

## 2<sup>nd</sup> Grade Math

### Weeks 7-8

This packet includes daily lessons from your students Math book. These are what we use daily in class so they are familiar with the format!

If there is something that your student does not understand, have them skip the problem and when we make phone calls we would be more than happy to review it!

Name \_\_\_\_\_

**Collect Data**

**Essential Question** How do you use a tally chart to record data from a survey?

**Listen and Draw**

Take turns pulling a cube from the bag.  
Draw a tally mark in the chart for each cube.

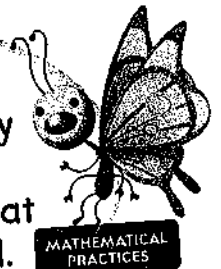
Cube Colors	
Color	Tally
blue	
red	
green	



**HOME CONNECTION** • Your child made tally marks to record the color of cubes pulled from a bag. This activity prepares children for using and recording data in this chapter.

**Math Talk**

Explain how tally marks help you keep track of what has been pulled.



## Model and Draw

You can take a **survey** to collect **data**.  
You can record the data with tally marks.

Greg asked his classmates which lunch is their favorite.

Favorite Lunch	
Lunch	Tally
pizza	
sandwich	I
salad	
pasta	

The tally marks in the tally chart show the children's answers. Each tally mark stands for one child's choice.

## Share and Show



1. Take a survey. Ask 10 classmates which pet is their favorite. Use tally marks to show their choices.

2. How many classmates chose dog?  
\_\_\_\_\_ classmates

3. Which pet did the fewest classmates choose?  
\_\_\_\_\_

Favorite Pet	
Pet	Tally
cat	
dog	
fish	
bird	

4. Did more classmates choose cat or dog? \_\_\_\_\_

How many more? \_\_\_\_\_ more classmates

Name \_\_\_\_\_

## On Your Own

5. Take a survey. Ask 10 classmates which indoor game is their favorite. Use tally marks to show their choices.

Favorite Indoor Game	
Game	Tally
board	
card	
computer	
puzzle	

6. How many classmates chose board game?

\_\_\_\_\_ classmates

7. Which game did the most classmates choose?

8. Did more classmates choose a card game or a computer game?

How many more? \_\_\_\_\_ more classmates

9. Which game did the fewest classmates choose?

10. How many classmates did not choose a board game or a puzzle? **Explain** how you know.

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# PROBLEM SOLVING REAL WORLD

Claire asked her classmates to choose their favorite subject. She made this tally chart.

Favorite Subject	
Subject	Tally
reading	I
math	
science	

11. How many more classmates chose math than reading?

\_\_\_\_\_ more classmates

12. How many classmates did Claire ask?

\_\_\_\_\_ classmates

13. **H.O.T.** Write a new question about the data in the chart. Then write the answer to your question.

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14. **Test Prep** Use the tally chart. Which statement is true?

- ☐ 13 children voted for breakfast.
- ☐ 35 children voted in all.
- ☐ 12 children voted for dinner.
- ☐ Fewer children voted for lunch than for breakfast.

Favorite Meal	
Meal	Tally
breakfast	
lunch	
dinner	II

**TAKE HOME ACTIVITY** • With your child, take a survey about favorite games and make a tally chart to show the data.

Name \_\_\_\_\_

**Read Picture Graphs****Essential Question** How do you use a picture graph to show data?**Listen and Draw** REAL WORLD

Use the tally chart to solve the problem.  
Draw or write to show what you did.

Favorite Hobby	
Hobby	Tally
crafts	I
reading	
music	
sports	II

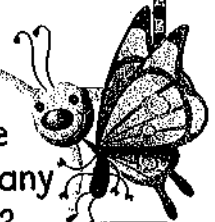
\_\_\_\_\_ more children



**FOR THE TEACHER** • Read the following problem. Mr. Martin's class made this tally chart. How many more children in his class chose sports than chose reading as their favorite hobby?

**Math Talk**

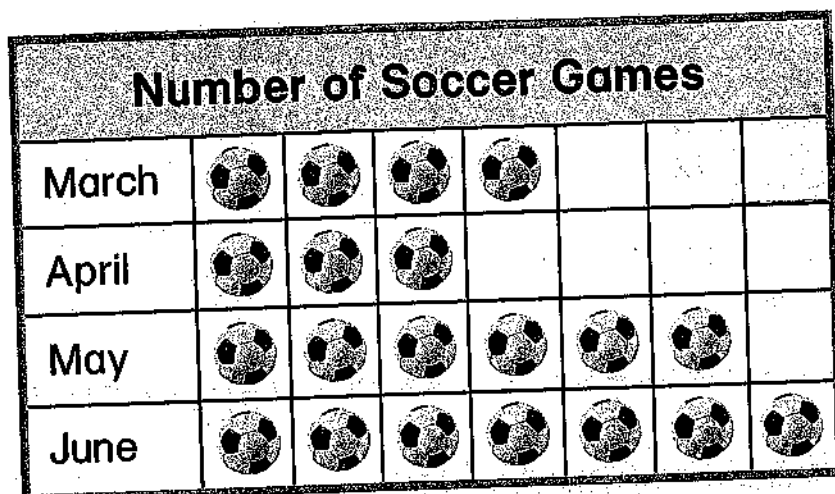
Can the chart be used to find how many girls chose music?  
**Explain.**



MATHEMATICAL PRACTICES

## Model and Draw

A **picture graph** uses pictures to show data.



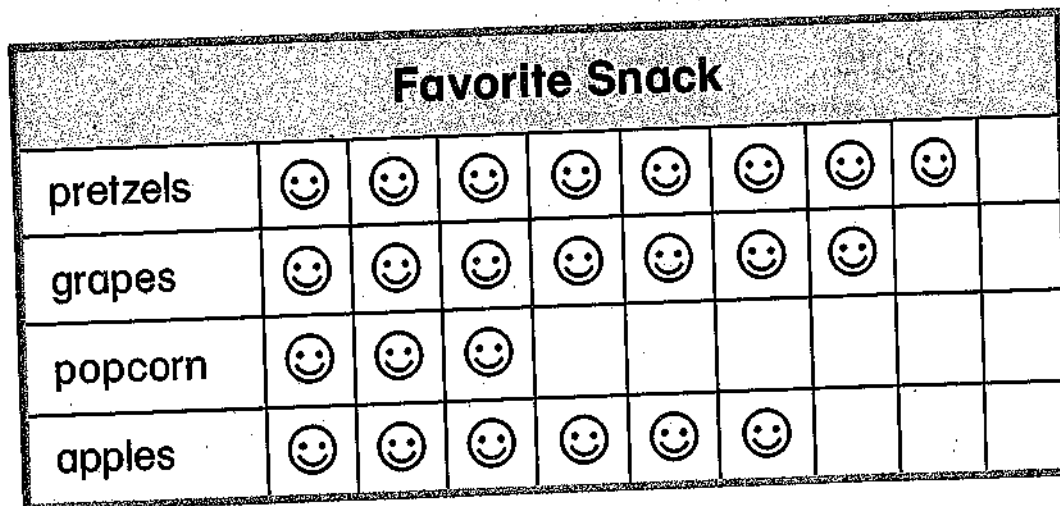
Key: Each  stands for 1 game.

A key tells how many each picture stands for.

## Share and Show



Use the picture graph to answer the questions.



