

MY Homework

Lesson 1

Collect and Record Data

Homework Helper



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While Ryan waited for the bus, he recorded the colors of the cars that went by in a tally chart. Write one sentence that describes the data.

Ryan saw tan cars more than any other color car.

Colors of Cars	
Color	Tally
Red	
Tan	
White	
Blue	

Practice

1. Alyssa records the results of her survey in the tally chart. Organize this data in the frequency table.

Favorite Day of School Week	
Day	Tally
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Favorite Day of School Week	
Day	Votes

2. Which day of the school week is the least favorite day?

Model Math For Exercises 3–5, refer to the following information. Filippo observed the type of pants his friends wear to school.

3. Organize the set of data in a frequency table.

Pants Worn to School	
Type of Pants	Tally
Jeans	I
Corduroys	
Khaki	II
Athletic	

Pants Worn to School	
Type of Pants	Frequency

4. How many more pairs of jeans were worn than corduroys? _____
5. Which type of pants was worn the most that day? _____

Vocabulary Check



Match each vocabulary term with its definition.

- | | |
|--|---|
| <p>6. survey</p> <p>7. frequency table</p> <p>8. tally chart</p> | <ul style="list-style-type: none"> • asking a group of people a question • organizes the number of times each result has occurred in a table • records the results of data collected using tally marks |
|--|---|

Test Practice

9. According to the tally chart, how many students participated in the survey?
- (A) 16 students (C) 18 students
- (B) 17 students (D) 19 students

After School Activities	
Activity	Tally
Piano Practice	
Soccer Practice	II
Book Club	

MY Homework

Lesson 2

Draw Scaled Picture Graphs

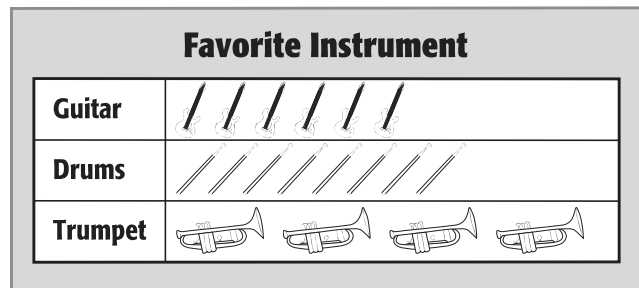
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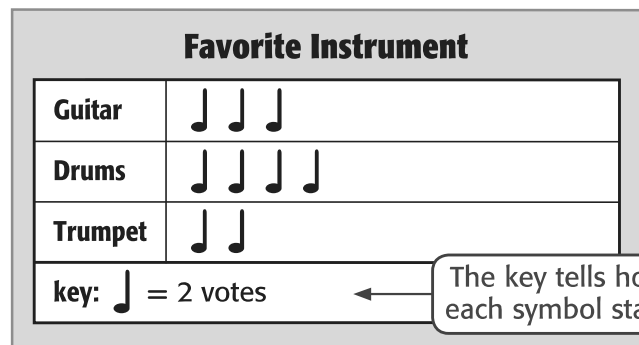
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Eighteen people voted for their favorite instrument. The results are shown in the two graphs below. How many people voted for guitar?

A picture graph uses different pictures to represent each vote.



A pictograph, or scaled picture graph, uses the same symbol to represent more than one vote.



$$\downarrow = 2, \text{ so } 2 \times 3 = 6$$

6 people voted for guitar.

The key tells how many each symbol stands for.

Practice


1. Display the set of data in a pictograph. Then write a sentence that interprets the data.

How I Get to School	
Method	Frequency
Walk	5
Car	8
Bus	12

How I Get to School	
Walk	
Car	
Bus	
key: = 2 students	

2. Display the set of data in a pictograph. Write a sentence that interprets the data.


Dulaney Horse Farm	
Horse	Frequency
Appaloosa	16
Mustang	8
Clydesdale	10

Dulaney Horse Farm	
Appaloosa	
Mustang	
Clydesdale	
key:  = 4 horses	



Problem Solving

3. **PRACTICE**  **Understand Symbols** A pictograph key shows

3  symbols. Each symbol represents 7 hikers in the mountains. How many hikers are in the mountains altogether?

