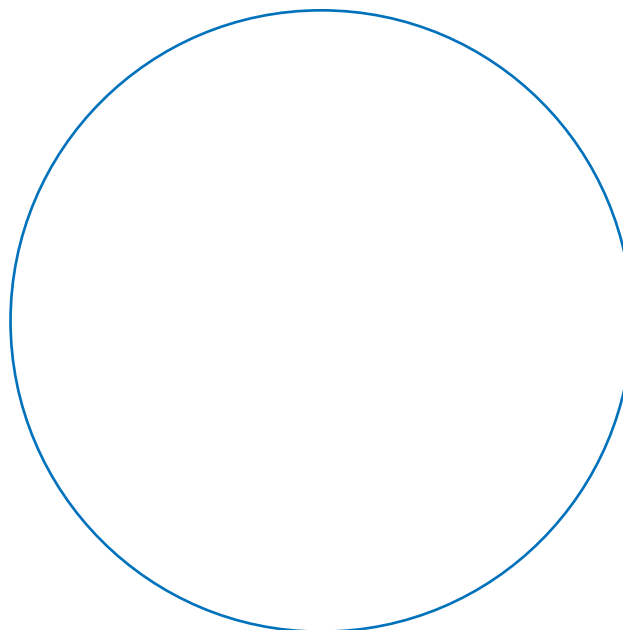
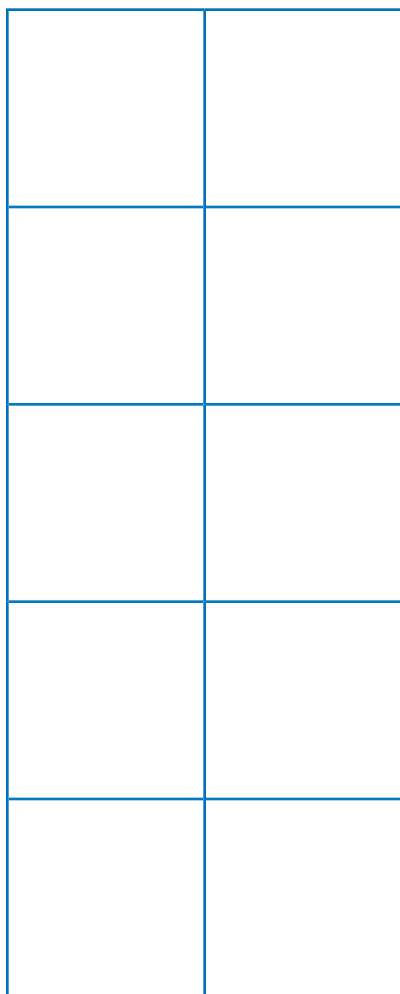
- counters



Have children form groups of 6, 7, 8, and 9. Review numbers 1 to 5 using dot cards, and then display the dot card for 6. Give 6 children paper plates and have them use the plates to make an arrangement of 6 on the floor. Repeat,

having other groups of 6 children make different arrangements. Then have children use counters to make arrangements of 6 on the workmat, counting to check that each arrangement shows 6. Repeat with 7, 8, and 9 counters.

Connect It



Children explore visual images of 10. Children place 5 counters in a column of the 10-frame. Then they add counters one at a time to fill the frame,

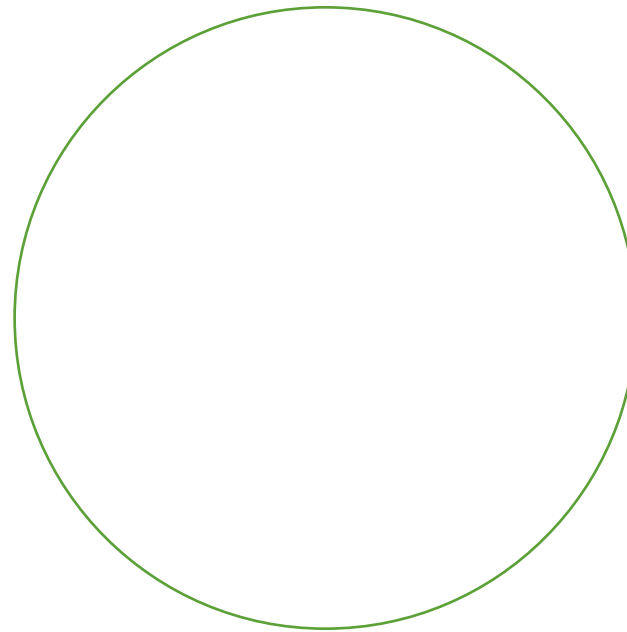
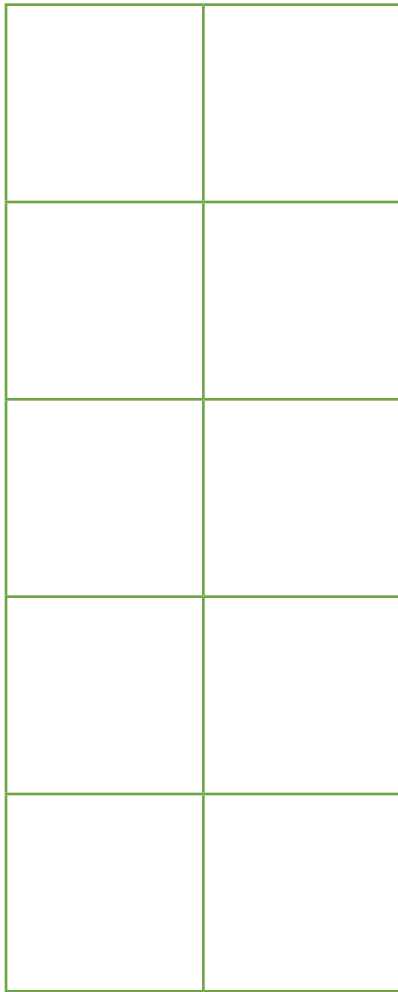
counting to verify each time. Next, they move the counters to be around the edge of the circle. Ask: *How do you count objects in a circle?*

Name: _____

Prepare for Counting and Writing to 10

The diagram consists of a central oval containing the number 8. Four lines radiate from this central oval to the corners of a larger rectangle, connecting it to four smaller rectangular boxes. Each of these four boxes is labeled 'Examples' in the top-left corner. The boxes are intended for children to show the meaning of the number 8 using words, numbers, or pictures.

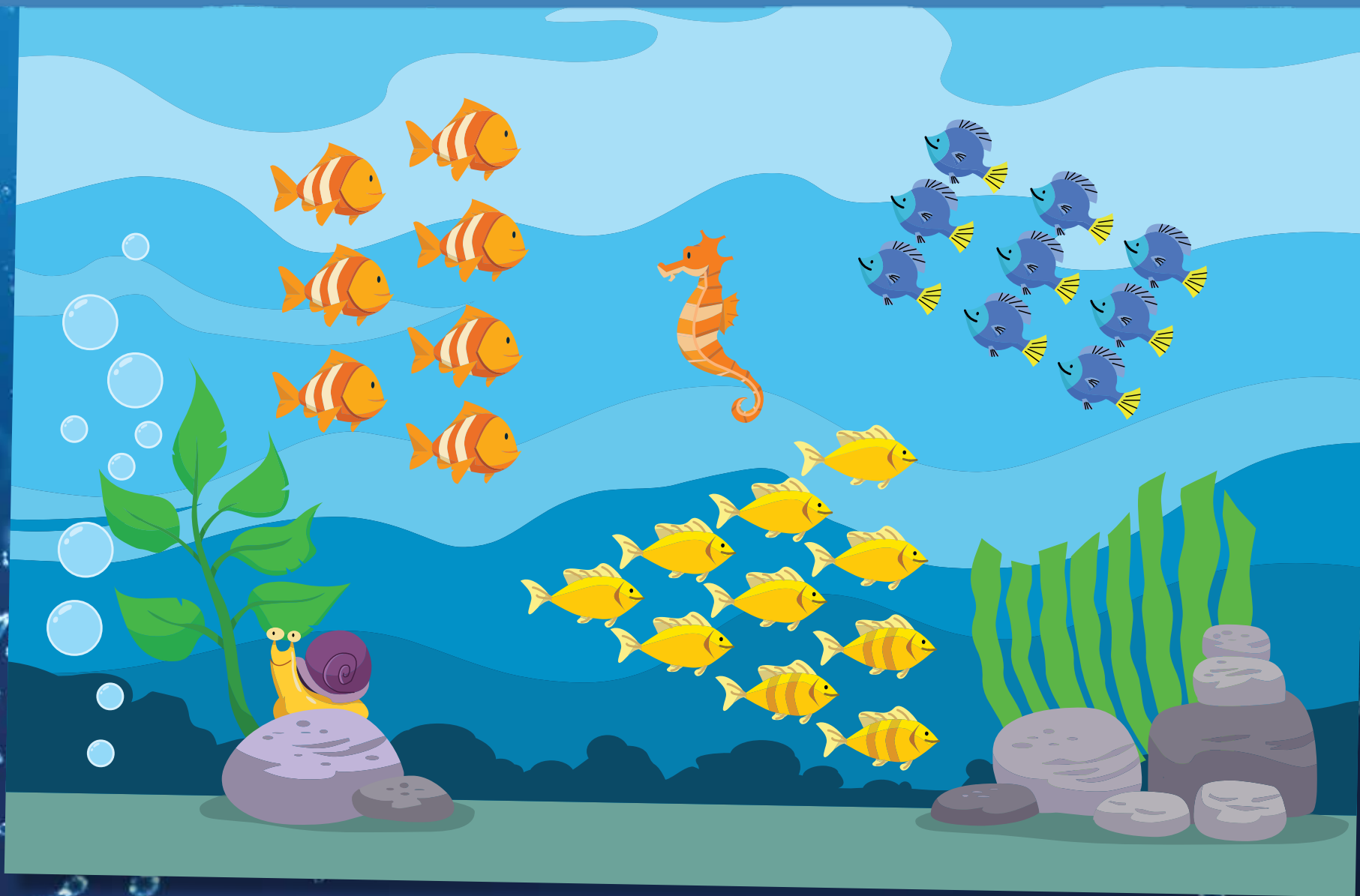
Have children show the meaning of 8. Have children fill in each of the boxes to show the meaning of 8. Tell children that they can use words, numbers, and pictures. Encourage them to show as many ideas as they can.