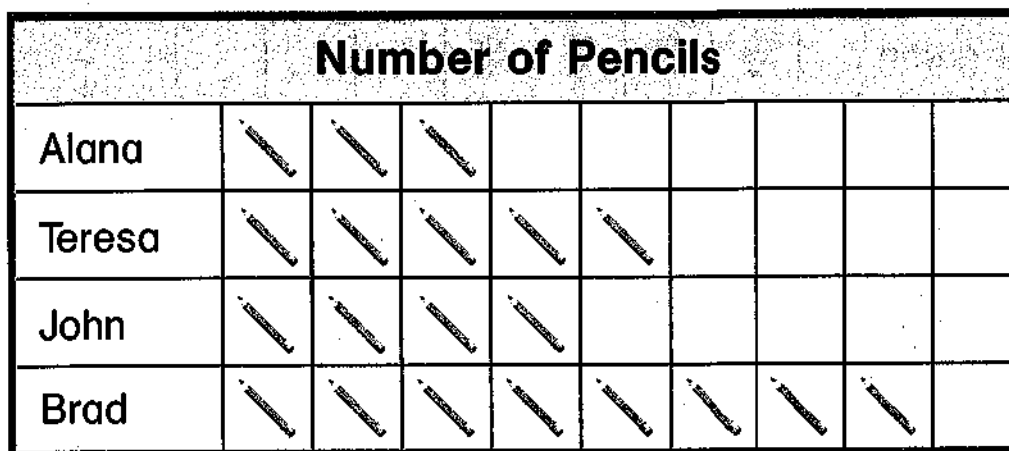
Key: Each  stands for 1 child.

- Which snack was chosen by the fewest children? \_\_\_\_\_
- How many more children chose pretzels than apples? \_\_\_\_\_ more children

Name \_\_\_\_\_

## On Your Own

Use the picture graph to answer the questions.



Key: Each  stands for 1 pencil.

3. How many pencils do Alana and Brad have? \_\_\_\_\_ pencils
4. How many more pencils does Teresa have than Alana has? \_\_\_\_\_ more pencils
5. How many pencils do the four children have? \_\_\_\_\_ pencils
6. Christy has 7 pencils. Write two sentences to describe how her number of pencils compares to the data in the picture graph.

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# PROBLEM SOLVING REAL WORLD

Favorite Balloon Color								
green								
blue								
red								
purple								







Key: Each  stands for 1 child.

7. How many children chose the color blue or chose the color green? \_\_\_\_\_ children

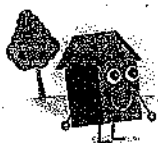
8.  Which three colors were chosen by a total of 13 children?
- \_\_\_\_\_

9. **Test Prep** Use the picture graph. How many pets do the three children have?

- ☐ 6  
☐ 5  
☐ 4  
☐ 3

Number of Pets				
Scott				
Andre				
Maddie				

Key: Each  stands for 1 pet.



**TAKE HOME ACTIVITY** • Have your child explain how he or she solved Exercise 9.

# Make Picture Graphs

**Essential Question** How do you make a picture graph to show data in a tally chart?

## Listen and Draw

Take turns pulling a cube from the bag.  
Draw a smiley face in the graph for each cube.

Cube Colors					
blue					
red					
green					
orange					

Key: Each ☺ stands for 1 cube.



**HOME CONNECTION** • Your child made a graph by recording smiley faces for the colors of cubes taken from a bag. This activity prepares children for working with picture graphs in this lesson.

### Math Talk

Explain how you know that the number of smiley faces for blue matches the number of blue cubes.







MATHEMATICAL PRACTICES

## Model and Draw

Each picture in the graph stands for 1 flower.  
Draw pictures to show the data in the tally chart.


Number of Flowers Picked	
Name	Tally
Jessie	III
Inez	IIII
Paulo	IIII

Number of Flowers Picked					
Jessie					
Inez					
Paulo					

Key: Each  stands for 1 flower.

## Share and Show



- Use the tally chart to complete the picture graph.  
Draw a  for each child.

Favorite Sandwich	
Sandwich	Tally
cheese	IIII
ham	II
tuna	IIII
turkey	III

Favorite Sandwich					
cheese					
ham					
tuna					
turkey					

Key: Each  stands for 1 child.

- How many children chose tuna? \_\_\_\_\_ children
- How many more children chose cheese than ham? \_\_\_\_\_ more children

Name \_\_\_\_\_


## On Your Own

4. Use the tally chart to complete the picture graph.  
Draw a ☺ for each child.

Fruit	Tally
apple	
plum	
banana	
orange	

Favorite Fruit					
apple					
plum					
banana					
orange					

Key: Each ☺ stands for 1 child.

5. How many children chose banana? \_\_\_\_\_ children
6. How many fewer children chose plum than banana? \_\_\_\_\_ fewer children
7. Which fruit did the most children choose? \_\_\_\_\_
8. How many more children chose banana than orange? \_\_\_\_\_ more children
9.  Which three fruits were chosen by a total of 10 children?
- \_\_\_\_\_



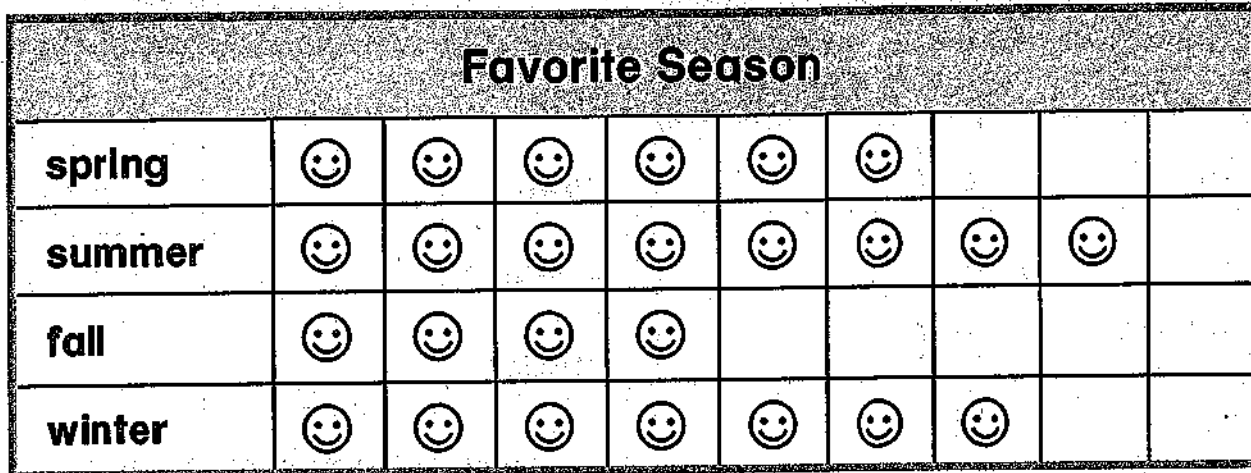
**TAKE HOME ACTIVITY** • Ask your child to explain how to read the picture graph on this page.



# Mid-Chapter Checkpoint

## Concepts and Skills

Use the picture graph to answer the questions.



Key: Each 😊 stands for 1 child.

- Which season did the fewest children choose?  
\_\_\_\_\_
- How many more children chose spring than fall?  
\_\_\_\_\_ more children
- How many children chose a season that was not winter?  
\_\_\_\_\_ children
- James took a survey. 5 children chose green as their favorite color. Which group of tally marks should James use to show this?

- ☐ |||  
☐ ||||  
☐ |||||  
☐ ||||| I

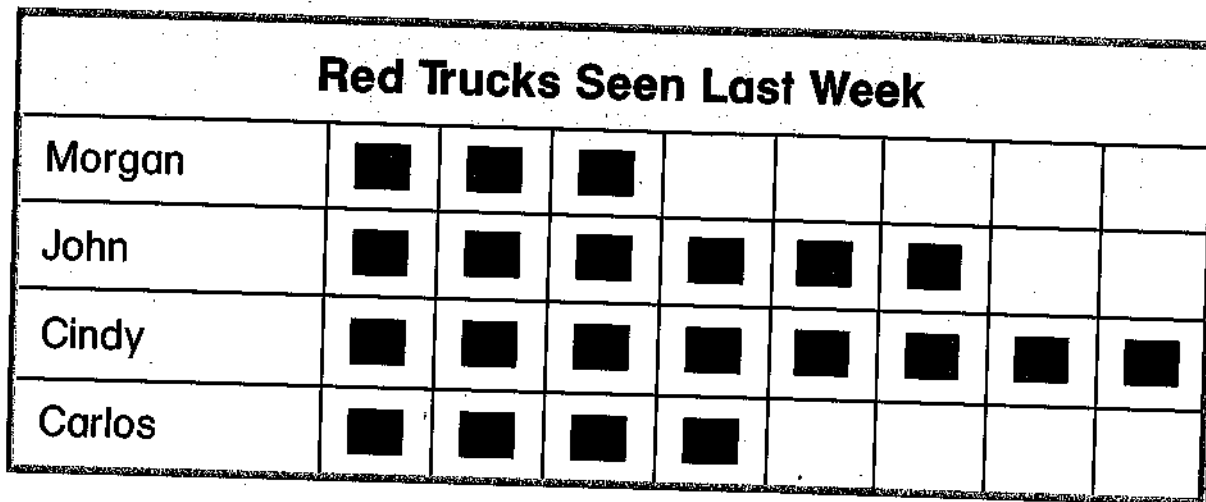
# Read Bar Graphs

**Essential Question** How is a bar graph used to show data?

## Listen and Draw



Use the picture graph to solve the problem.  
Draw or write to show what you did.