Vocabulary Check




Choose the correct word(s) to complete each sentence.

picture graph pictograph key analyze interpret

4. To _____, is to read or study the data on a graph.
5. The _____ in the graph tells how many each symbol stands for.
6. A _____ uses the same symbol to represent more than one vote or tally.

Test Practice

7. A pictograph key shows that each  symbol equals 6 movies. How many symbols equal 18 movies?
- (A) 2 symbols (C) 4 symbols
(B) 3 symbols (D) 5 symbols

MY Homework

Lesson 3

Draw Scaled Bar Graphs

Homework Helper



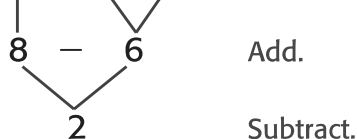
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Rodney surveyed his classmates to find which season they like best. First, he recorded the data in a tally chart. Then, he used the data to make a bar graph. How many more students voted for summer than for either spring or fall?

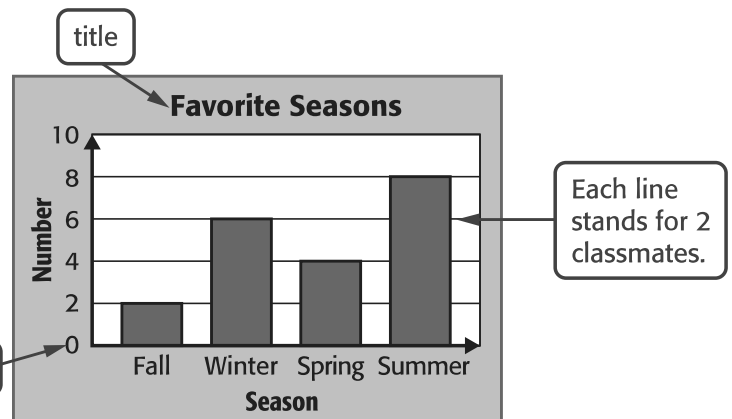
Favorite Seasons	
Season	Tally
Fall	
Winter	
Spring	
Summer	

Eight students voted for summer.
Four students voted for spring.
Two students voted for fall.

Find $8 - (4 + 2)$.



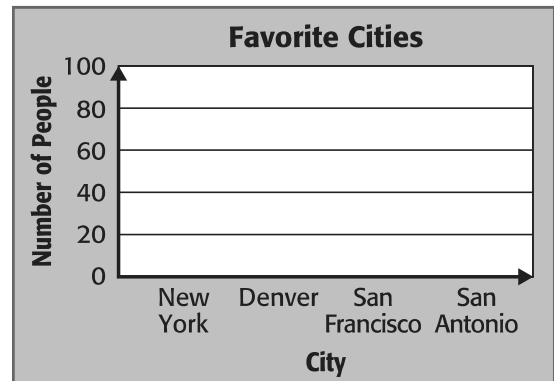
So, 2 more students voted for summer than for either spring or fall.



Practice

1. Display the set of data below in a vertical bar graph.

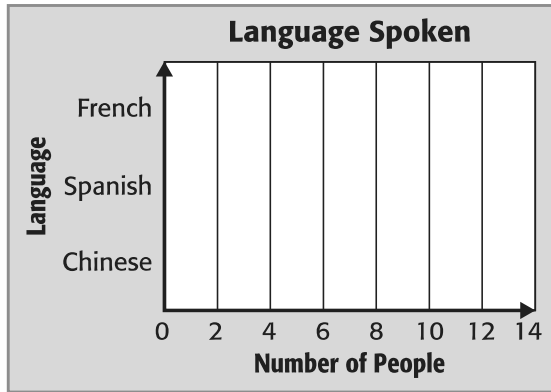
Favorite Cities	
City	Frequency
New York	80
Denver	20
San Francisco	40
San Antonio	60



Mathematical PRACTICE 4

Model Math Display the data in a horizontal bar graph. Use the graph to answer Exercises 3–4.

Language Spoken	
Language	Tally
French	
Spanish	
Chinese	



3. How many people participated in the survey?

Mathematical PRACTICE 2

Use Number Sense How many more people speak Spanish than Chinese and French combined?

Vocabulary Check



Write the definition of each.

