Lesson Objective: Use picture graphs and bar graphs to solve word problems.

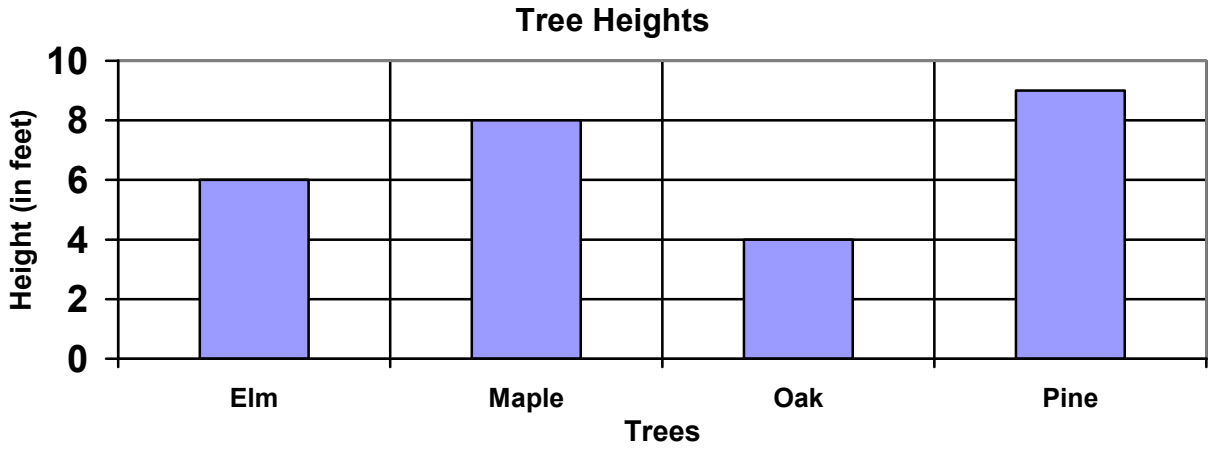
Vocabulary Box

data — Facts or information. Examples: Your grades on some math tests; the number of games your baseball team won and lost.

pictograph — A graph that uses pictures to show data.
Example:

Number of Games					
					
					
					
					
					
	Bears	**Eagles**	**Lions**	**Rockets**	**Tigers**
Baseball Games Won					
KEY:  equals 3 games won					

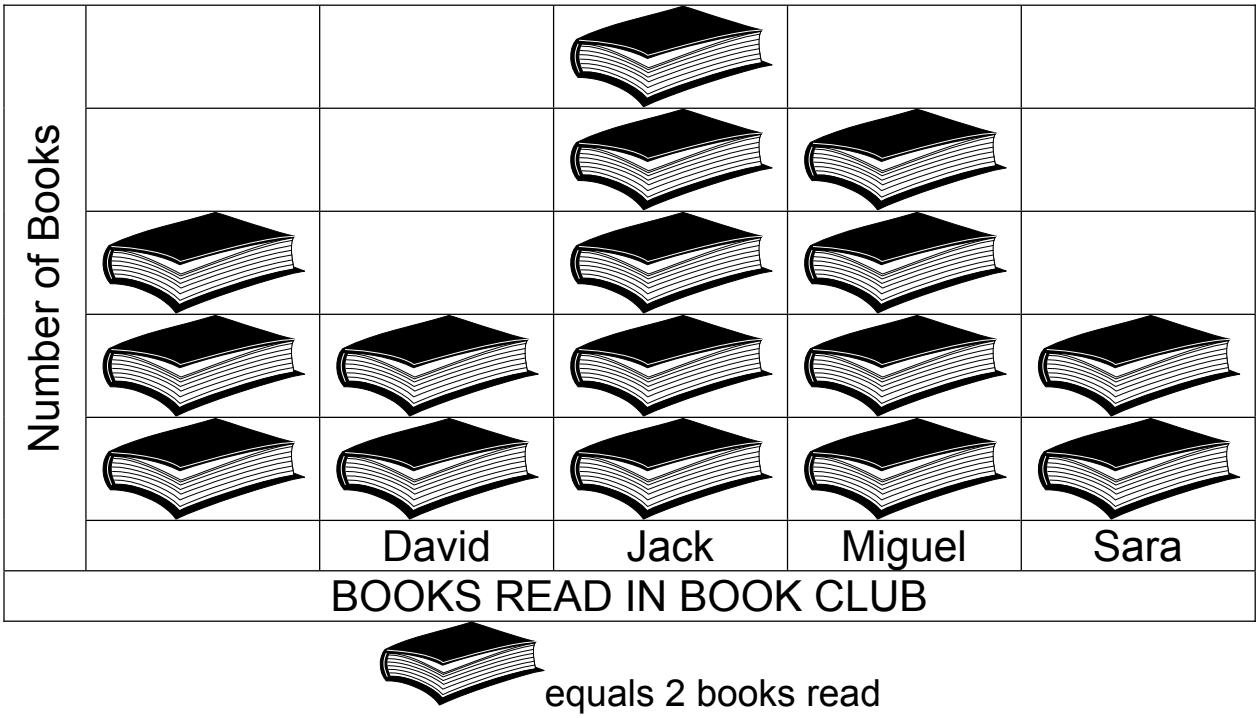
bar graph — A graph that uses bars to show data.
Example:



Guided Practice

Directions: Complete these practice problems with your partner. Your teacher will review the answers.

I. Use this pictograph to solve each problem.



1. How many books did Angela read? _____

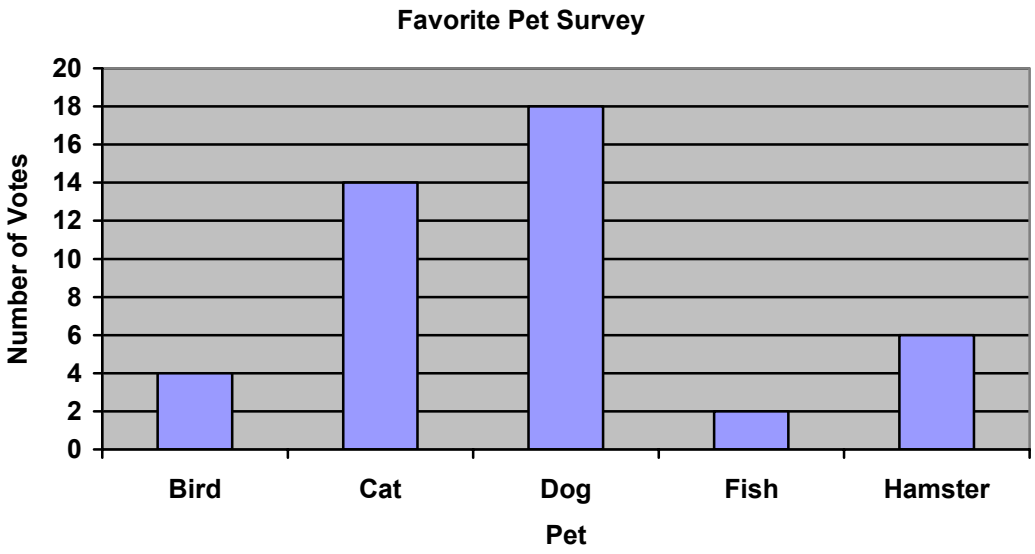
2. Who read eight books? _____

3. Which two people read the same number of books?

   _____

4. Who read the most books? _____

II. Use this bar graph to solve each problem.



1. How many votes did birds get? _____

2. Which pet got 14 votes? _____

3. Which pet got the largest number of votes? _____

4. Which pet got the smallest number of votes? _____

5. How many more votes did hamsters get than fish? _____

Summary/Closure

A. Vocabulary Words
Directions: Fill in the blanks.

1. All graphs show _____, or information.

2. A _____ uses bars to show data.

3. The _____ tells what each picture means on a pictograph.

4. A _____ uses pictures to show data.

B. Summarize What We Learned Today
1. Look at the pictograph in Part I in the Guided Practice section. Write a question about the data on that graph. Then use the graph to answer the question.

