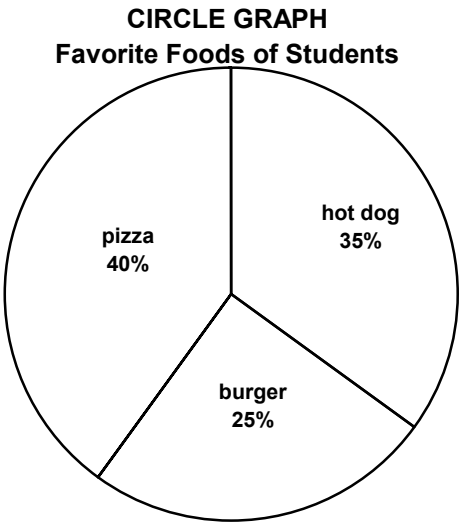
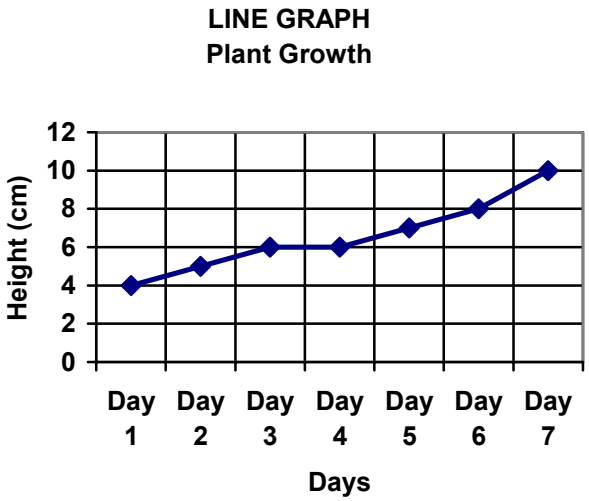
Lesson Objective: Construct and solve word problems involving line graphs, bar graphs, double bar graphs, and circle graphs.

Vocabulary Box

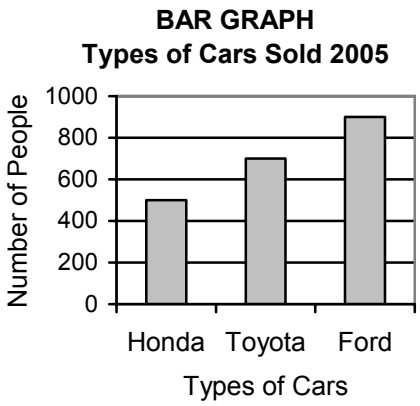
circle graph – A graph that shows parts of a whole. Example:



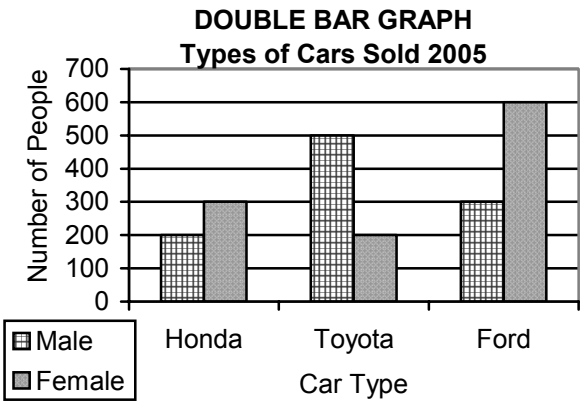
line graph – A graph that shows how an amount changes over time. Example:



bar graph – A graph that compares amounts. Example:

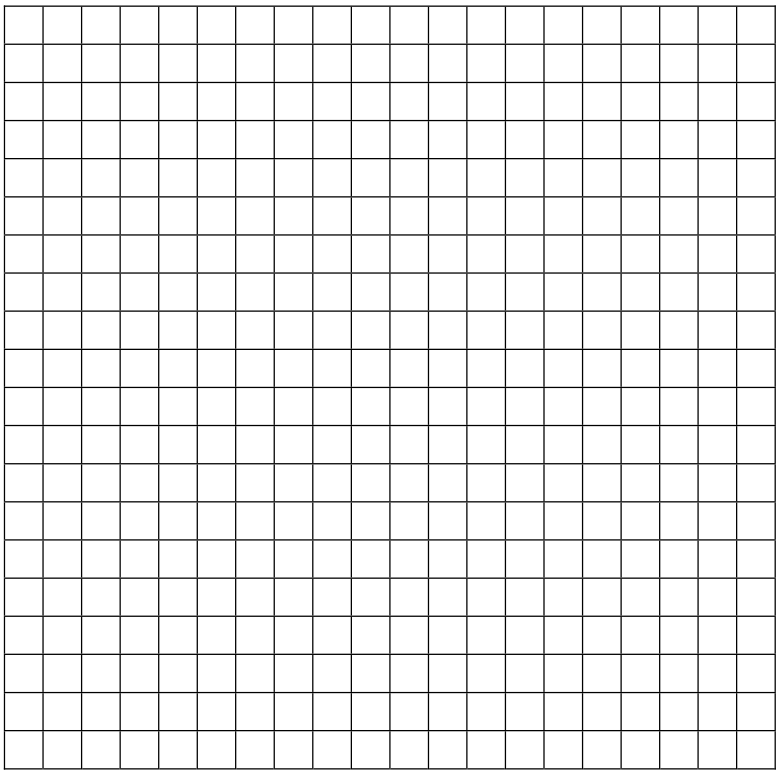


double bar graph – A graph that compares two sets of data. Example:



scale – A series of numbers written along one side of a graph to show the range of data on a graph. It begins at 0 and ends at a number higher than the greatest data value on the graph. Example: The scale on the line graph above is 0 through 12.

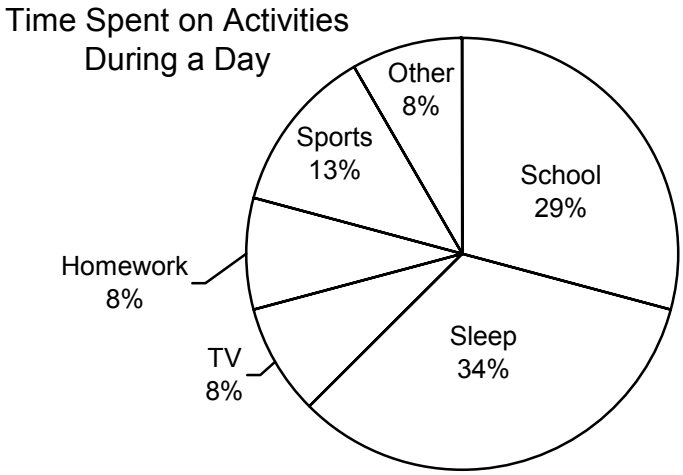
interval – The difference between a pair of ordered numbers on a graph's scale. Every interval on a single graph should be equal. Example: The intervals on the bar graph above are all 200.



Guided Practice

Directions: Complete the following practice problems. Your teacher will review the answers.