Children explore visual images of 8. Have children place 8 small objects on the 10-frame, one at a time, counting to verify each time.

Next, they move the objects to be around the edge of the circle. Ask: *How do you count objects in a circle?*

Develop Counting and Writing to 10



Encourage children to describe groups of 6, 7, 8, 9, and 10 they find in the picture. Discuss other size groups as well and note number pairs for 10, such as 4 large bubbles and 6 small bubbles. Have children circle a group of 10.

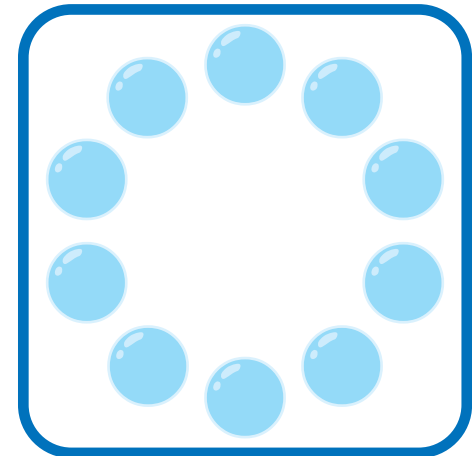
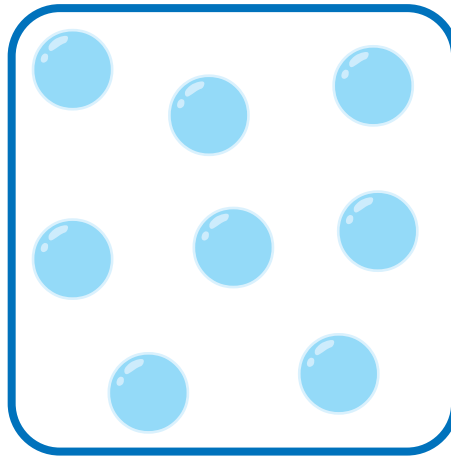
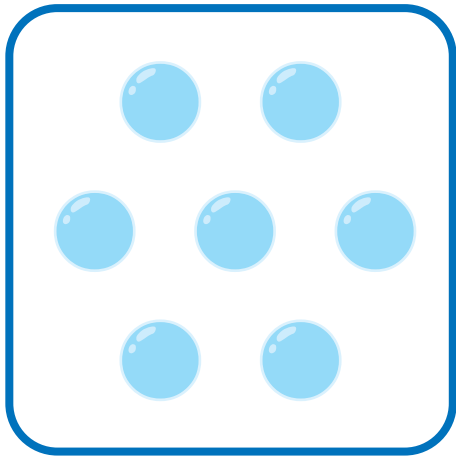
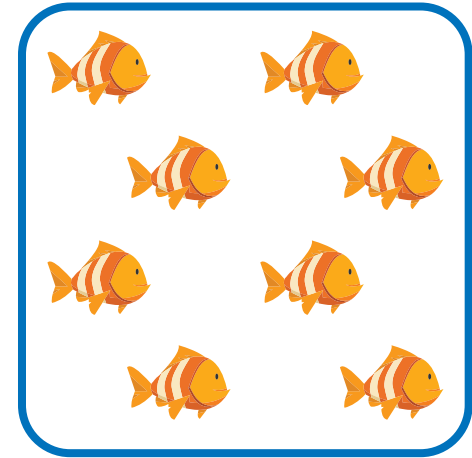
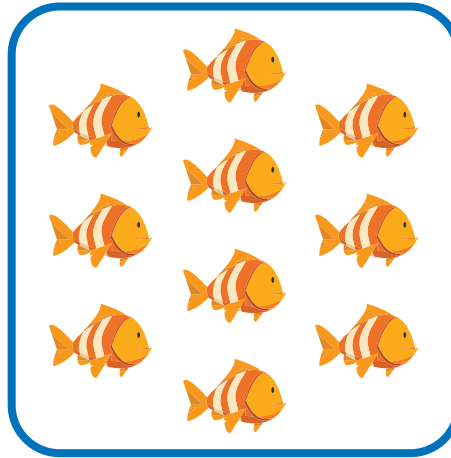
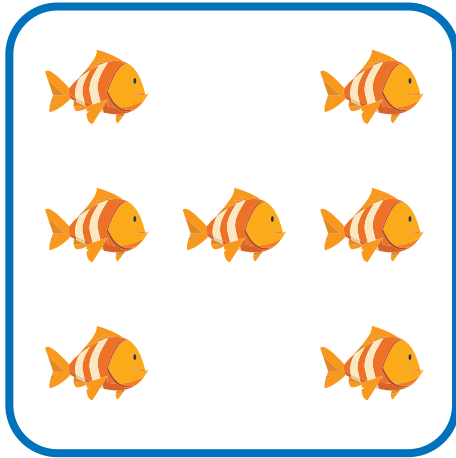
Discuss It Work with a partner. Can you find groups that have the same number? How can you tell?

Connect It



Math Toolkit

• counters

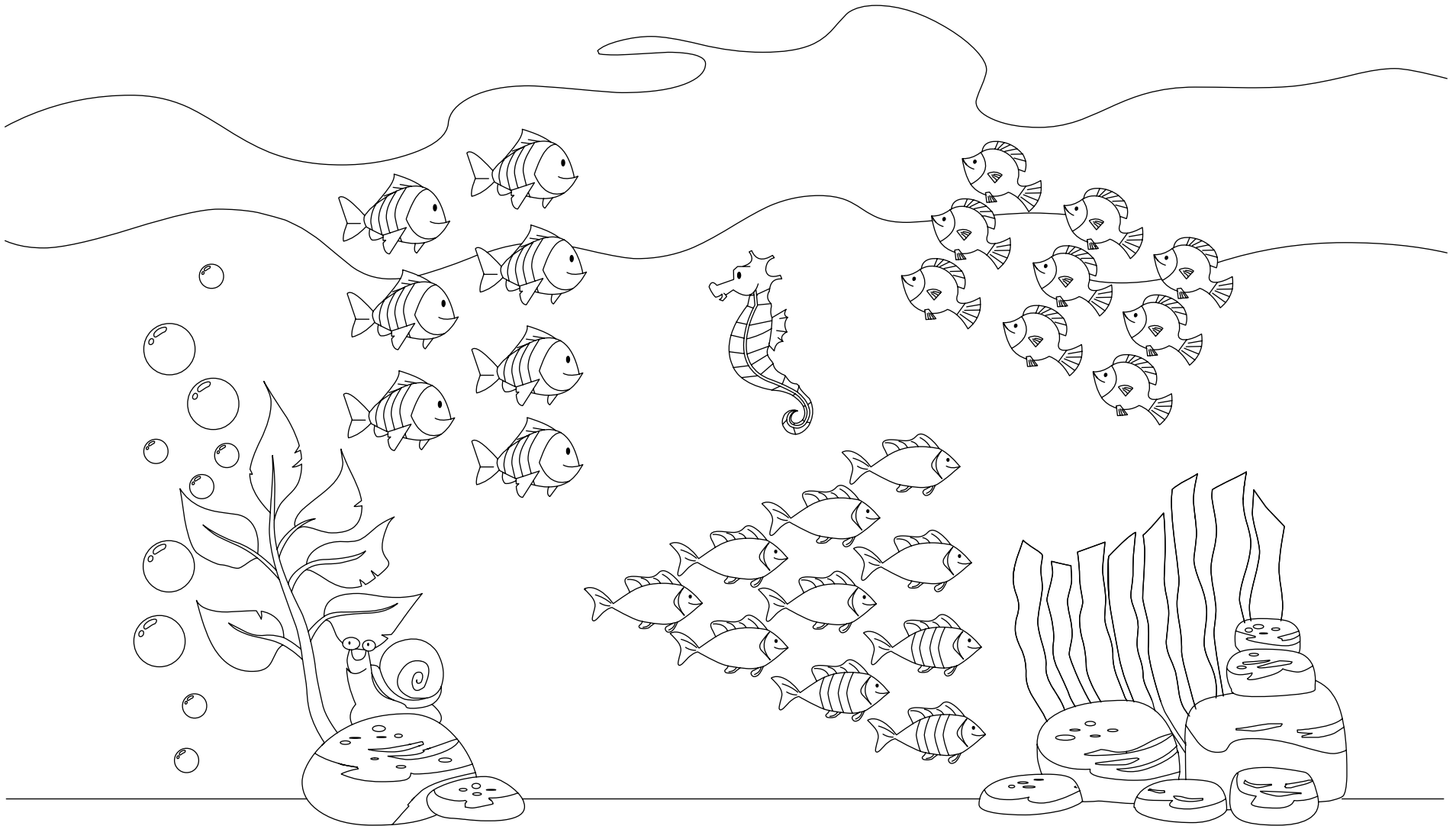


Have children count the number of objects in each group. Then have children draw lines to match groups that show the same number of objects.