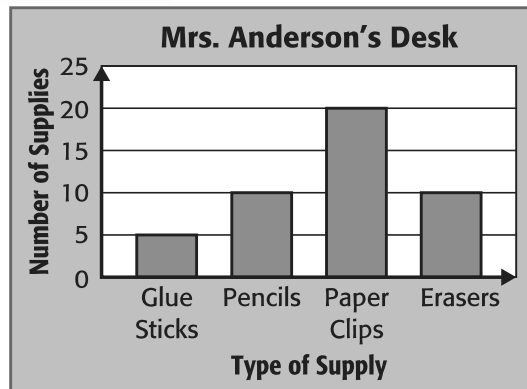
5. bar graph _____

6. scale _____

Test Practice

7. Refer to the bar graph. How many more paper clips does Mrs. Anderson have than pencils and glue sticks together?

- (A) 0 paper clips
- (B) 5 paper clips
- (C) 10 paper clips
- (D) 15 paper clips



MY Homework

Lesson 4

Relate Bar Graphs to Scaled Picture Graphs

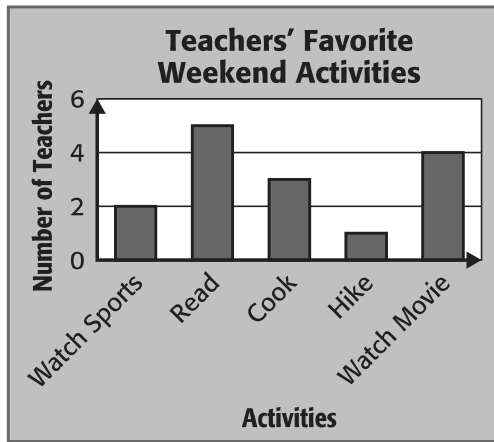
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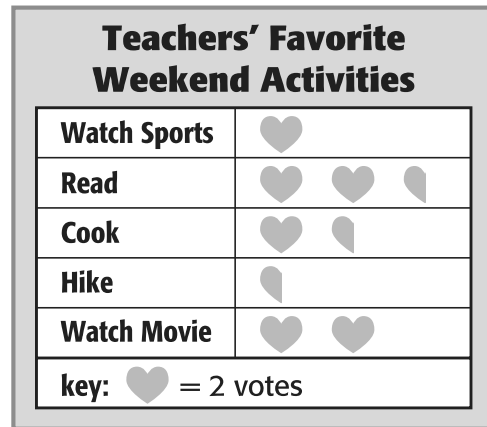
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The bar graph shows the results of a teacher survey. Place the data from the bar graph into a scaled picture graph. Does the data change? Write one sentence about the data.

Bar Graph



Scaled Picture Graph

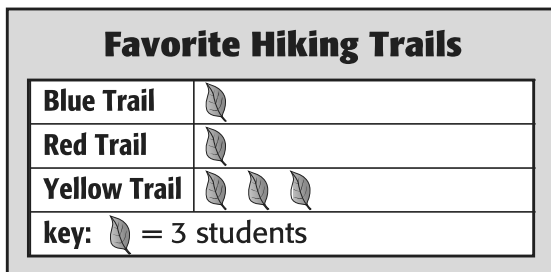


The data is the same in both graphs. The graphs show reading is the preferred weekend activity of the teachers surveyed.

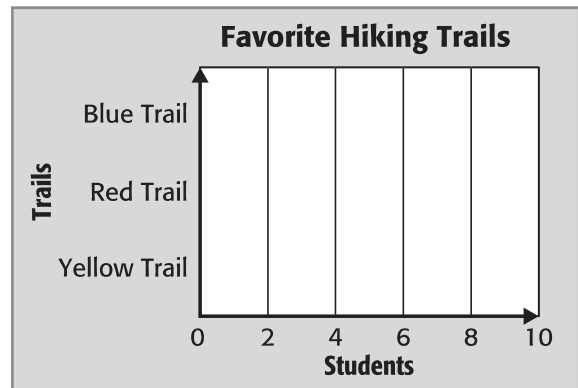
Practice

- Complete the bar graph using the data from the scaled picture graph. Write one sentence about the data in the graphs.