I. Use the circle graph below to answer the questions. You may work with a partner.

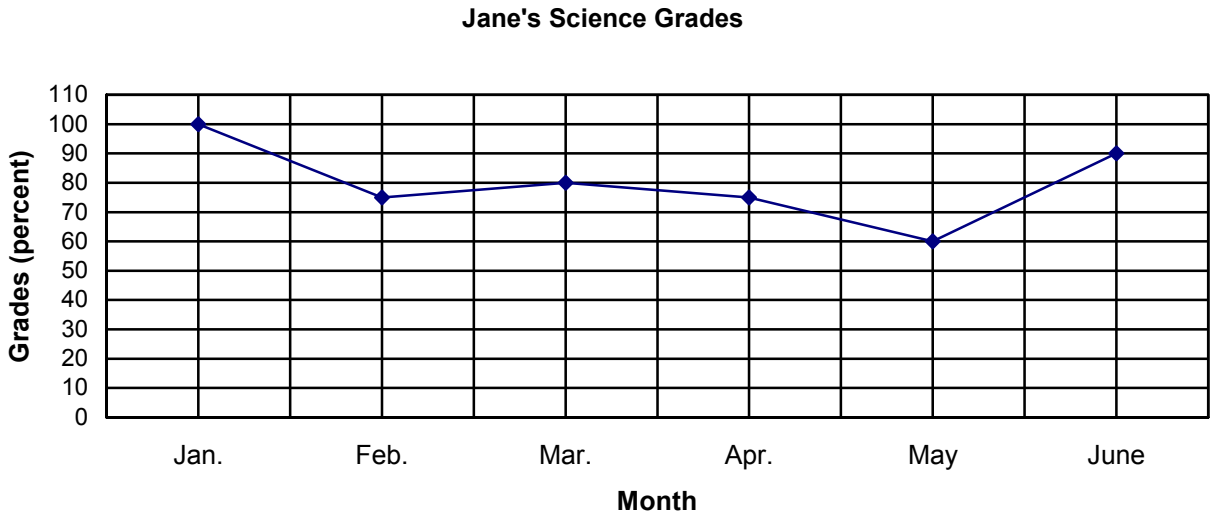


1. What percentage of the day is spent in school?

2. Which activity takes up the most time in a day?

3. Which three activities take up the same amount of time in a day?

II. Use the line graph below to answer the questions. Please work independently.



1. What is the scale on the line graph?

2. What are the intervals?

3. What was Jane’s science grade in April?

4. What was Jane’s science grade in June?

5. In which month was Jane’s science grade the highest?

6. In which month was her grade the lowest?

Summary/Closure

A. Vocabulary Words

Choose a type of graph that would best display the data for each situation. Some questions may have more than one answer.

1. Average daily temperature over a month.

2. Comparison of survey results of men to those of women.

3. Percentage of votes each candidate received in an election.

4. Number of people who frequently go to each of 7 stores in a mall.

5. Any data for which scales and intervals are important.

B. Summarize What We Learned Today

Write a sample survey question. Then tell which type of graph you would use to represent the data. Explain why that graph is most appropriate.

Lesson Objective: Construct and solve word problems involving line graphs, bar graphs, double bar graphs, and circle graphs.

Vocabulary Box

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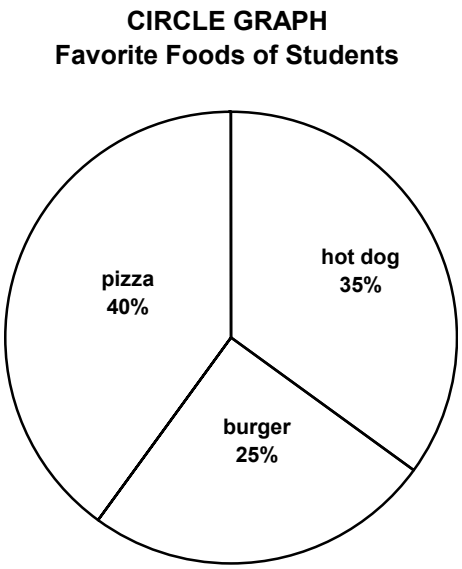
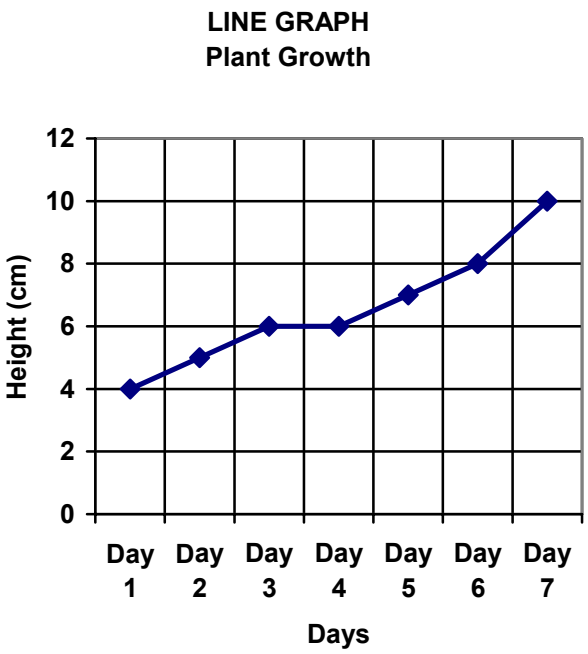
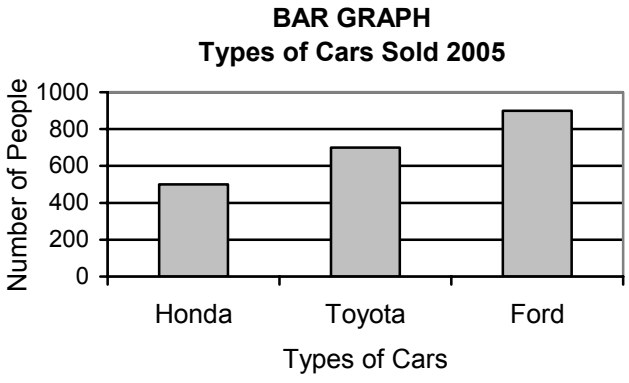


line graph – A graph that shows how an amount changes over time. Example:



bar graph – A graph that compares amounts. Example:



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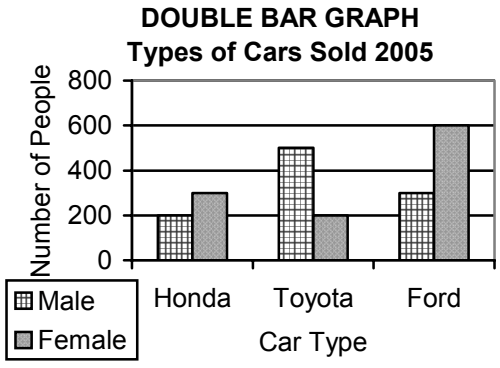

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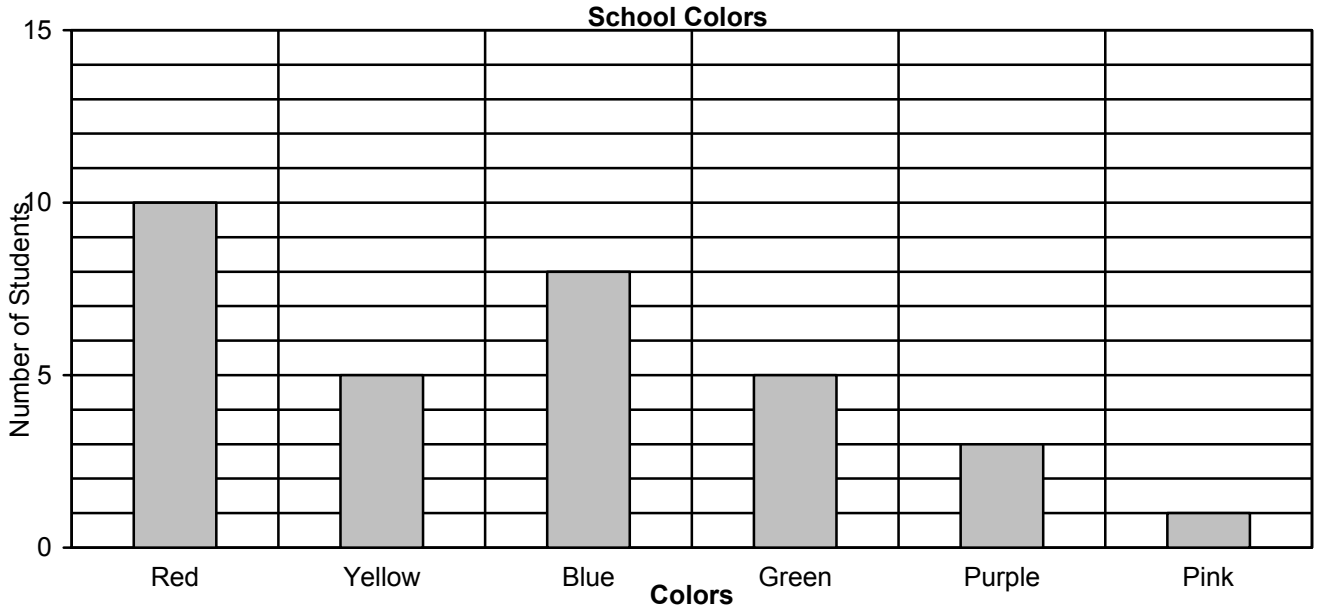
interval – The difference between a pair of ordered numbers on a graph's scale. Every interval on a single graph should be equal. Example: the intervals on the bar graph above are all 200.