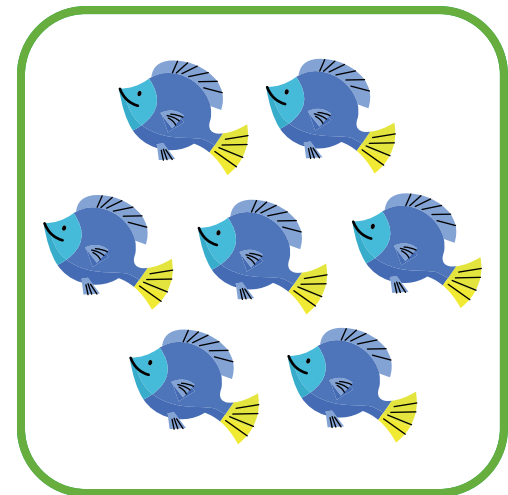
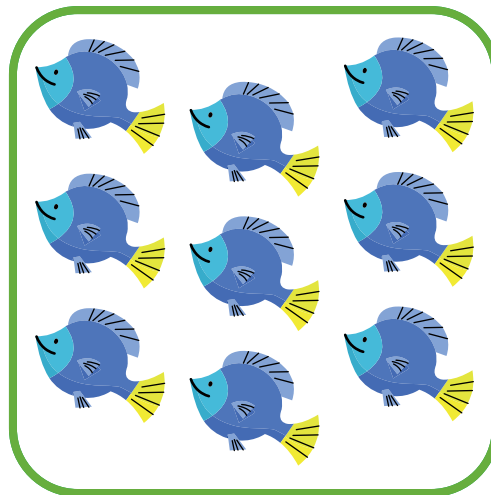
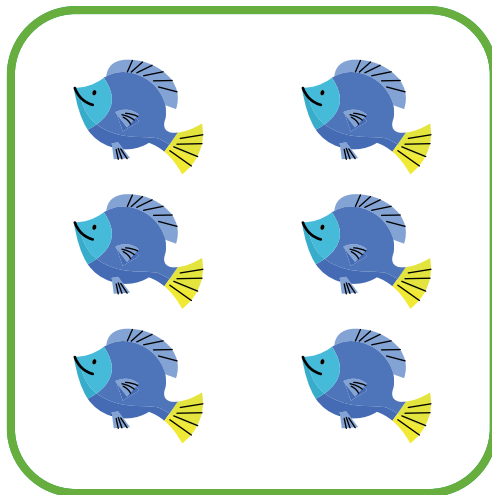
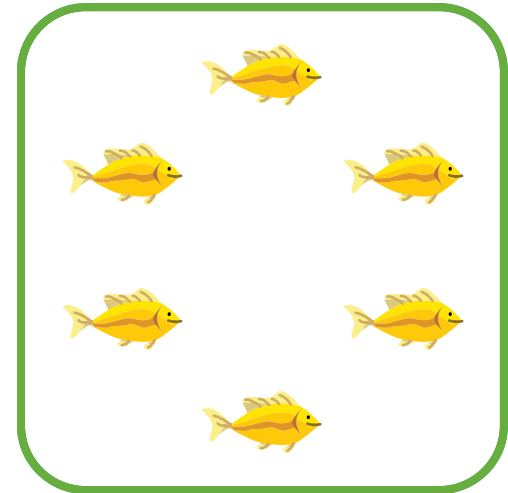
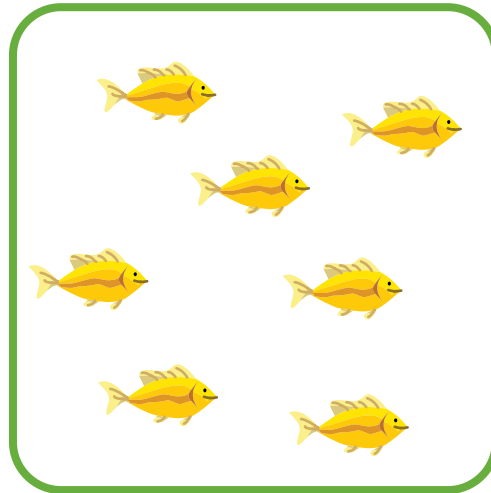
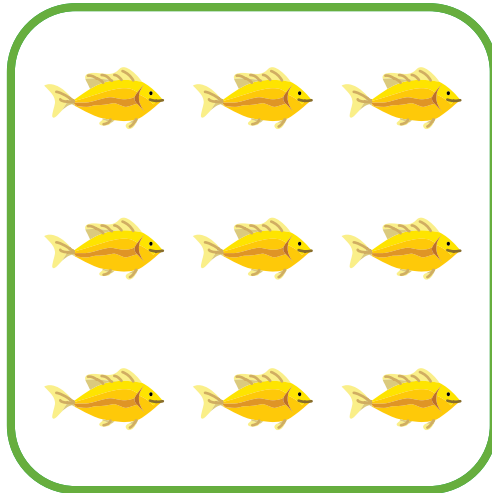
Discuss It

How did you keep track of which objects you counted?

Practice Counting and Writing to 10



Have children count groups of 6, 7, 8, 9, and 10. Have children color groups of 6 red, groups of 7 blue, groups of 8 green, groups of 9 yellow, and groups of 10 purple.




Have children count the number of fish in each group. Then have children draw lines to match groups that show the same number of fish.

Develop Counting and Writing to 10

Try It



Math Toolkit

- counters 
- dot cards (6–8)

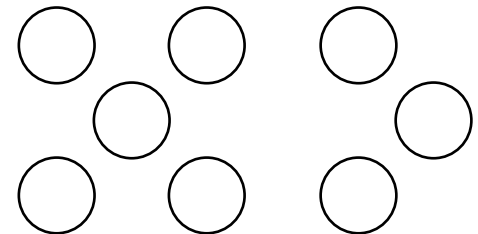
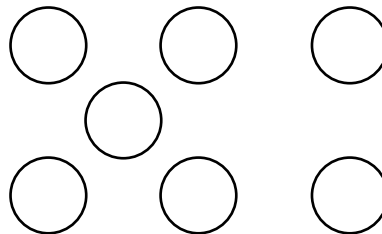
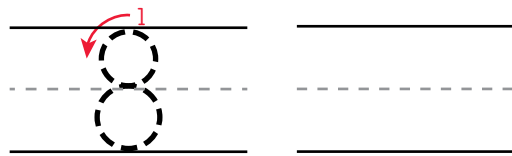
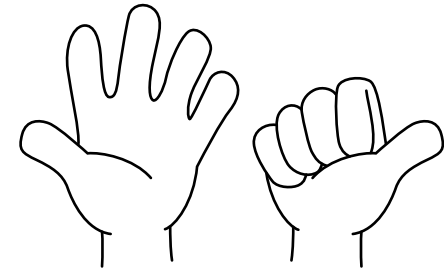
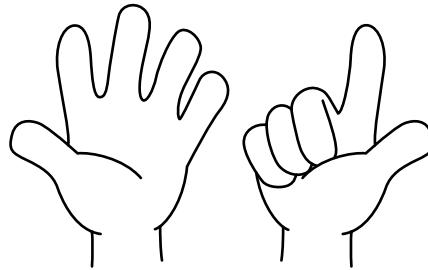
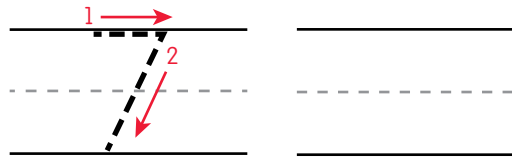
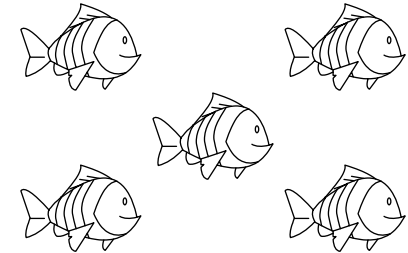
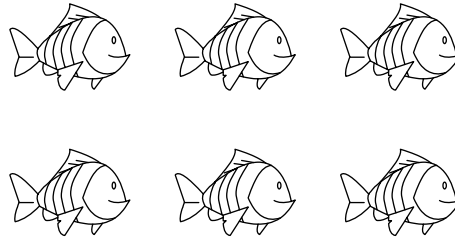
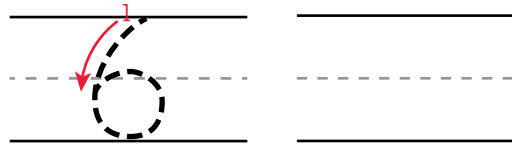


Have children use counters to make groups of 6, 7, or 8. Give children 10 counters and a set of dot cards for 6, 7, and 8. Children place the dot cards facedown and then turn one over and show that many counters on the workmat. Repeat.

Discuss It

How do you know you have the correct number of counters?