**Key:** Each ■ stands for 1 red truck.

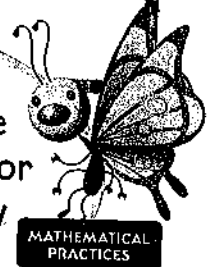
\_\_\_\_\_ red trucks



**FOR THE TEACHER** • Read this problem to children. Morgan made a picture graph to show the number of red trucks that she and her friends saw last week. How many red trucks did the four children see last week?

### Math Talk

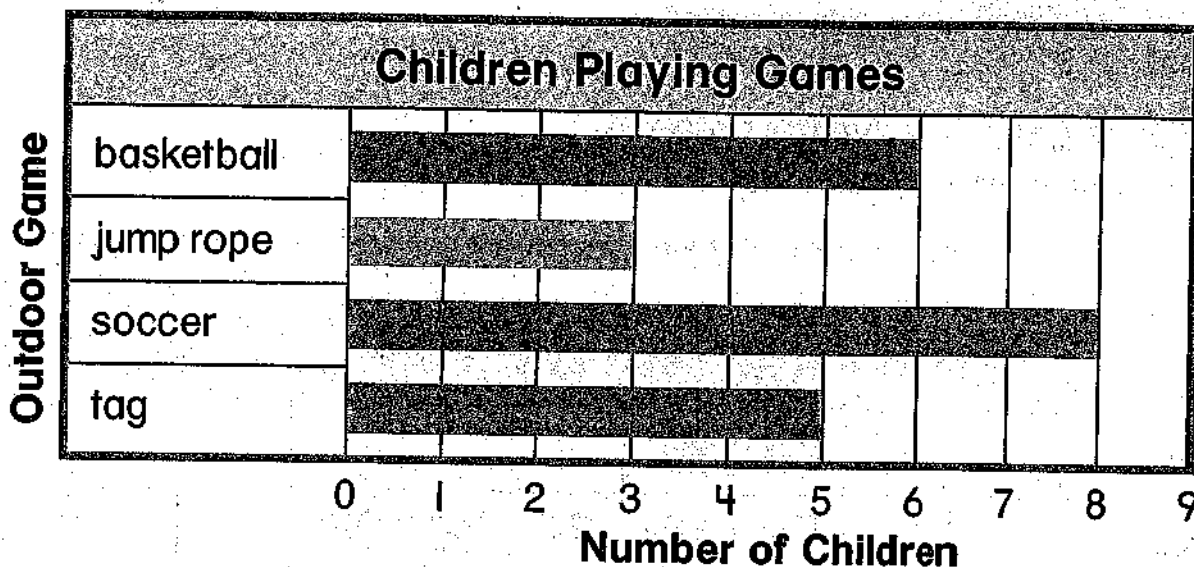
Describe how the data in the graph for John and for Cindy are different.



## Model and Draw

A **bar graph** uses bars to show data.  
Look at where the bars end.  
This tells how many.

There are  
8 children playing  
soccer.



## Share and Show



Use the bar graph.

1. How many green marbles are in the bag?

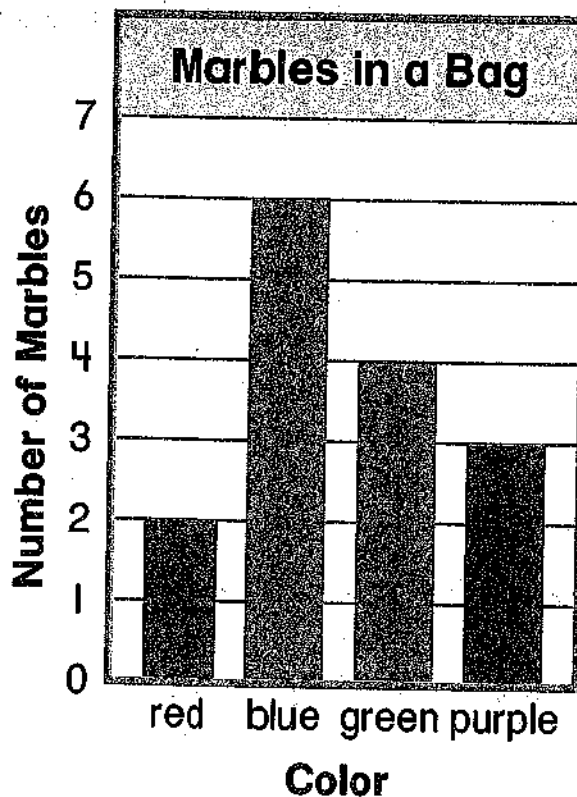
\_\_\_\_\_ green marbles

2. How many more blue marbles than purple marbles are in the bag?

\_\_\_\_\_ more blue marbles

3. How many marbles are in the bag?

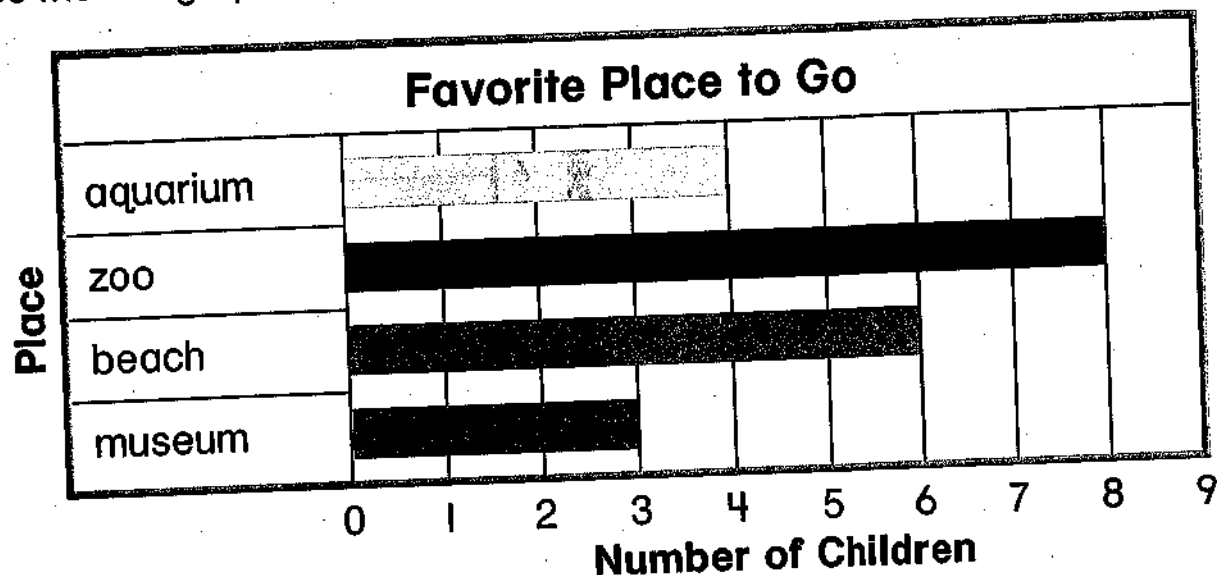
\_\_\_\_\_ marbles



Name \_\_\_\_\_

## On Your Own

Use the bar graph.