Independent Practice

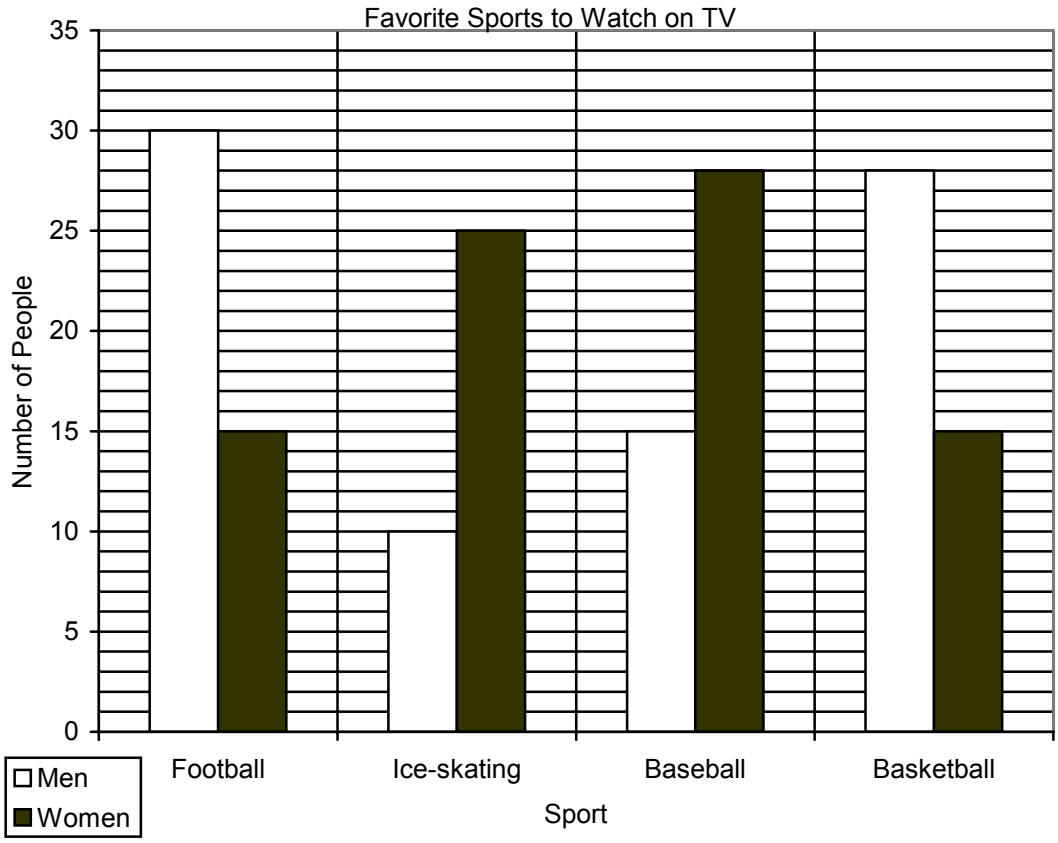
Directions: Use the graphs to complete the exercises.

I. A survey was taken to see which colors students wanted to use as the new school colors. The results are displayed in the bar graph below.



1. How many students want pink as the new school color?
2. How many students want blue?
3. Which color did most students prefer?
4. How many students were surveyed, assuming each could pick only one color?
5. If the school is going to choose 2 colors, which 2 should they pick, according to the survey results?

II. Men and women were surveyed to find out their favorite sport to watch on TV. The results are displayed on the double bar graph below.



1. How many men were surveyed altogether, assuming all those surveyed responded?

2. In which sport was there the greatest difference in the way men and women responded?

3. How large was the difference?

4. Which sport do most men prefer to watch?

5. Which sport do most women prefer to watch?

6. How many women said that basketball is their favorite sport to watch?

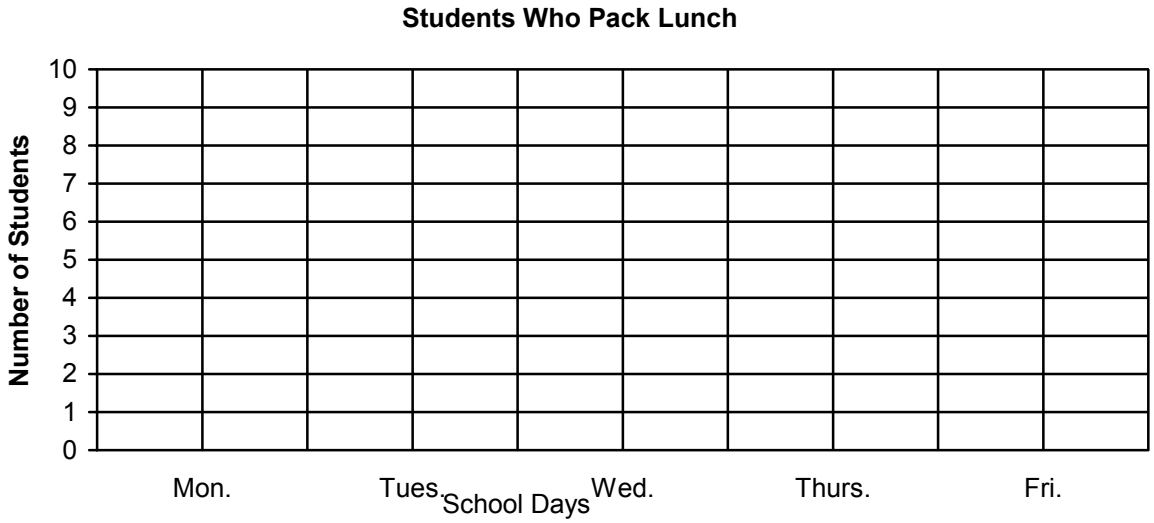
BONUS?