   Problem:_____

   _____

   _____?

   Answer:
   _____.

2. Look at the bar graph in Part II in the Guided Practice section. Write a question about the data on that graph. Then use the graph to answer the question.

   Problem:_____

   _____

   _____?

   Answer:
   _____.

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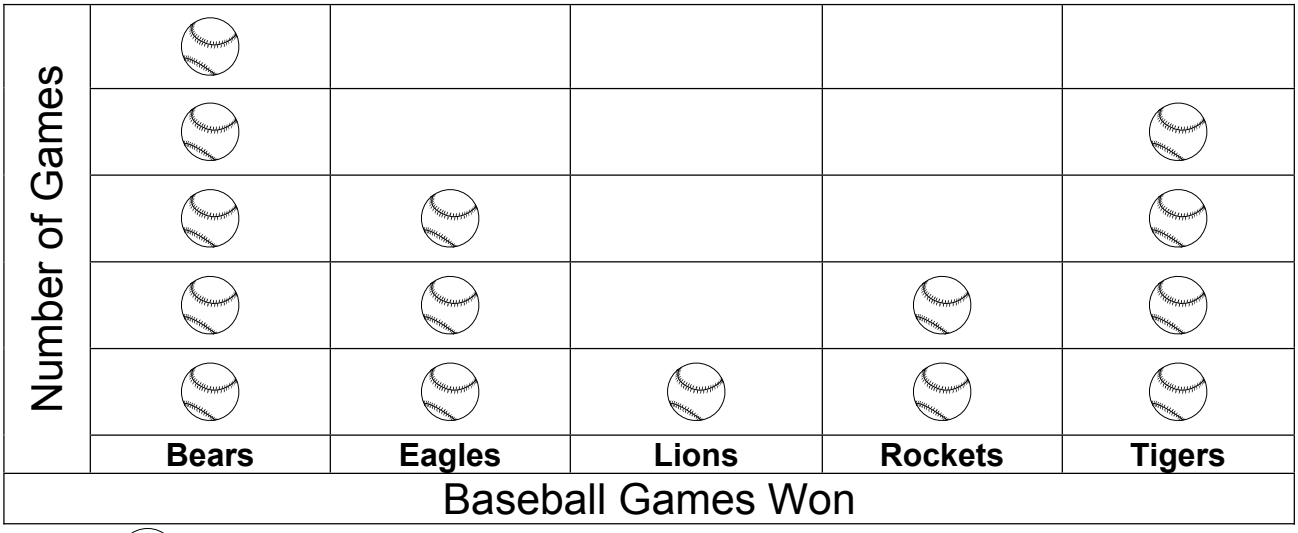