4. How many children chose the beach?

\_\_\_\_\_ children

5. Which place did the fewest children choose?

\_\_\_\_\_

6. How many more children chose the zoo than the aquarium?

\_\_\_\_\_ more children

7. How many children chose a place that was not the zoo?

\_\_\_\_\_ children

8. Find the number of children who chose the aquarium and the beach. Then find the number of children who chose the zoo and the museum. Describe how these two numbers are different.

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# PROBLEM SOLVING

REAL

WORLD

Use the bar graph.

9. How many maple trees are there?

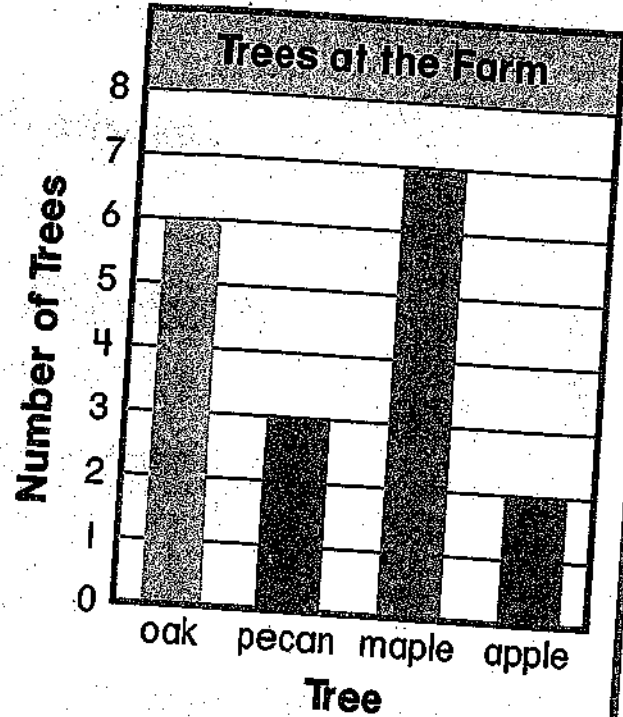
\_\_\_\_\_ maple trees

10. How many fewer apple trees than oak trees are there?

\_\_\_\_\_ fewer apple trees

11. How many trees are not apple trees?

\_\_\_\_\_ trees



12. **HOT** Suppose 7 more trees are brought to the farm. How many trees would be at the farm then? Explain.

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13. **Test Prep** Look at the bar graph above. How many oak trees are at the farm?

- ☐ 3  
☐ 6  
☐ 7  
☐ 8

**TAKE HOME ACTIVITY** • Ask your child to explain how he or she solved Exercise 10.

Name \_\_\_\_\_

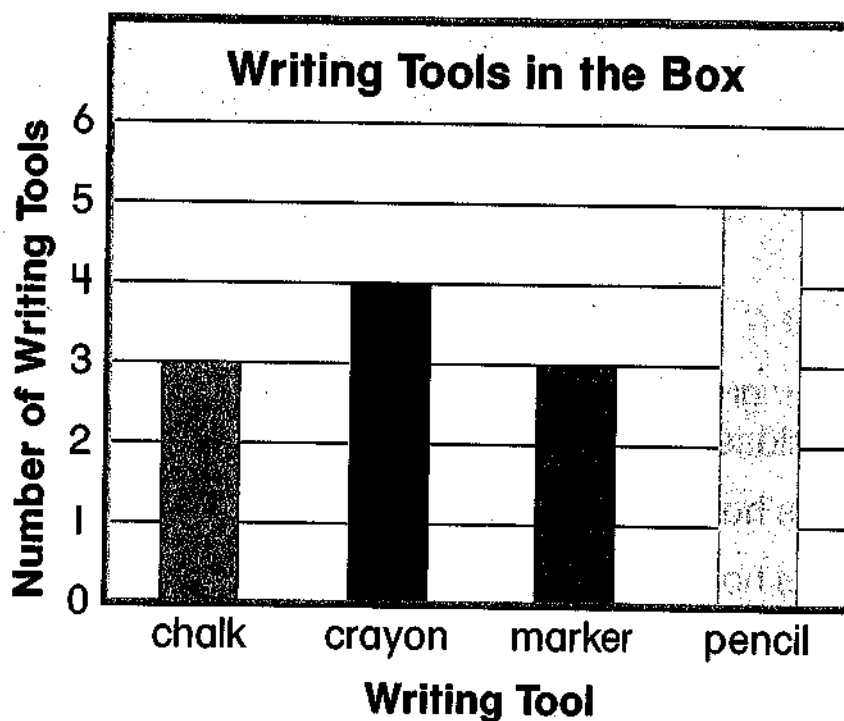
# Make Bar Graphs

**Essential Question** How do you make a bar graph to show data?

## Listen and Draw



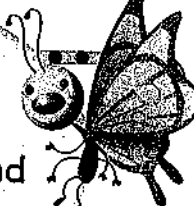
Use the bar graph to solve the problem.  
Draw or write to show what you did.



\_\_\_\_\_ writing tools

### Math Talk

**Describe** how the information in the graph for crayon and for marker is different.



MATHEMATICAL PRACTICES

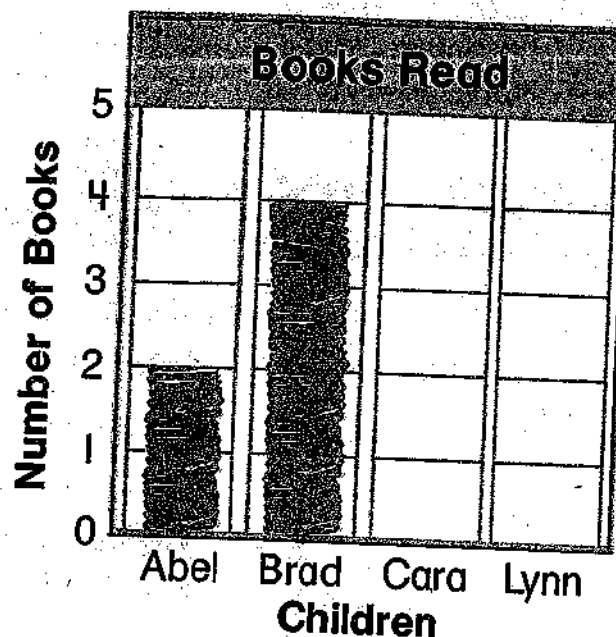


**FOR THE TEACHER** • Read the following problem. Barry made this bar graph. How many writing tools are in the box?

## Model and Draw

Abel read 2 books, Brad read 4 books, Cara read 1 book, and Lynn read 3 books.

Complete the bar graph to show this data.



## Share and Show

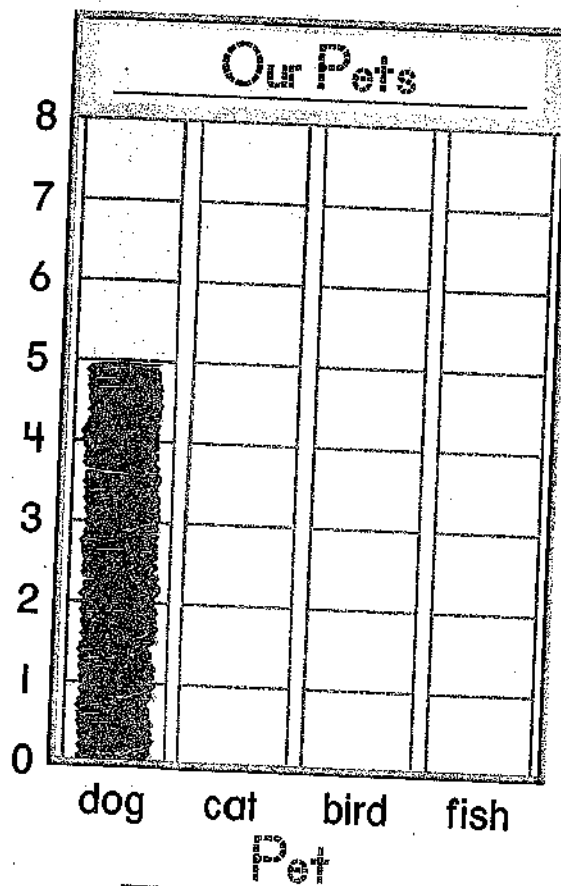


Ella is making a bar graph to show the kinds of pets her classmates have.