Connect It



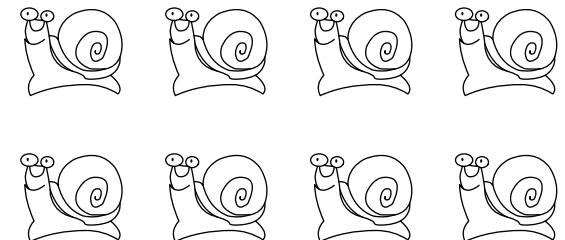
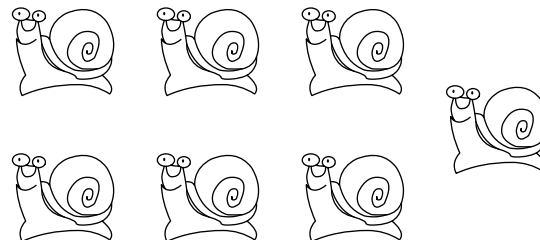
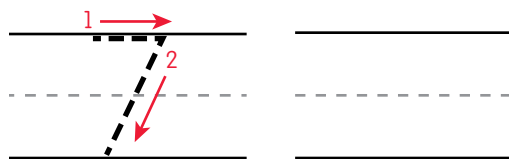
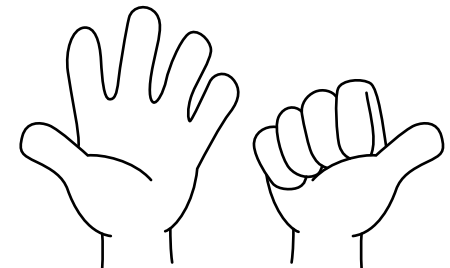
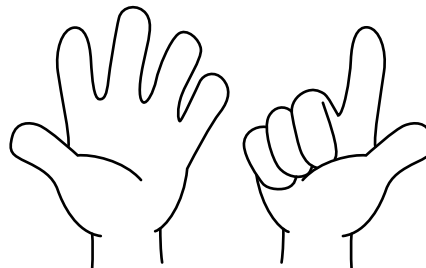
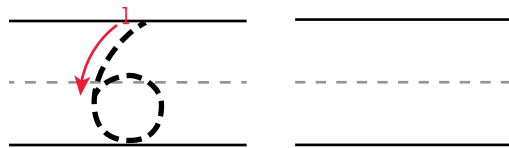
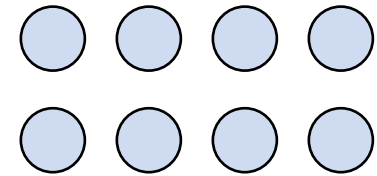
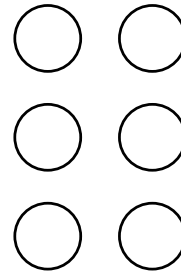
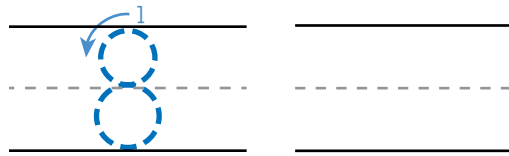
Ask children to find the group that shows 6, 7, or 8. Have children read the number at the beginning of each problem. Then have them trace and write the numeral. Have children color the group with the correct number of objects.

Discuss It

How did you decide which group of circles to color? What are different ways you could count the group of 8 circles?

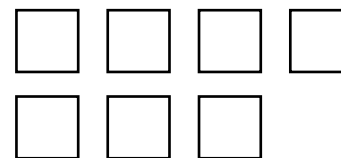
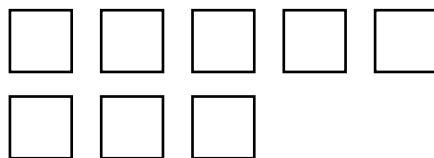
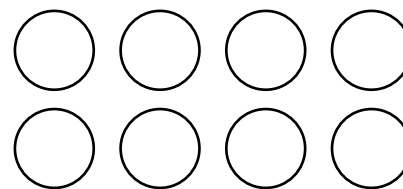
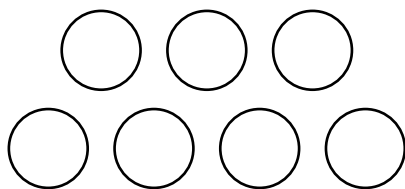
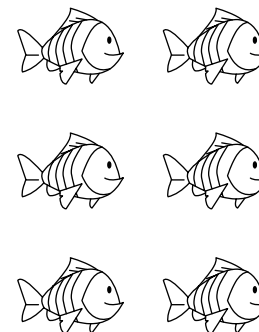
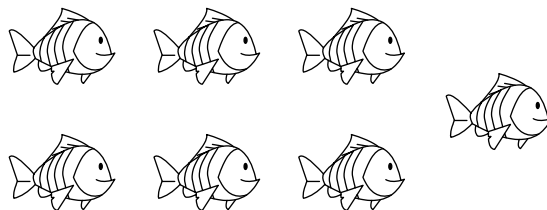
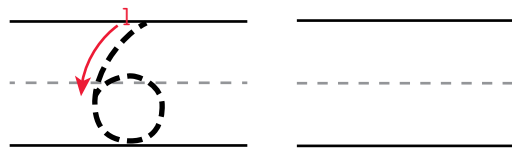
Practice Counting and Writing to 10

Example



Have children practice writing 6, 7, and 8 and counting 6, 7, and 8 objects.

Ask children to trace and then write the numeral at the beginning of each problem. Then have children color the group with that number of objects.



Have children practice writing 6, 7, and 8 and counting 6, 7, and 8 objects.

Ask children to trace and then write the numeral at the beginning of each problem. Then have children color the group with that number of objects.

Refine Counting and Writing to 10

Apply It



Math Toolkit

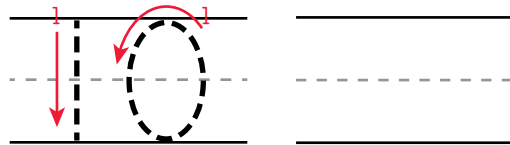
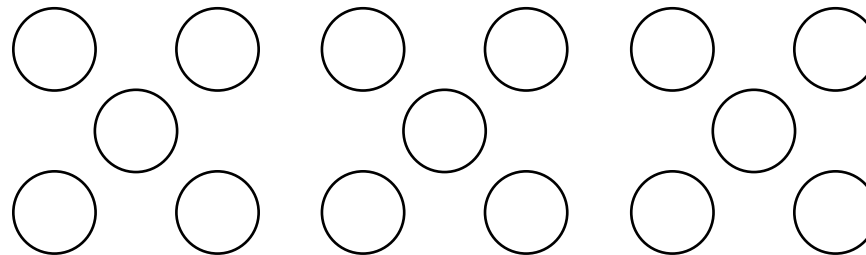
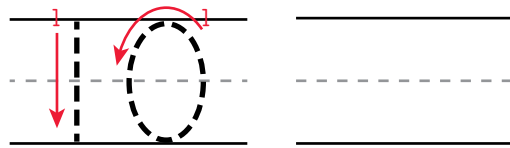
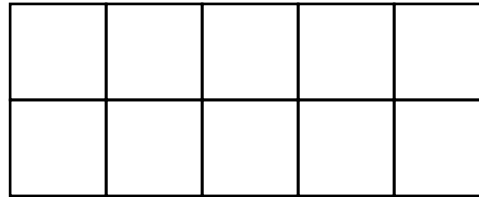
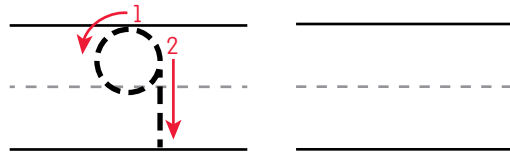
- counters 



Have children count 9 or 10 counters. Give pairs of children a cup of 20 counters. Have one child count out 9 counters and the second child check by placing the counters on the 10-frame. Children then switch roles. Repeat with counting out 10 counters.

Discuss It

How does the 10-frame help you check that you have counted the correct number?



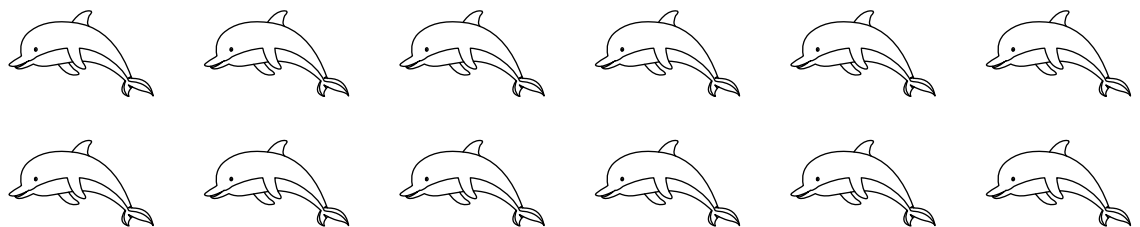
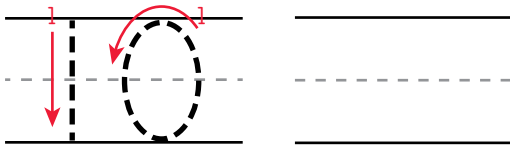
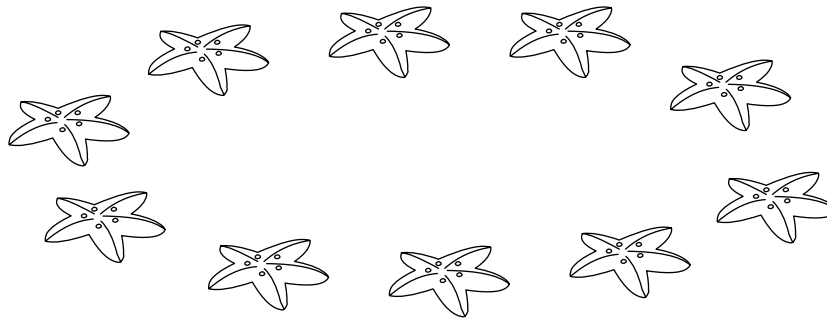
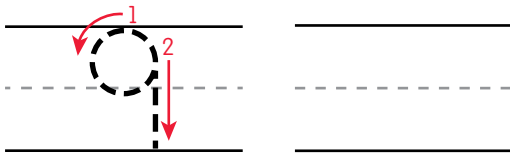
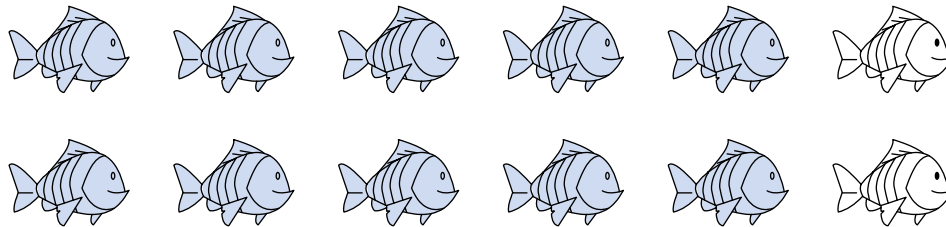
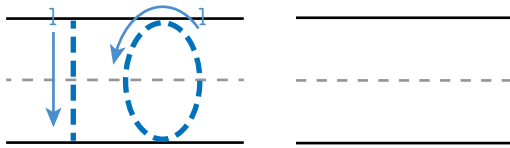
Ask children to trace and write the numerals 9 and 10 and then color 9 or 10 objects.
Note that they may choose to color any 9 or 10 of the objects in the groups. In the last problem, have children trace and write 10 and then draw 10 shapes or objects.