Scaled Picture Graph

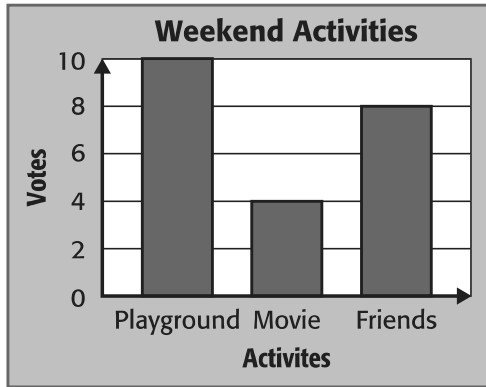


Bar Graph

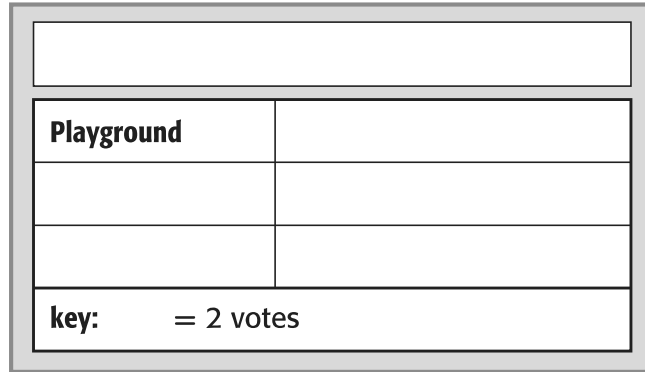


2. Complete the scaled picture graph using the data from the bar graph. Write one sentence about the data in the graphs.

Bar Graph



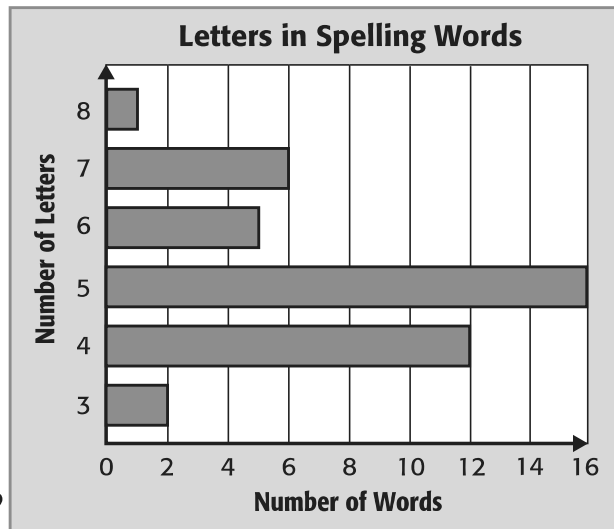
Scaled Picture Graph



Problem Solving

The bar graph shows the number of letters in the third grade spelling words. Refer to the bar graph for Exercises 3–4.

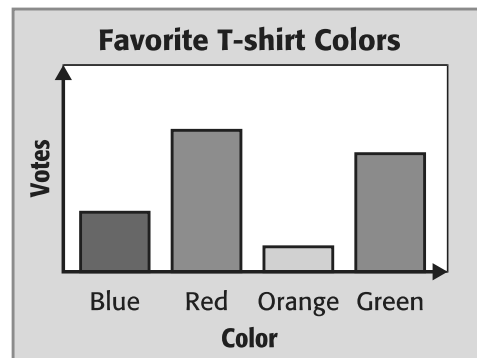
3. How many letters do most of the spelling words have?



4. **PRACTICE** **Make a Plan** What might the key for a scaled picture graph that displays the same data be?

Test Practice

5. Which information is needed to complete the bar graph?
- (A) the colors of shirts
 - (B) the scale of the graph
 - (C) the color with the least shirts
 - (D) the title of the graph



MY Homework

Lesson 5

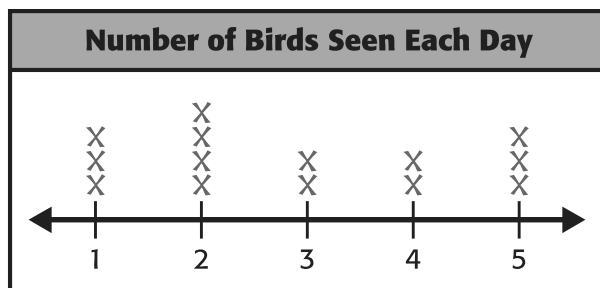
Draw and Analyze Line Plots

Homework Helper



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Jori recorded the number of birds she saw at the bird feeder each day for 5 days. She displayed the data in a line plot. What is one conclusion you can make from this line plot?