KEY:  equals 3 games won

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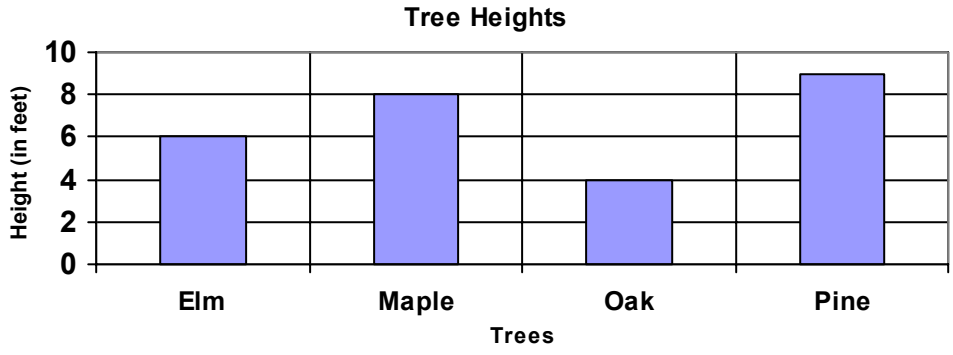
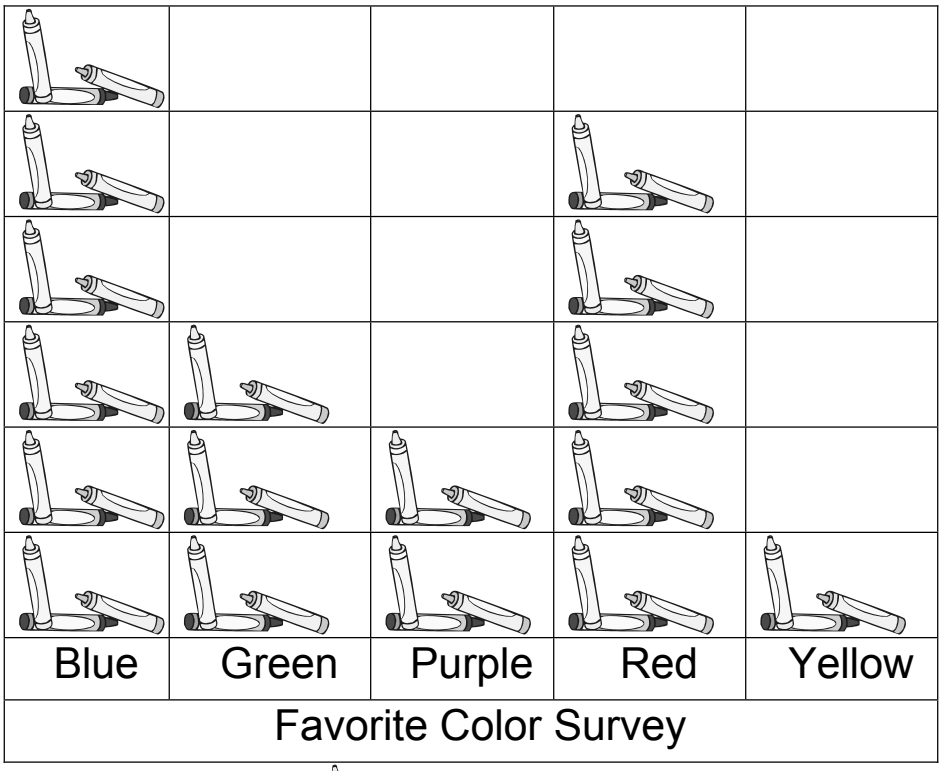
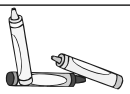


Independent Practice

Directions: Complete these practice problems on your own. Your teacher will review the answers.