Discuss It

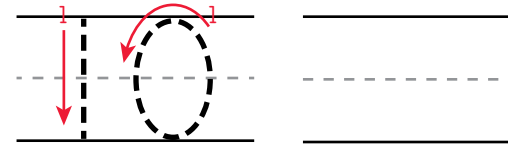
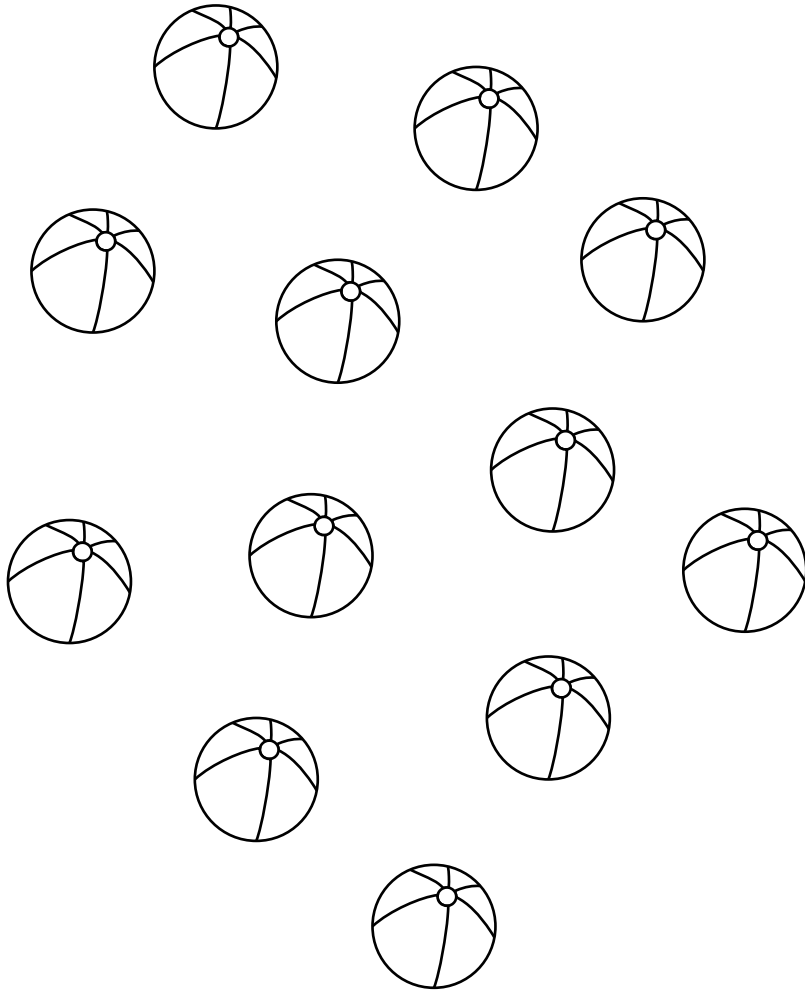
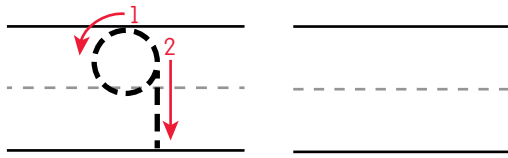
Work with a partner. How did your partner draw 10? How can you check that you both drew 10 objects correctly?

Practice Counting and Writing to 10

Example



Have children practice writing 9 and 10 and counting out 9 or 10 objects.
Ask children to trace and write the numeral 9 or 10. Then have children color that number of objects.



Have children trace and write the numerals 9 and 10, count and color 9 objects, and then draw 10 objects. On the left, have children trace and

write the numeral 9 and then color 9 objects. On the right, ask children to trace and write the numeral 10 and then draw a picture to show 10 objects.

Refine Counting and Writing to 10

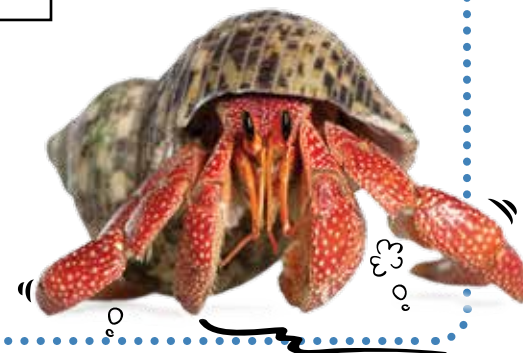
Apply It



Math Toolkit

• counters 

1 2 3 4 5 6 7 8 9 10



Have children find a missing number from the 1 to 10 sequence. Have children work in pairs. One child covers one of the numbers. The other child figures out which number is covered and shows it with counters on the 10-frame.

Discuss It

How did you find the missing number?



How many  ? 8 9 10

Color 1  for each  .



Have children count the fishbowls and circle the number that tells how many and then color 1 fish for each bowl. Allow children to find their own strategies to figure out how many fish and which ones to color.

Discuss It

Work with a partner. Did you color the same fish as your partner? How many fish do not have a bowl?

Explore Comparing Within 10



Try It


Learning Target

- Compare two numbers between 1 and 10 presented as written numerals.

SMP 1, 2, 3, 4, 5, 6, 8



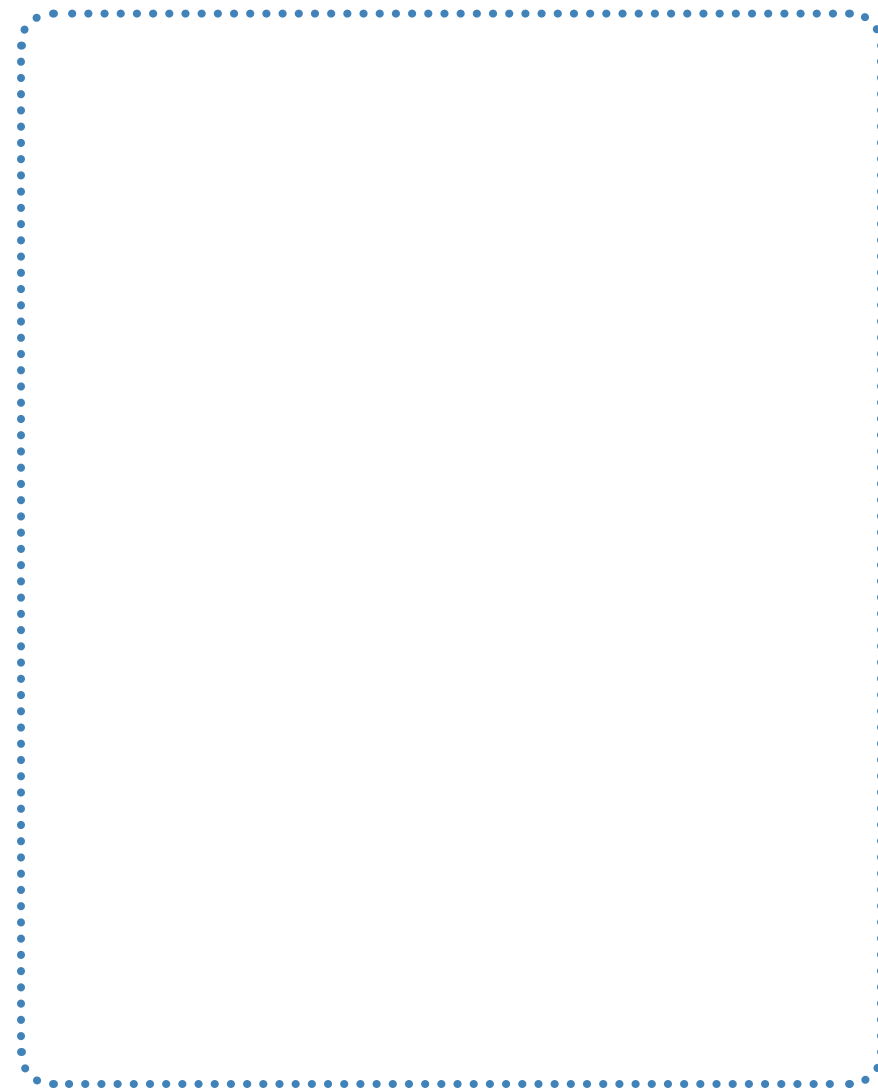
Math Toolkit

- counters 
- crayons

Children compare groups of 6 and 7 crayons and discuss how to identify the group that has more. Invite two children to the front of the class and give one child 6 crayons and the other 7 crayons. Ask: *Which child*

has more crayons? How do you know? Then have children use counters to model the problem and discuss how they can compare the number of counters without counting.