- 5 classmates have a dog.
- 7 classmates have a cat.
- 2 classmates have a bird.
- 3 classmates have fish.

1. Write labels and draw bars to complete the graph.
2. How will the graph change if one more child gets a bird?

Number of Classmates

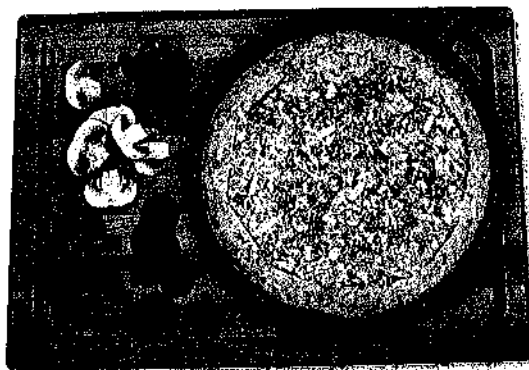


Name \_\_\_\_\_

## On Your Own

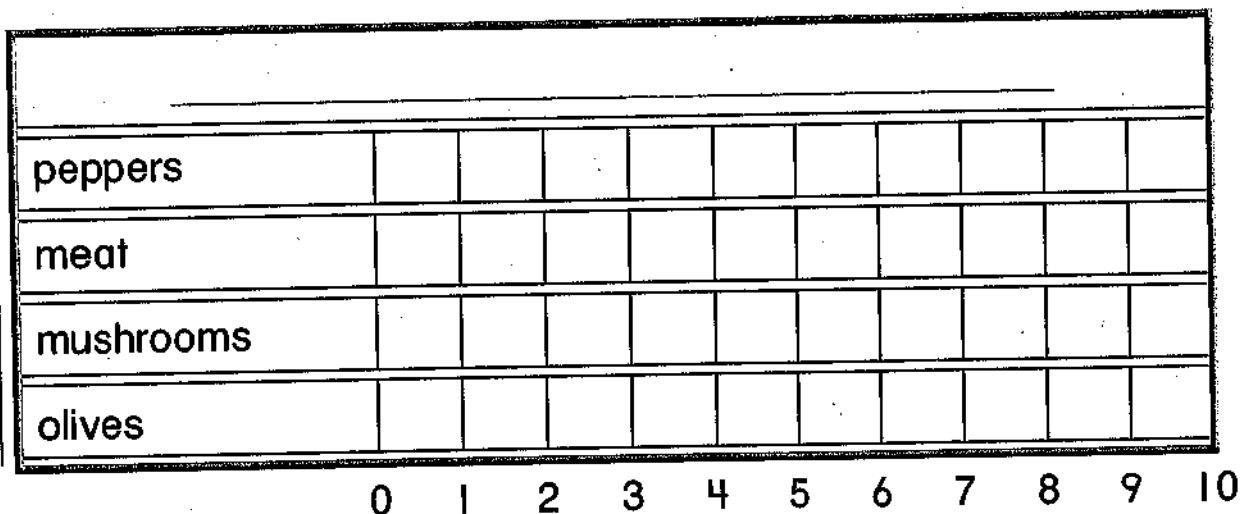
Dexter asked his classmates which pizza topping is their favorite.

- 4 classmates chose peppers.
- 7 classmates chose meat.
- 5 classmates chose mushrooms.
- 2 classmates chose olives.



3. Write a title and labels for the bar graph.

4. Draw bars in the graph to show the data.



5. Which topping did the most classmates choose? \_\_\_\_\_



6. Did more classmates choose peppers and olives than meat? **Explain.**

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# PROBLEM SOLVING REAL WORLD

Cody asked his classmates which zoo animal is their favorite.

Use the data to complete the bar graph.

7. Write a title and labels.  
Draw bars.

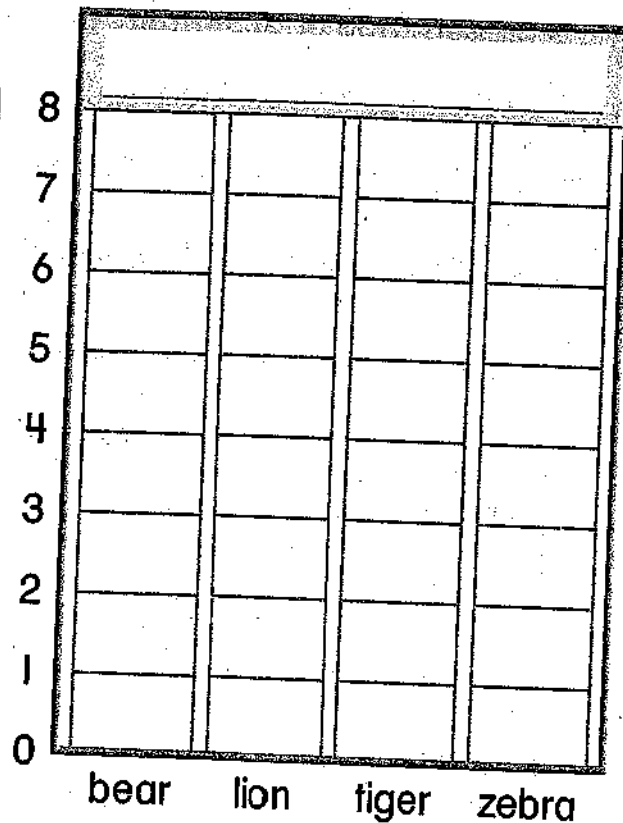
- 6 classmates chose bear
- 4 classmates chose lion
- 7 classmates chose tiger
- 3 classmates chose zebra

8. How many more classmates chose bear than zebra?

\_\_\_\_\_ more classmates

9. **HOT** How many fewer classmates chose lion than classmates that chose the other zoo animals?

\_\_\_\_\_ fewer classmates



10. **Test Prep** Look at the bar graph above. Which animal did the most classmates choose?

- ☐ bear
- ☐ tiger
- ☐ lion
- ☐ zebra

**TAKE HOME ACTIVITY** • Ask your child to describe how he or she used the favorite zoo animal data to complete the bar graph.

Name \_\_\_\_\_

# Problem Solving • Display Data

**Essential Question** How does making a bar graph help when solving problems about data?

Maria recorded the rainfall in her town for four months. How did the amount of rainfall change from September to December?

September	4 inches
October	3 inches
November	2 inches
December	1 inch

## Unlock the Problem

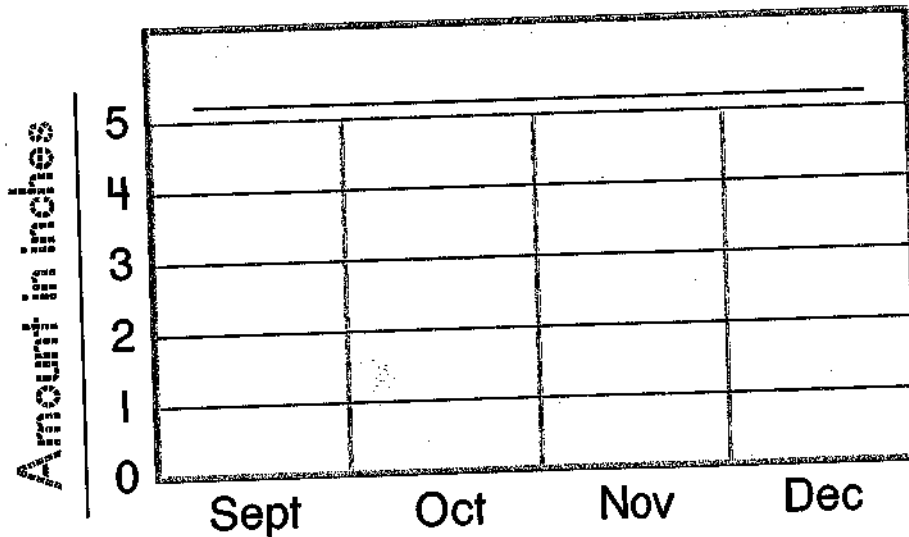
**What do I need to find?**

how the amount of rainfall changed from September to December

**What information do I need to use?**

the amount of rainfall in each of the four months

**Show how to solve the problem.**



The amount of rainfall \_\_\_\_\_



**HOME CONNECTION** • Your child made a bar graph to show the data. Making a graph helps your child organize data to solve problems.