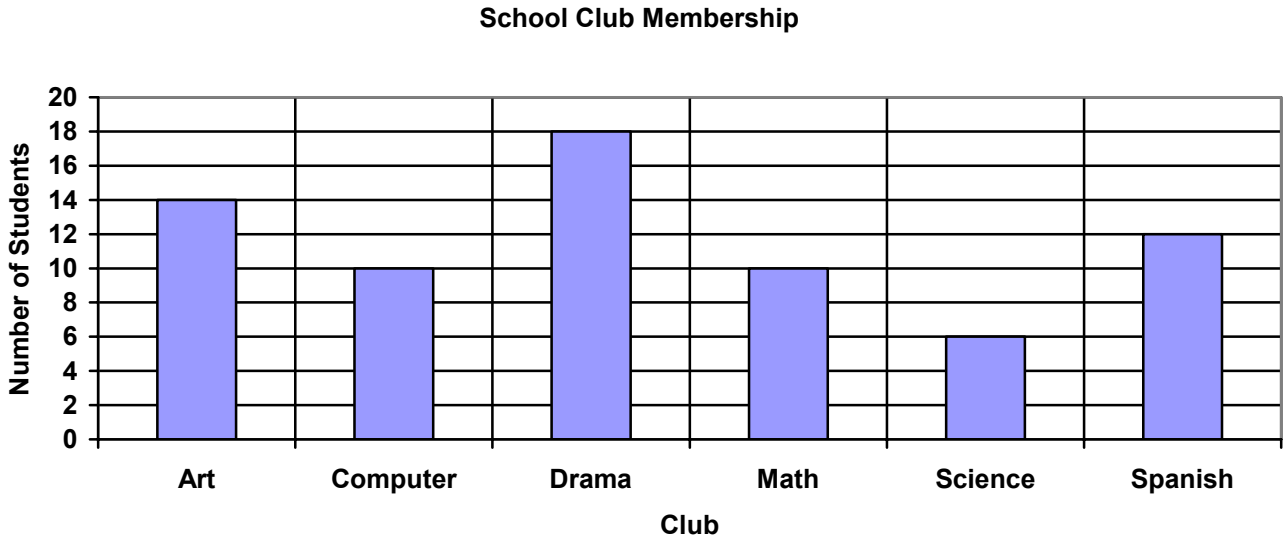
I. Use this pictograph to solve each problem.



Each  equals 4 votes.

1. How many votes did purple get? _____
2. Which color got 12 votes? _____
3. Which color got the most votes? _____
4. Which color got the fewest votes? _____
5. How many votes did yellow and red get in all? _____

II. Use this bar graph to solve each problem.



1. How many students are in the science club? _____
2. Which club has 14 members? _____
3. Which club has the most members? _____
4. Which club has the fewest members? _____
5. Which two clubs have the same number of members? _____

BONUS?

Directions: The pictograph shows the data in the table. Draw pictures to finish the pictograph. Use the key.

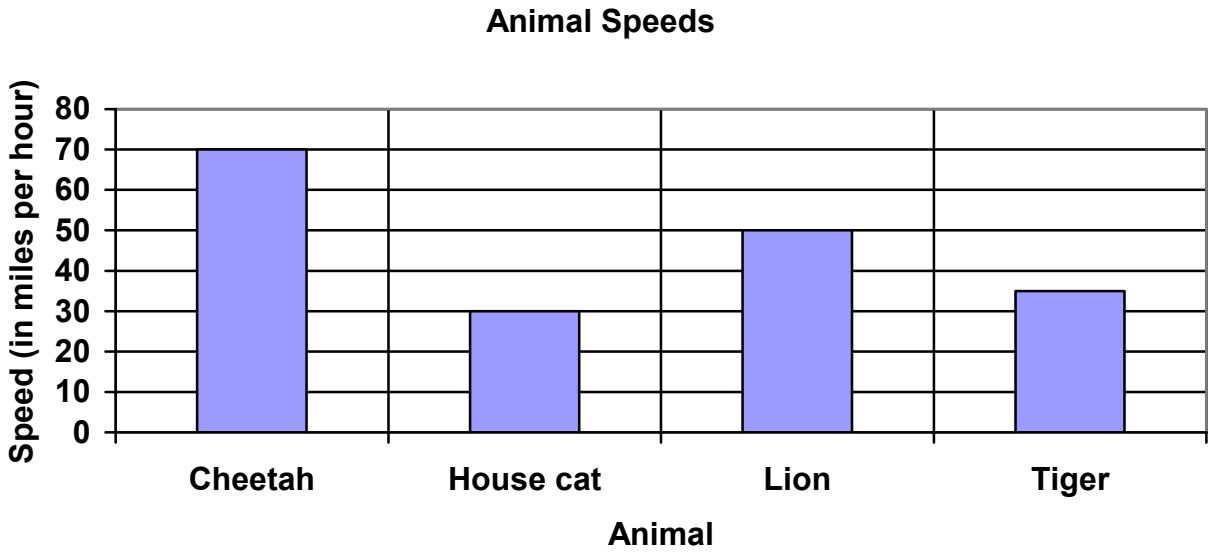
Favorite Dessert Survey	
Dessert	**Number of Votes**
Cake	12
Cupcake	8
Ice cream	16
Pie	6
Popsicle	4

				
				
				
Cake	**Cupcake**	**Ice cream**	**Pie**	**Popsicle**
Favorite Dessert Survey				

Key: Each  equals 2 votes.