Connect It



Children compare groups of counters to see which has more. Pair children and give each child a group of 5, 6, or 7 counters. Then ask children to compare the counters to find out which child has more or if they have the

same number of counters. Ask pairs to explain how they determined who has more. Then display 5 crayons in one hand and 7 crayons in the other. Ask: *Which hand has more crayons? How do you know?*

Prepare for Comparing Within 10

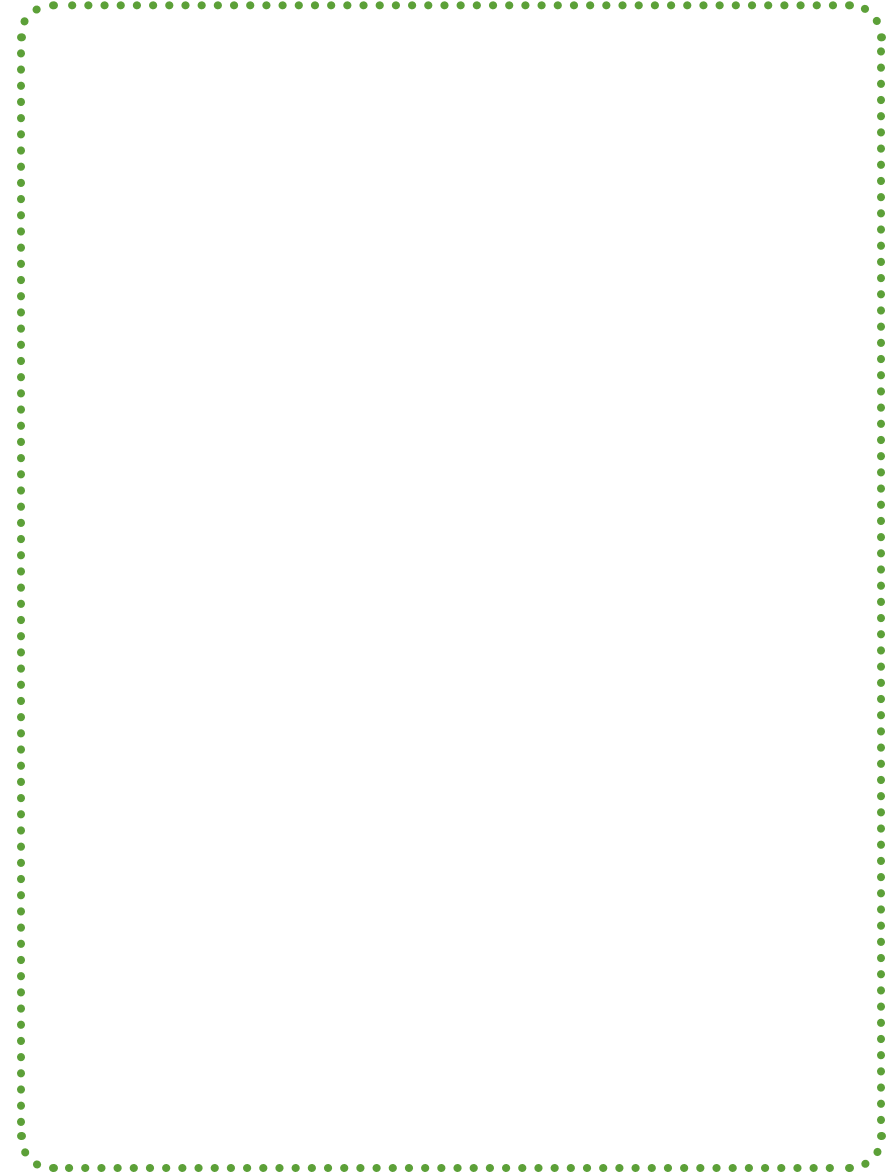
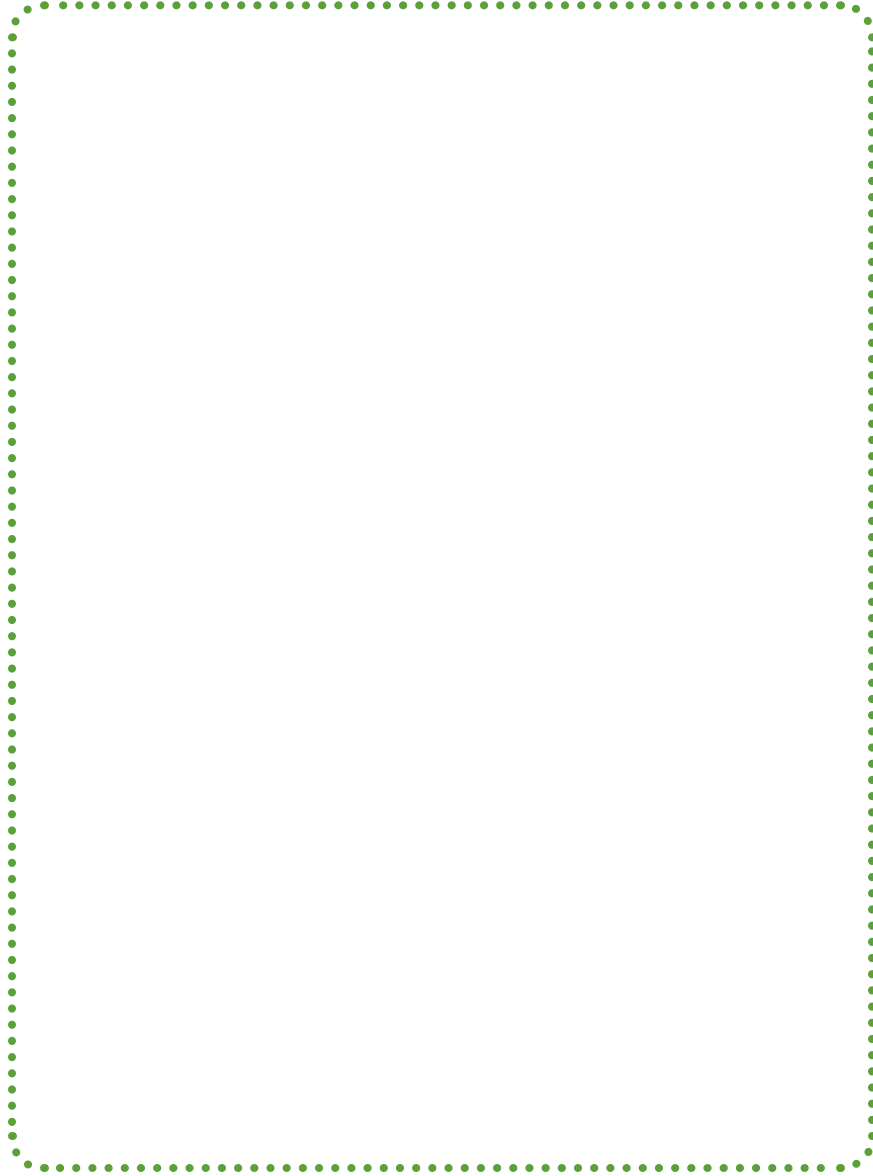
less

Examples

Examples

Examples

Have children show the meaning of the word *less*. Have children fill in each of the boxes to show the meaning of the word *less*. Tell children that they can use words, numbers, and pictures. Encourage them to show as many ideas as they can.



Children compare groups of objects to see which has fewer. Give children some small objects. Have them put 3 objects on one workmat and 2 objects on the other workmat. Then ask children to compare the objects to find out which

workmat has fewer. Ask them to explain how they determined which has fewer. Then have them place 3 objects on one workmat and 4 objects on the other workmat. Ask: *Which workmat has fewer objects? How do you know?*

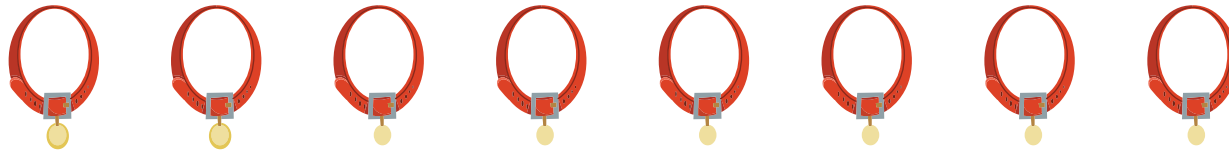
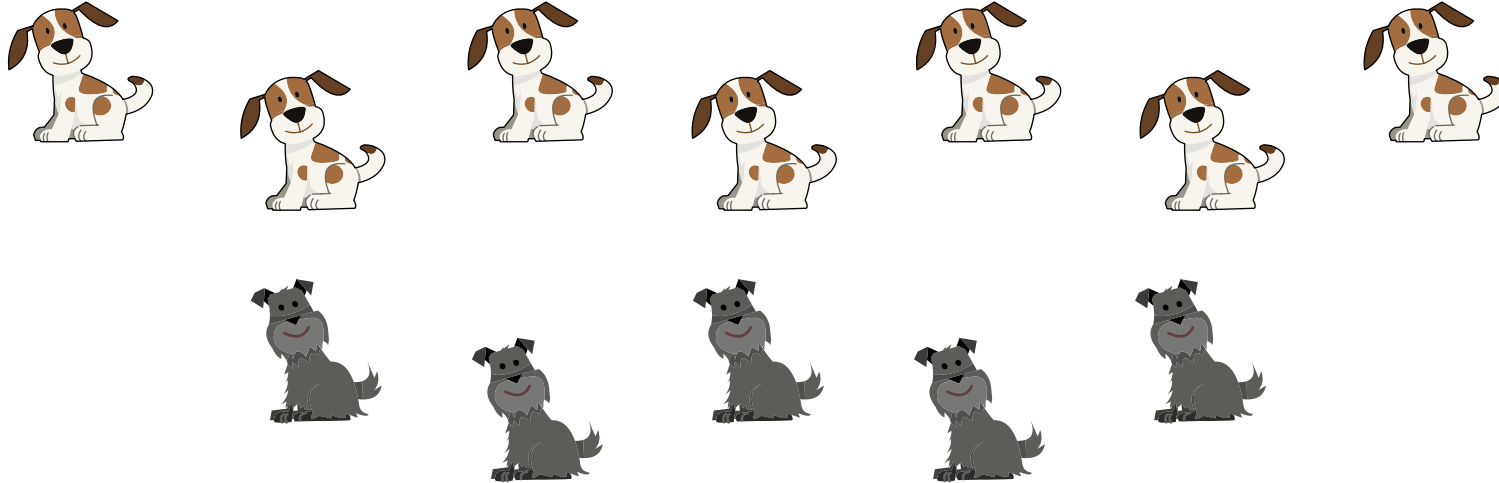
Develop Comparing Within 10



Encourage children to discuss the quantities of items and then compare quantities. Ask children to make comparison statements using *more*, *less*, *fewer*, or *the same as*. Have children draw lines matching each puppy to a collar.