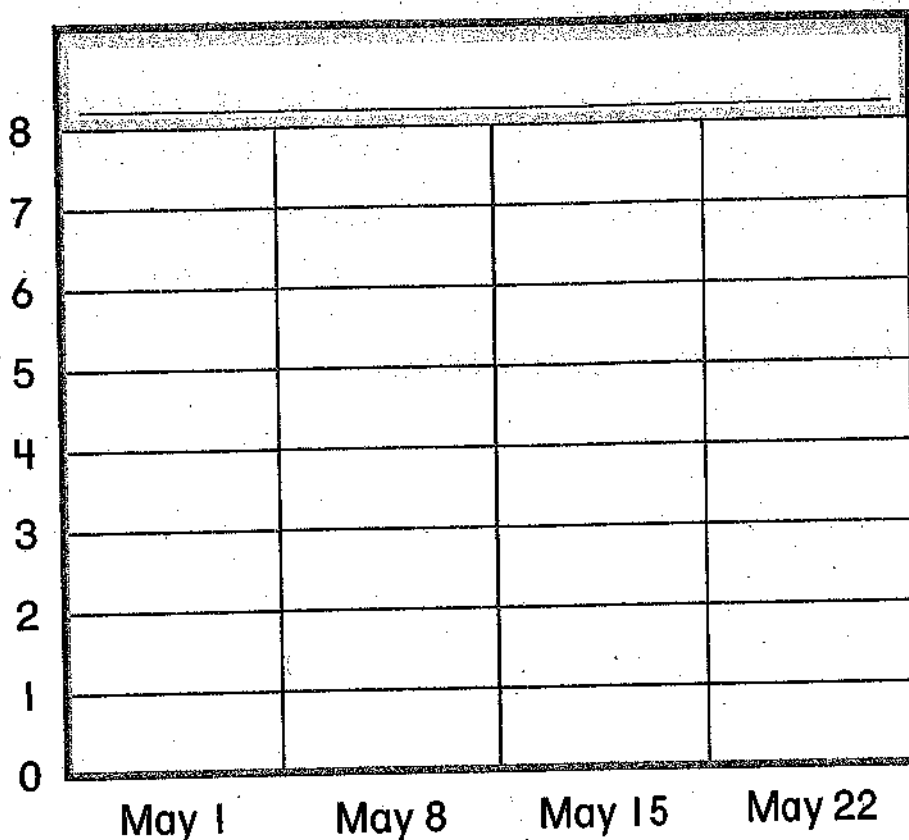
## Try Another Problem

Make a bar graph to solve the problem.

- What do I need to find?
- What information do I need to use?

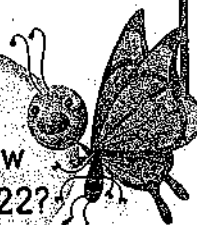
1. Matthew measured the height of his plant once a week for four weeks. Describe how the height of the plant changed from May 1 to May 22.

May 1	2 inches
May 8	3 inches
May 15	5 inches
May 22	7 inches



The height of the plant \_\_\_\_\_

**Math Talk**  
How many inches  
did the plant grow  
from May 1 to May 22?  
**Explain.**



MATHEMATICAL  
PRACTICES

Name \_\_\_\_\_

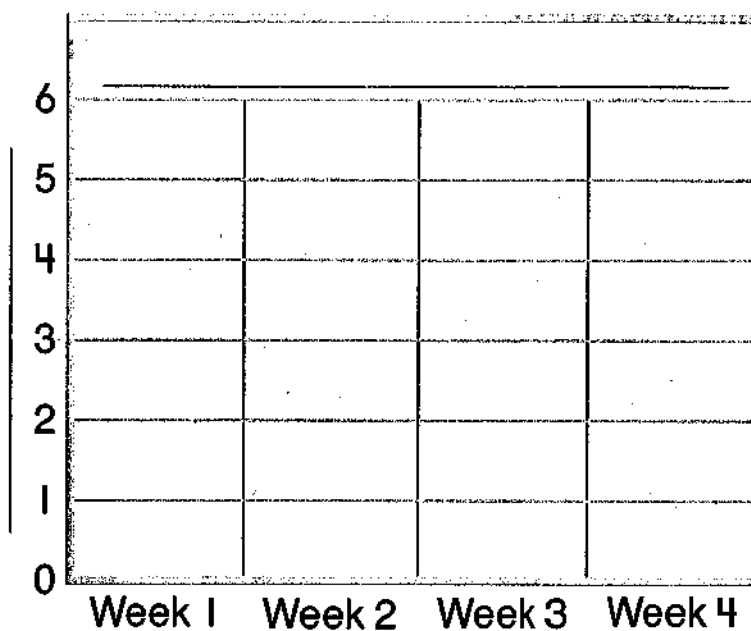
## Share and Show



Make a bar graph to solve the problem.

2. Bianca wrote the number of hours that she practiced playing guitar in June. Describe how the amount of practice time changed from Week 1 to Week 4.

Week 1	1 hour
Week 2	2 hours
Week 3	4 hours
Week 4	5 hours



The amount of practice time \_\_\_\_\_

3. If Bianca's practice time is 4 hours in Week 5, how does her practice time change from Week 1 to Week 5?

\_\_\_\_\_

\_\_\_\_\_

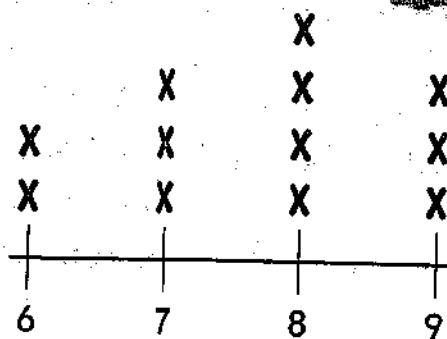
\_\_\_\_\_




Solve.

4. How many strings are 9 inches long?

\_\_\_\_\_ strings

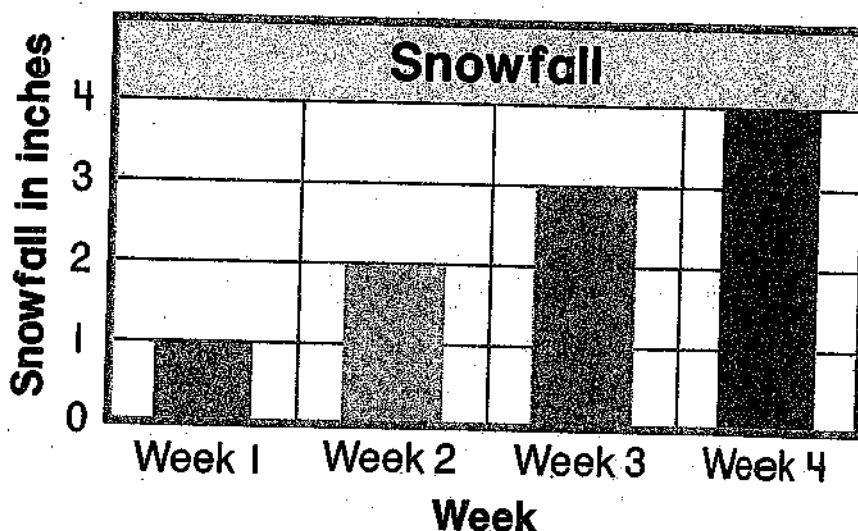


5.  How many strings are more than 6 inches long?

\_\_\_\_\_ strings

Lengths of Strings in Inches

6. **Test Prep** Use the bar graph. How did the amount of snowfall change from Week 1 to Week 4?