Problem Solving

Jenny is doing a report for school. The report is about cats. She finds this bar graph in a library book. How much faster can a cheetah run than a lion?



1. First you need to find how fast a cheetah can run. Use the bar graph.

   Cheetah's speed: _____ miles per hour

2. Then you need to find how fast a lion can run. Use the bar graph.

   Lion's speed: _____ miles per hour

3. Then you need to find the difference in their speeds. *(Use logical thinking.)*

   _____ – _____ = _____

   So, a cheetah can run _____ miles per hour faster than a lion.

1. What is data? _____

2. What kind of graph uses pictures to show data?

   _____

3. What kind of graph uses bars to show data?

   _____

4. Look at the bar graph in the Problem Solving section. How fast can a house cat run? _____

5. Look at the pictograph in the Bonus section. How many votes did cake get? _____

Lesson Objective: Choose and use an appropriate problem-solving strategy.

Guided Practice on Problem Solving Strategies

Draw a picture, make a model, guess and test, or make a list to solve these math problems.

I. Directions: Work with your partner to solve the following problems.

1. Kendra has two stacks of books. There are seven books in each stack.

   How many books are there altogether? _____

2. Three of me equals one whole. I am one of three parts. What am I?

   _____

Problem Solving

I. Directions: Solve the following word problems by selecting an appropriate problem-solving strategy.

1. Josh had 75 cents. He spent 50 cents on an ice cream cone.

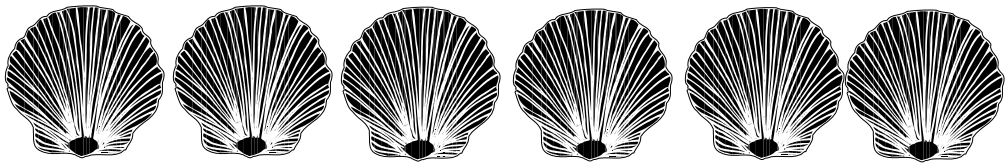
   How many cents did Josh have left? _____

   Guess: Do you think you need to regroup? _____

   Test: Solve the problem. Show your work.

2. Mia has a shell collection. She has 29 clam shells and 19 mussel shells.

   How many shells does Mia have altogether? _____



Guess: Do you think you need to regroup? _____

Test: Solve the problem. Show your work.

lesson thirty - student resource sheet

II. Directions: Write the number that solves the riddle. Show your problem-solving strategy.

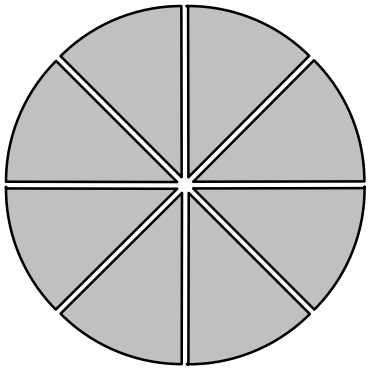
1. I am a number. I am the product of 3 times 3. What number am I?

   _____

2. I am a number. If you make 5 groups of 2, you will find me. What number am I?_____

3. I am a factor. If you multiply me by 4, the product is 8. What factor am I? _____

III. Directions: Look at the picture of the pizza. Then circle the correct answer.



1. How many pieces of pizza equal $\frac{1}{4}$ of the pizza?

   2 4 6 8

2. How many pieces of pizza equal $\frac{1}{2}$ of the pizza?

   2 4 6 8