Number of Birds Seen Each Day	
Day	Tally
Day 1	
Day 2	
Day 3	
Day 4	
Day 5	

One conclusion that can be made is that there were 3 birds at the feeder, on 2 of the days.

Practice

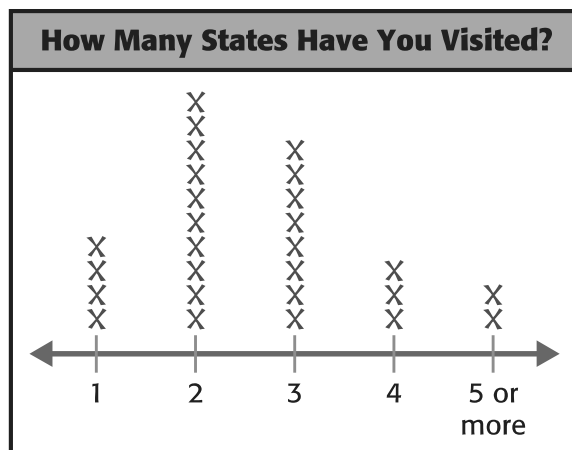
Use the line plot above to answer Exercises 1–3.

- How many days were there 2 birds at the bird feeder? _____
- How many days were there 3 or fewer birds at the feeder? _____
- How many days were there 3 or more birds at the feeder? _____

For Exercises 4 and 5, refer to the line plot that shows the number of states each student has visited.

4. How many states have the most number of students visited?

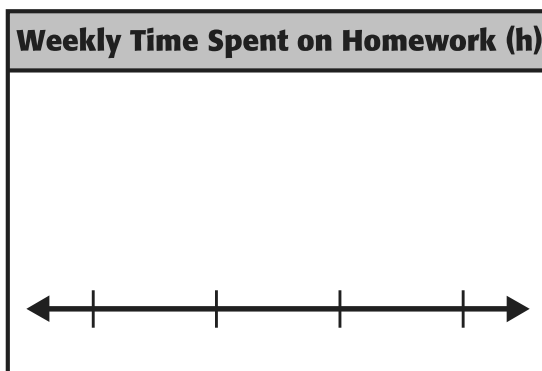
5. How many students have visited three states?



Problem Solving

6. PRACTICE **Model Math** Mrs. Sebring's class made a tally chart of the number of hours they spent on homework last week. Display the set of data in the line plot.

Weekly Time Spent on Homework	
Time (h)	Tally
8	
9	
10	
11	



Vocabulary Check



7. What is a line plot?

Test Practice

8. Refer to the line plot in Exercise 6. What is the difference between the least number of hours spent on homework and the most number of hours spent on homework?

- (A) 1 hour (B) 3 hours (C) 8 hours (D) 11 hours

MY Homework

Lesson 6

Hands On: Measure to Halves and Fourths of an Inch

Homework Helper



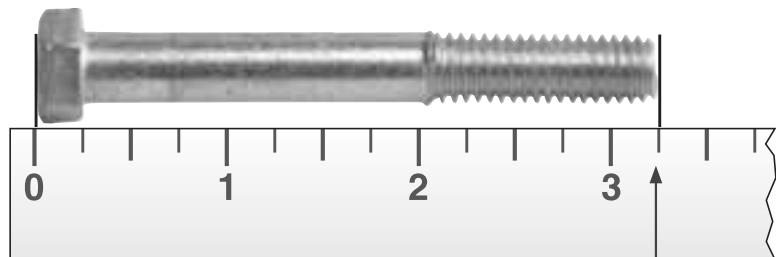
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Measure the length of the bolt to the nearest quarter inch.



1 Measure the length.

The length of the bolt is greater than 3 whole inches.



It measures even with the first mark after 3 inches.

Count the one quarter-inch spaces after 3 inches.

one quarter-inch space = $\frac{1}{4}$ inch



2 Write the length.

Write a number to represent the whole inches.