- ☐ The amount of snowfall stayed the same.
- ☐ The amount of snowfall increased.
- ☐ The amount of snowfall decreased.
- ☐ The amount of snowfall decreased and then increased.



**TAKE HOME ACTIVITY** • Have your child explain how he or she solved Exercise 5.

Name \_\_\_\_\_



## Chapter 10 Review/Test

### Vocabulary

Use a word in the box to complete each sentence.

1. You can take a survey to collect \_\_\_\_\_.

(p. 470)

bar graph  
picture graph  
data

2. A \_\_\_\_\_ uses pictures to show data in a graph. (p. 474)

### Concepts and Skills

Use the tally chart to complete the picture graph.

Draw a ☺ for each bird.

Birds Counted at the Park	
Child	Tally
Reggie	
Kate	
Ted	
Mandy	

Birds Counted at the Park					
Reggie					
Kate					
Ted					
Mandy					

Key: Each ☺ stands for 1 bird.

3. Which child counted the most birds?

4. How many fewer birds did Ted count than Reggie counted?

\_\_\_\_\_ fewer birds

5. How many birds did the four children count?

\_\_\_\_\_ birds

Fill in the bubble for the correct answer choice.

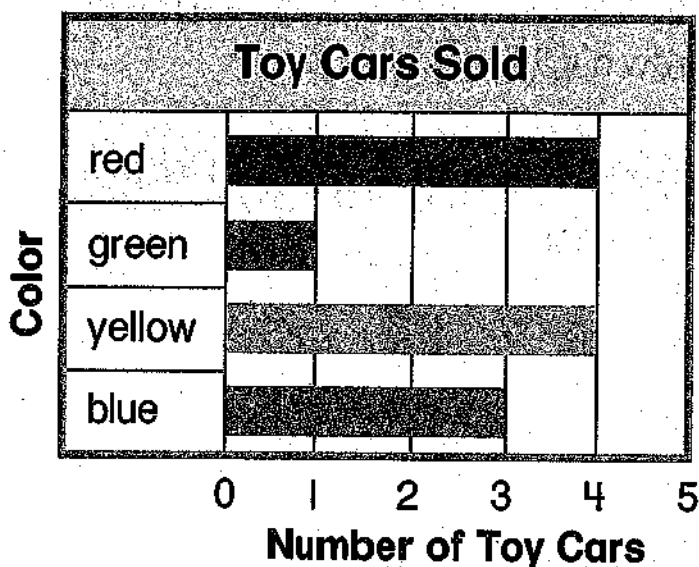
6. Use the tally chart.  
How many children chose apple muffins?

- ☐ 13  
☐ 8  
☐ 7  
☐ 5

Favorite Muffin	
Muffin	Tally
banana	
blueberry	
apple	

7. Use the bar graph.  
How many more yellow toy cars than green toy cars were sold?

- ☐ 1  
☐ 3  
☐ 4  
☐ 5



8. Use the picture graph.  
How many stickers do Megan and Lin have?

- ☐ 4  
☐ 5  
☐ 6  
☐ 7

Stickers We Have					
Shane	😊	😊	😊		
Megan	😊	😊			
Lin	😊	😊	😊	😊	
Elroy	😊	😊	😊		

Key: Each 😊 stands for 1 sticker.













Name \_\_\_\_\_

Fill in the bubble for the correct answer choice.

9. Use the picture graph.

How many fewer books did Joy read than Tony?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 5

Books We Read					
Joy					
Dave					
Sasha					
Tony					

Key: Each  stands for 1 book.

10. Use the tally chart. How many children chose truck?

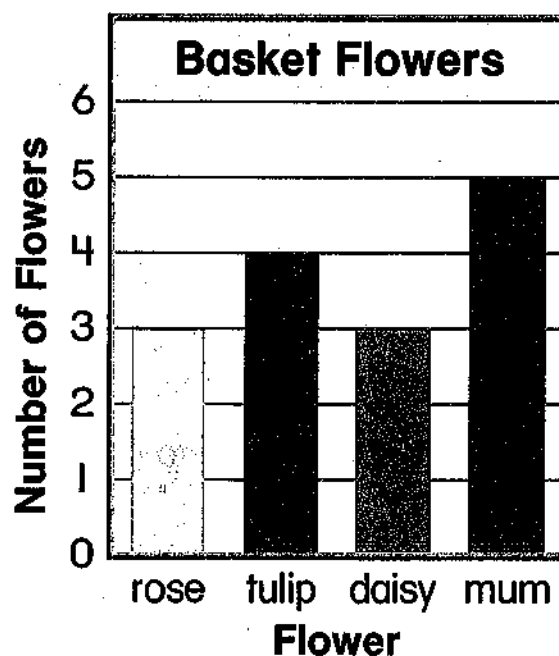
- ☐ 5
- ☐ 8
- ☐ 10
- ☐ 12

Children's Toy	
Toy	Tally
ball	
truck	
doll	

11. Use the bar graph.

How many more mums than roses are in the basket?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 8












## Constructed Response

12. The data for grape juice is not shown in the picture graph. If 13 children voted in all, how many pictures should there be for grape juice?

\_\_\_\_\_ pictures

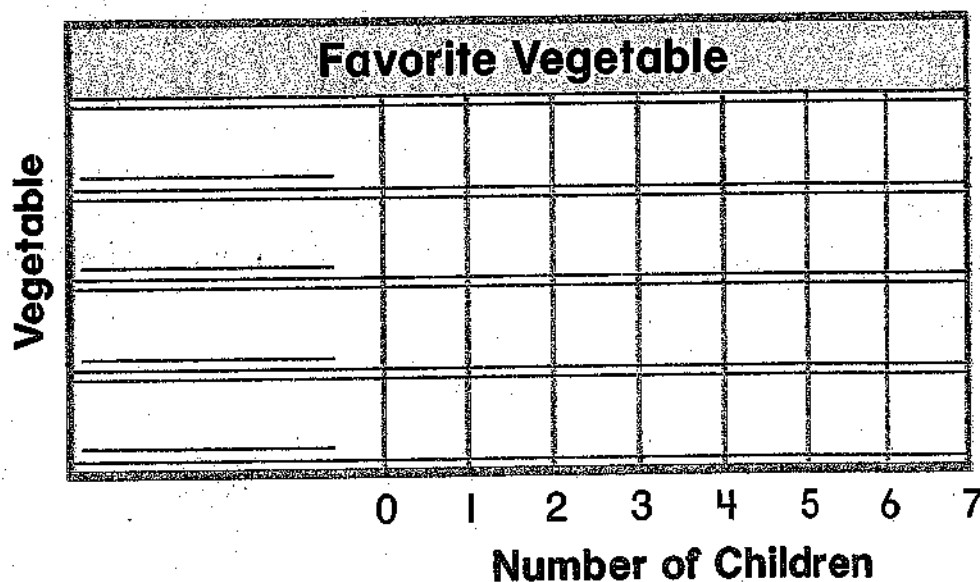
Explain your answer.

Favorite Juice				
apple				
berry				
orange				
grape				

Key: Each  stands for 1 child.

## Performance Task

13. In a survey for favorite vegetable, 3 children chose squash, 4 children chose beans, 6 children chose corn, and 5 children chose carrots. Write labels and draw bars to complete the graph.



Write a sentence to describe the data in the graph.

# Learn About Using a Picture Graph and Bar Graph

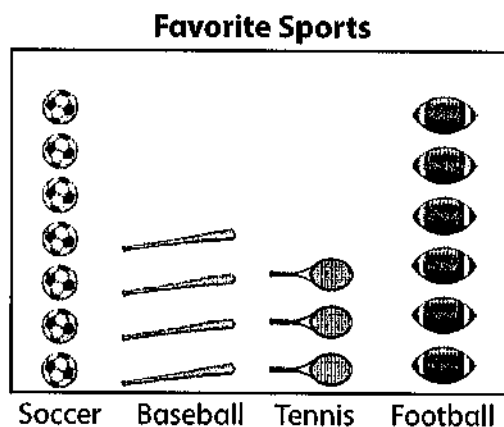
**Read the problem. Then you will use the graphs to answer questions.**

Martin asked the students in his class, "What is your favorite sport?" His results are in the tally chart.