Discuss It Do you think the pet store sells more dog treats than balls? Why or why not?

Connect It



Have children draw lines to match objects and circle the group with more. For each problem, ask children to tell which group has more and explain how they know.

Discuss It How does drawing lines to match objects help you know which group has more?

Practice Comparing Within 10



Have children count and color the 8 dogs. Have children color green a group that has fewer than 8. Have them color brown a group that has more than 8. Then have children color the rest of the picture.

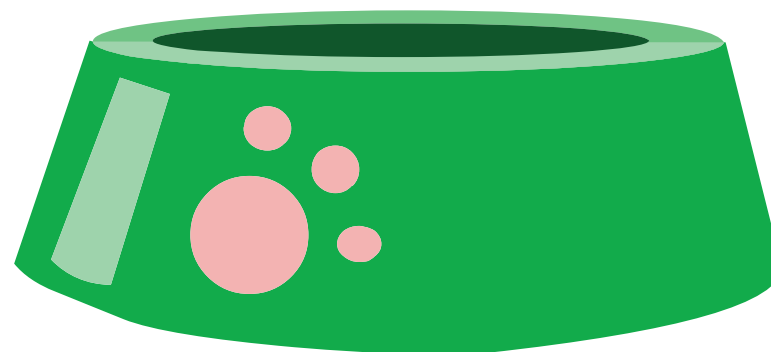
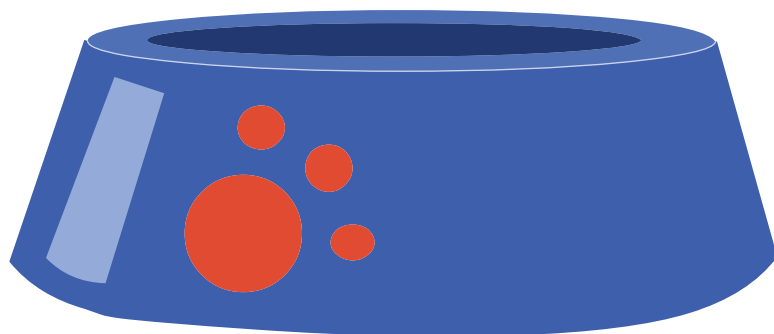


Have children draw lines to match objects and circle the group with fewer.
For each problem, ask children to tell which group has fewer and explain how they know.

Develop Comparing Within 10

Try It**Math Toolkit**

• counters

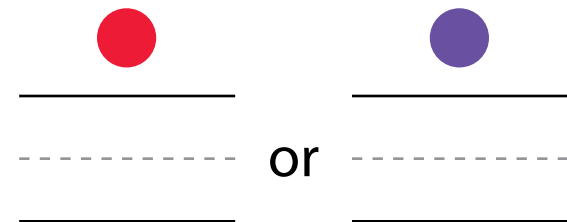
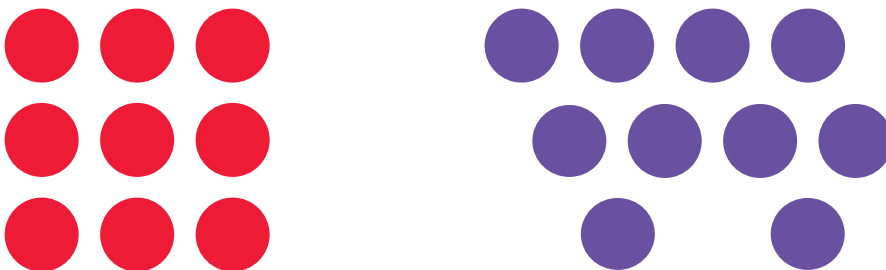
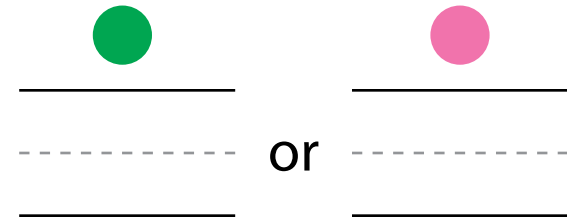
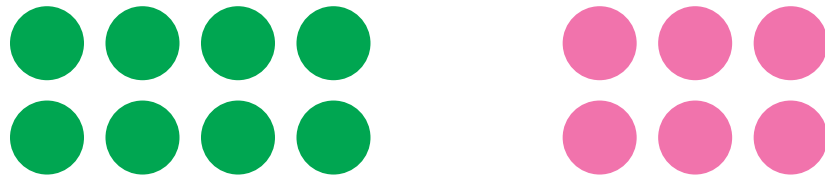
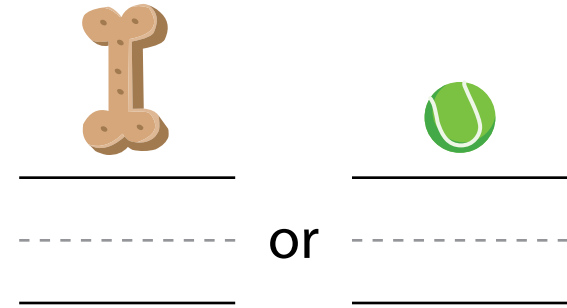
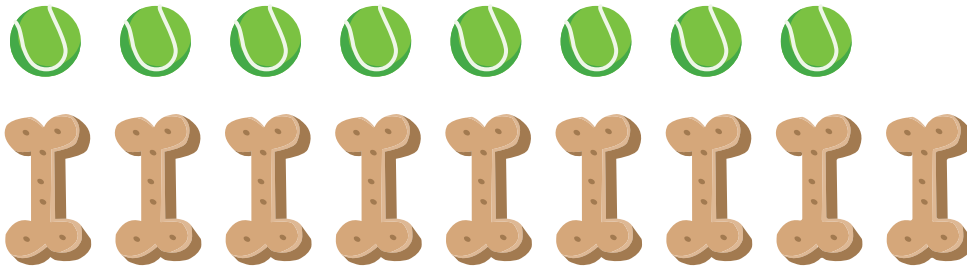


Have children compare groups of counters to see which has more. Tell children how many counters to put in each bowl. Use 5 to 10 counters in each bowl. Then ask them to compare the counters to find out which bowl has more and which bowl has fewer.

Discuss It

Which bowl would have more if there were 9 counters in each bowl?

Connect It

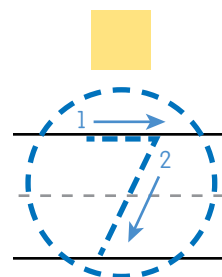


Have children compare the quantities shown in the pictures. Have children write how many are in each group, read each number, and then circle the number that is greater. For each problem, discuss different ways to decide which group has more.

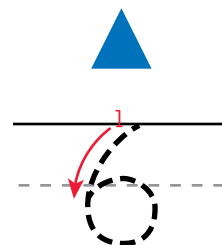
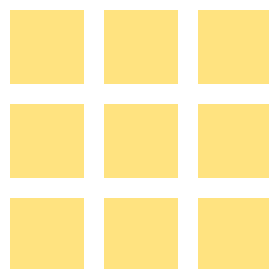
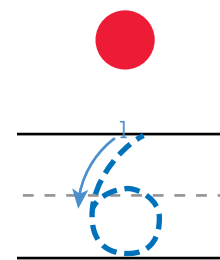
Discuss It Work with a partner. Look at the green and pink dots. Is there one pink dot for every green dot? How can you be sure?

Practice Comparing Within 10

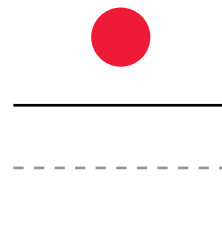
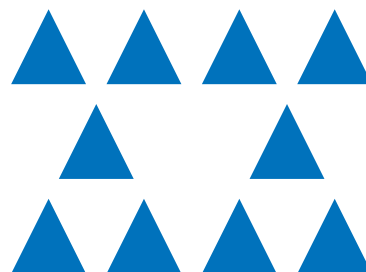
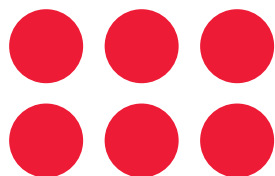
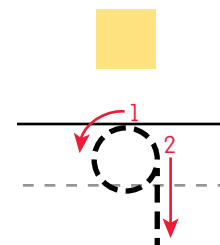
Example