Write a fraction to represent the remaining part of an inch.

whole inches →

$3\frac{1}{4}$

fraction of an inch ↑

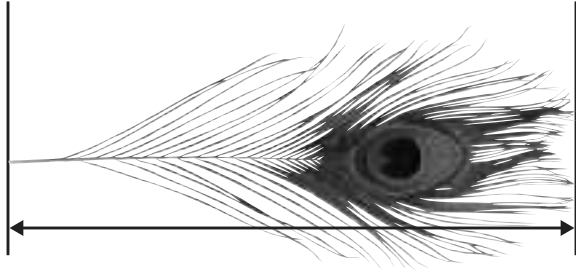
The length is closer to $3\frac{1}{4}$ inches than it is to 3 inches or $3\frac{1}{2}$ inches.

To the nearest quarter inch, the length is $3\frac{1}{4}$ inches.

Practice

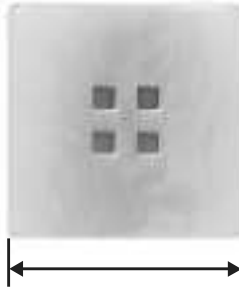
1. Measure the length to the nearest $\frac{1}{2}$ -inch.

Length: _____



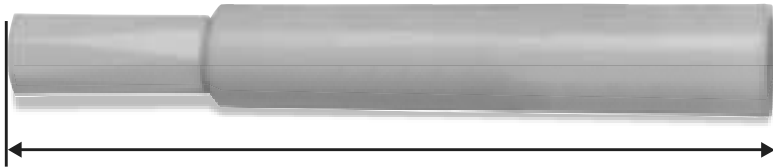
2. Measure the length to the nearest $\frac{1}{4}$ -inch.

Length: _____



Problem Solving

3. Measure the length of the marker to the nearest half inch.



Length: _____

4. **Mathematical PRACTICE**  **Be Precise** Measure the length of the spool of thread to the nearest quarter inch.

Length: _____



Vocabulary Check



5. How many half inches are in one inch? _____

6. How many quarter inches are in one inch? _____

MY Homework

Lesson 7

Collect and Display Measurement Data

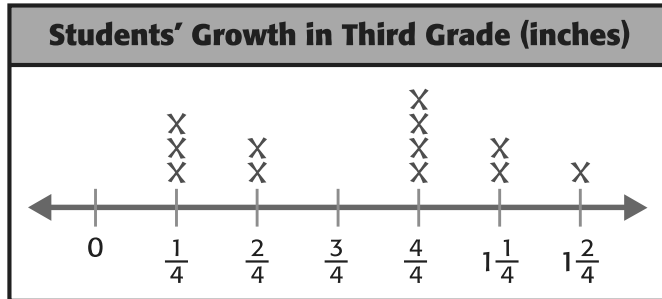
Homework Helper



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Mrs. Carnes measured her students at the beginning of the school year and then again half way through the year. She recorded their growth in a tally chart. What is the most frequent measurement of growth of Mrs. Carnes' students?

Use a line plot to display the data.



Students' Growth in Third Grade	
Measurement	Tally
$\frac{1}{4}$ in.	
$\frac{2}{4}$ in.	
$\frac{3}{4}$ in.	
$\frac{4}{4}$ in.	
$1\frac{1}{4}$ in.	
$1\frac{2}{4}$ in.	

The most frequent measurement of growth is $\frac{4}{4}$ of an inch, or 1 inch.

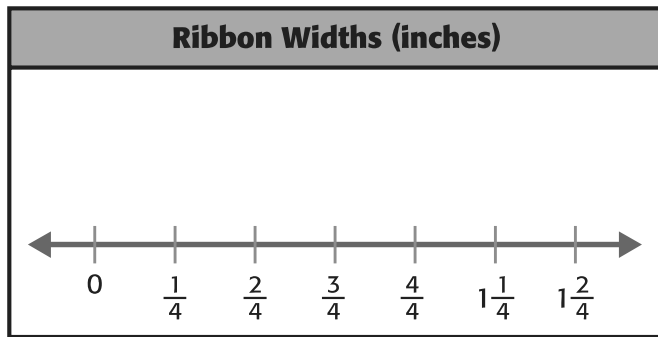
Practice

- Tell why, in the line plot above, there are no Xs above $\frac{3}{4}$ of an inch.