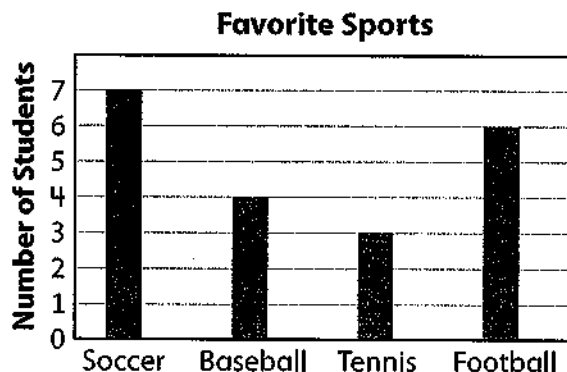
Soccer	Baseball	Tennis	Football

How many students did Martin ask?

► **Picture It** You can make a picture graph.



► **Model It** You can make a bar graph.



**► Connect It Use the graphs.**

- 2** How do you use the picture graph to find the number of students who chose soccer?

\_\_\_\_\_

- 3** How do you use the bar graph to find the number of students who chose soccer?

\_\_\_\_\_

\_\_\_\_\_

- 4** How many students chose soccer as their favorite? \_\_\_\_\_

- 5** Explain how to use the bar graph to find the total number of students Martin asked.

\_\_\_\_\_

\_\_\_\_\_

- 6** How many students did Martin ask? Show your work.

\_\_\_\_\_

\_\_\_\_\_

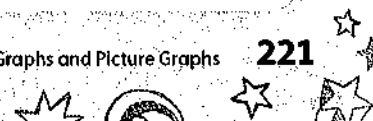
**► Try It Try more problems.**

- 7** How many fewer students chose tennis than football? \_\_\_\_\_

- 8** Two students changed their answers from soccer to baseball.

Now how many students chose soccer? \_\_\_\_\_

Now how many students chose baseball? \_\_\_\_\_

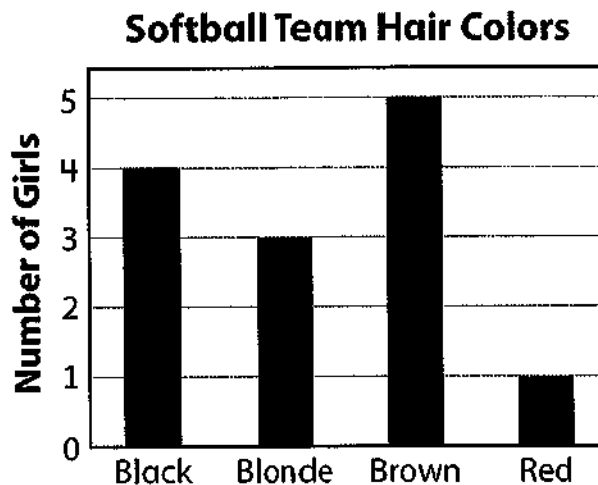


## Making Bar Graphs and Picture Graphs

Solve the problems.

Use the graph to solve Problems 1 and 2.

Maggie recorded the hair color of the girls on her softball team. She put her data in a bar graph.



- 1** Which two colors have the least number of girls with that hair color? Circle the correct answer.

- A** black and blonde
- B** brown and black
- C** black and red
- D** red and blonde

- 2** Circle *True* or *False* for each sentence.

- a.** There are more girls with black hair than brown hair.
- b.** There are more girls with brown hair than the other three colors combined.
- c.** There are 2 fewer girls with red hair than blonde hair.
- d.** There are 8 girls with brown hair or blonde hair.

True      False

True      False

True      False

True      False



- 3** Wes recorded the weather for one week in the table at the right.

Complete the picture graph below using the data in the table. Draw a ☀ for sunny days and a ☁ for cloudy days.

Sunny, Cloudy, and Rainy Days	
Sunny	
Rainy	☔

Day	Weather
Sun.	cloudy
Mon.	cloudy
Tues.	sunny
Wed.	sunny
Thur.	rainy
Fri.	sunny
Sat.	cloudy

- 4** Use your completed picture graph from Problem 3 to fill in the blanks below.

There were the same number of \_\_\_\_\_ and \_\_\_\_\_ days.

There were \_\_\_\_\_ more sunny days than \_\_\_\_\_ days.

- 5** If Saturday had been sunny, how would the picture graph be different than it is now?

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**Self Check** Now you can make bar and picture graphs.  
Fill this in on the progress chart on page 163.

# Learn About Making Bar Graphs and Picture Graphs

**Read the problem. Then you will show the data in a graph.**

Lynn visited an apple orchard. She looked at one row of trees. She wrote down the color of the apples on each tree.

red, red, yellow, green, red, green, red, red, yellow, red, green, green

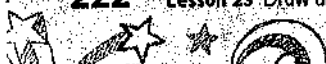
First, organize the data. Then make a picture graph and a bar graph to show the data.

► **Model It** You can organize the data in a tally chart.

Red	Yellow	Green

► **Model It** You can organize the data in a table.

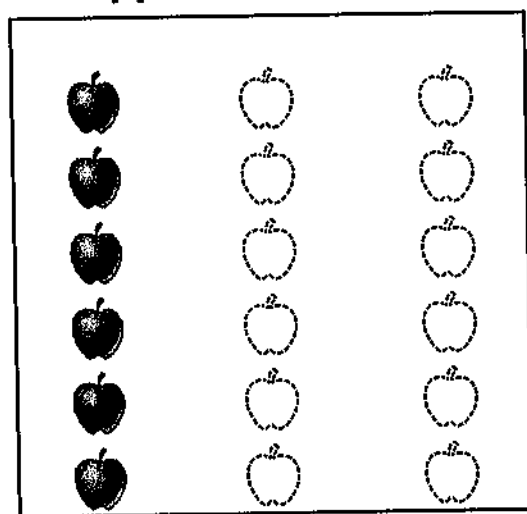
Color of Apple	Number of Trees
Red	6
Yellow	2
Green	4



## ► Connect It Make a picture graph and a bar graph.

For Problems 9–11, use these graphs and the data from the previous page.

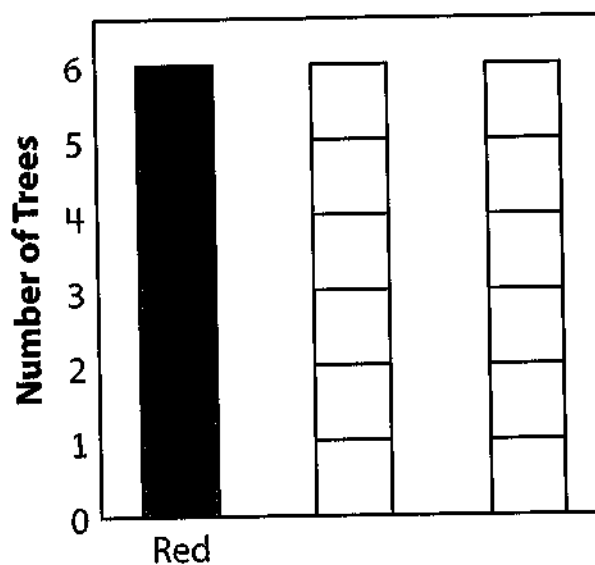
**Apple Orchard Trees**



Red

Yellow

Green



- 9 Color the picture graph to show how many yellow apple trees and green apple trees Lynn saw.
- 10 On the bar graph, fill in the title and labels.
- 11 Color the bar graph to show how many yellow apple trees and green apple trees Lynn saw.

## ► Try It Draw a bar graph.

- 12 Make a bar graph for this data. Show your work on a separate sheet of paper.

Favorite Colors			
Blue	Purple	Green	Red
5	6	2	3