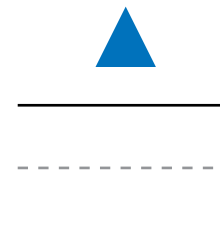
or



or

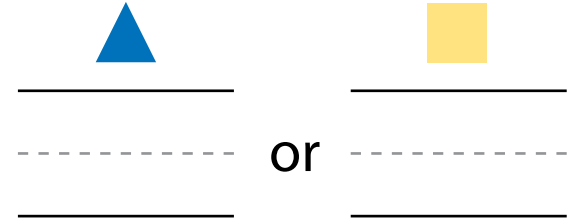
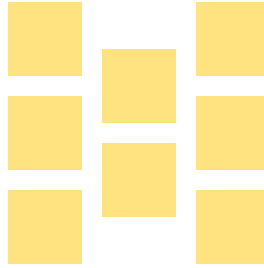


or

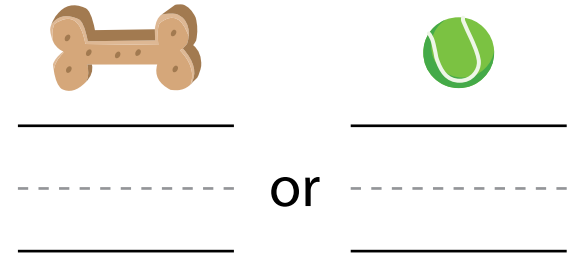
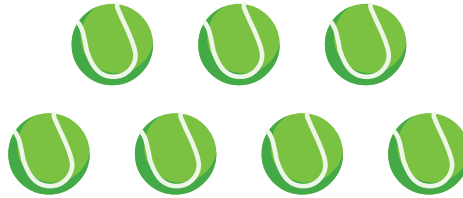
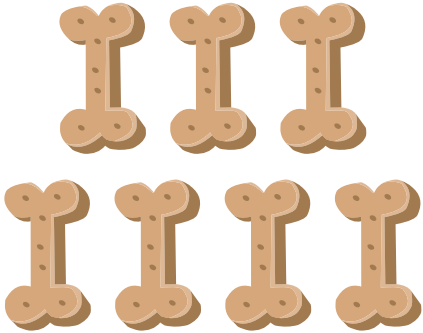


In each problem, have children compare the numbers of objects.

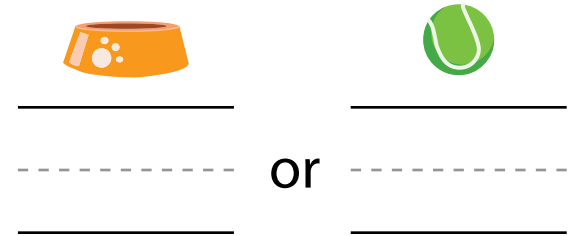
Have children write how many are in each group and then circle the number that is greater.



or



or



or

In each problem, have children compare the numbers of objects. Have children write how many are in each group and then circle the number that is less. If the groups have the same number, have children circle both numbers.

Refine Comparing Within 10

Apply It

Which is less?



Math Toolkit

- counters 
- 10-frames

7 or 9

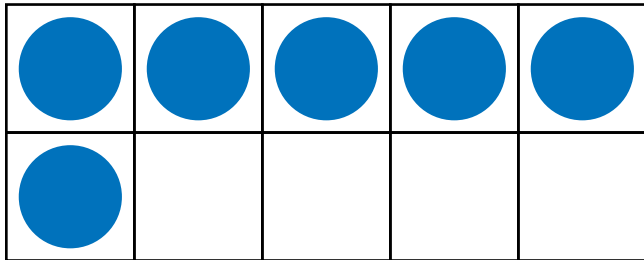
10 or 0

Ask children to compare numbers. First have them compare numbers and tell which is less. Have children represent each number with counters to check their comparisons. For each problem, have them circle the number that is less.

Discuss It

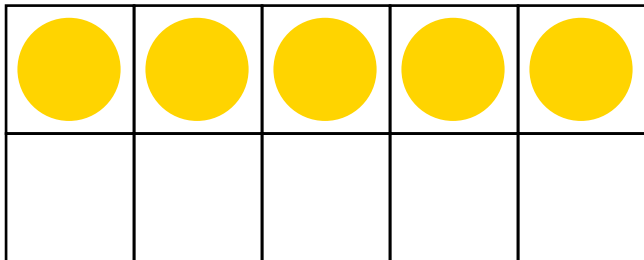
How did using counters on the 10-frames help you check your comparisons?

How many?

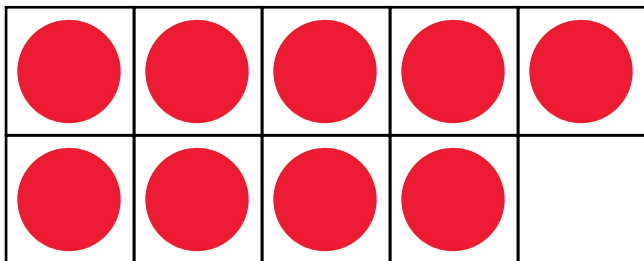


Which is less?

or 5



or 7



or 10

Have children compare the number of counters in a 10-frame with a given number and tell which is less. Have them count and write the number of counters in the 10-frame, compare that number with the number shown in black, and circle the number that is less.

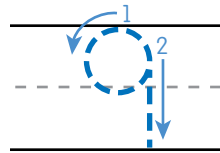
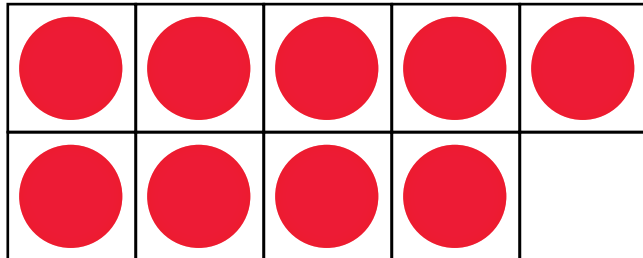
Discuss It

Look at all the counters. Which group of counters shows the number closest to 10? How do you know?

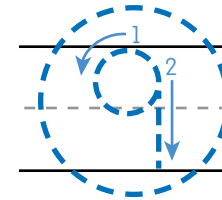
Practice Comparing Within 10

Example

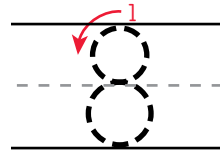
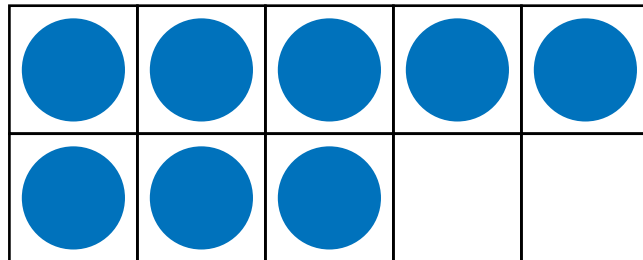
How many?



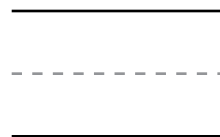
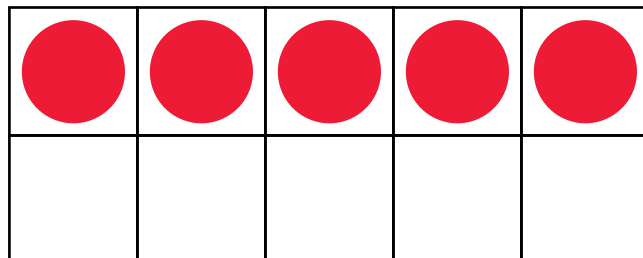
Which is greater?



or 7



or 6

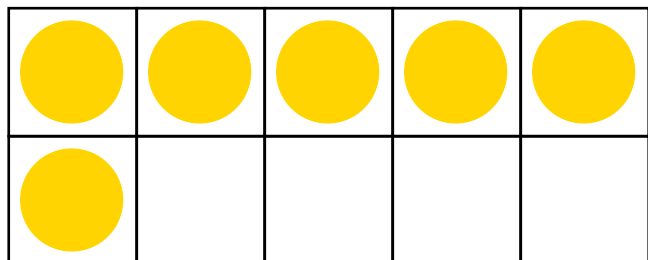


or 10

Have children compare the number of counters in a 10-frame with a given number and tell which is greater. Have children count and write the number

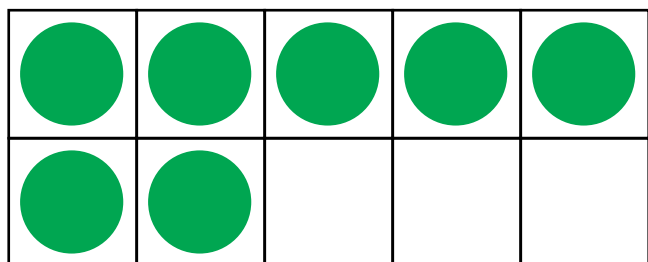
of counters in the 10-frame. Ask them to compare that number with the number shown on the right. Have them circle the number that is greater.

How many?

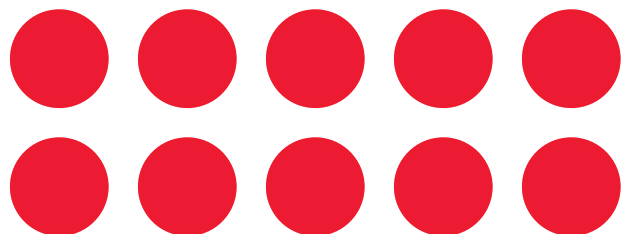


Which is less?

or 7



or 8



or 9

Ask children to compare a number of counters with a given number and tell which is less. Have children count and write the number of counters. Ask


them to compare that number with the number shown on the right. Have them circle the number that is less.

Refine Comparing Within 10

Apply It



Math Toolkit

- counters 
- number cubes (labeled 5–10)
- 10-frames



Have children tell which number is greater and which is less. Have partners roll two number cubes (labeled 5–10). Ask them to say which number is greater and which is less and then use counters to build the numbers on the 10-frames to check. Repeat.

Discuss It

How can you tell which number is greater before you check your answer with counters?

Greater

6

8

9

7

10

6

Less

6

9

10

8

7

8

Have children determine which number is greater and which is less. For each pair of numbers in the first column, ask children to write the number that is greater. In the second column, ask them to write the number that is less.

Discuss It

Check your work. How can you be sure which number is greater? How can you be sure which number is less?