- Did more of Mrs. Carnes' students grow an inch or more or less than an inch? Explain.

3. Ribbon can be bought in many different widths. The tally chart shows how many spools of each width of ribbon can be bought. Represent the measurement data in a line plot.

Ribbon Widths	
Width	Tally
$\frac{1}{4}$ in.	
$\frac{2}{4}$ in.	
$\frac{3}{4}$ in.	
$\frac{4}{4}$ in.	
$1\frac{1}{4}$ in.	
$1\frac{2}{4}$ in.	



Problem Solving

- 4. PRACTICE 2** **Use Number Sense** Which two widths, of different length, when put together will equal $\frac{4}{4}$ of an inch or 1 whole inch?

5. Which two widths, of different length, when put together will equal $1\frac{1}{4}$ inches? Explain.

- 6. PRACTICE 1** **Make Sense of Problems** Which has a greater combined width, two spools of ribbon that are each $\frac{2}{4}$ inch in width, or one spool that is $\frac{4}{4}$ inch in width? Explain.

Test Practice

7. How many spools of ribbon are represented in the line plot for Exercise 3?
- (A) $1\frac{2}{4}$ spools (C) 15 spools
 (B) 14 spools (D) 16 spools

MY Homework

Lesson 8

Problem Solving: Work a Simpler Problem

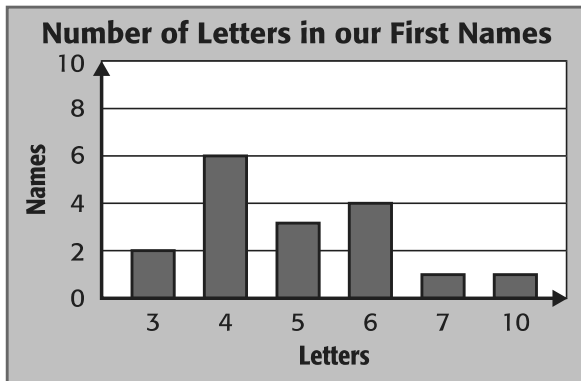
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Students recorded the number of letters in their first name in a tally chart. How many times as many students have 4 letters in their name than 3 letters?

First, solve a simpler problem by making a bar graph.



Letters	Tally
3	
4	
5	
6	
7	
10	

Two names have 3 letters. Six names have 4 letters. So, 3 times as many students have 4 letters in their name than have 3 letters.



Problem Solving

1. What activity do Jaime's friends want to do most? Solve a simpler problem first by organizing the data in a tally chart.

Activity	Tally

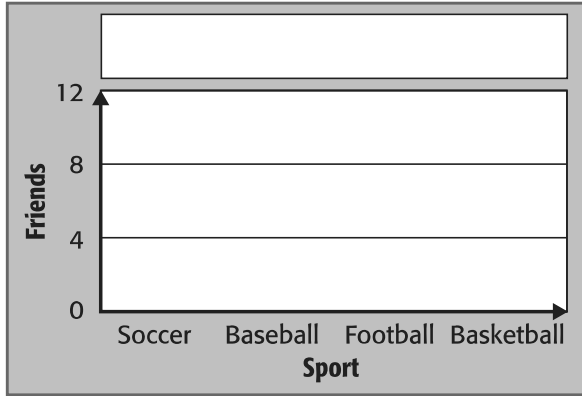
Alyssa - baseball
Jacob - swim
Kendra - picnic
Eve - swim
Luke - baseball
Kim - swim

Jaime and his friends will _____.

Solve each problem by first solving a simpler problem.

2. Elizabeth surveyed her friends. She asked them to name their favorite sport. Is it reasonable to say that Elizabeth surveyed about 30 of her friends? First solve a simpler problem by making a bar graph.

Favorite Sports	
Sport	Tally
Soccer	
Baseball	
Football	
Basketball	



- 3. PRACTICE** **Make Sense of Problems** Look at Exercise 2. What is the simpler problem you solved first?

4. How many more students chose football and baseball together than basketball? Write an equation.

- 5. PRACTICE** **Model Math** Write a problem about the data above that would take two steps to solve. Then solve.