Directions: Complete the line graph using the data from the table.

Mr. Jones is keeping track of the number of students in his class who pack their lunches throughout the week. The results for a week are shown in the table below.

Number of Students Who Pack Lunch

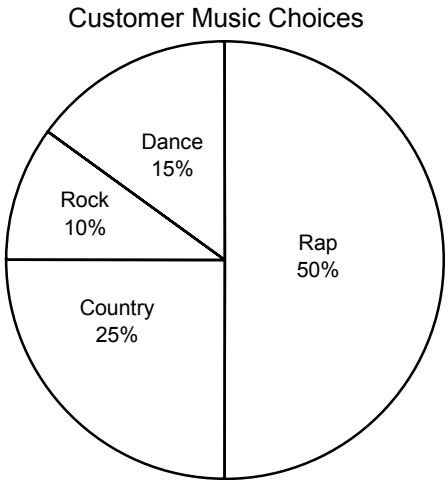
Day of the Week	Monday	Tuesday	Wednesday	Thursday	Friday
Number of Students	5	4	3	9	7



Problem Solving

Directions: Use problem-solving strategies to solve the word problems.

Lena is working as the manager of a record store, and she needs to decide what to put in a local newspaper ad to attract customers. Lena surveyed her current customers to find out their favorite type of music. Her results are shown in the circle graph below.



1. Which type of music do most customers prefer?

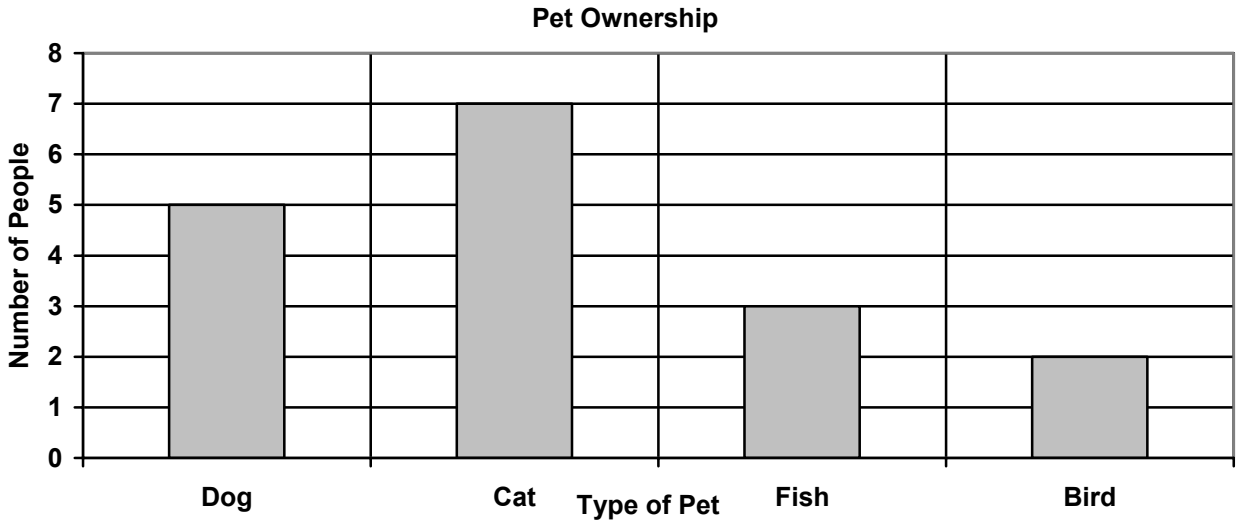
2. What percentage of people responded that dance is their favorite type of music?

3. If 200 people took the survey, how many people prefer country music?

4. Based on the survey results, which type of music should Lena advertise in the newspaper? Explain your answer.

5. Do you think Lena should continue to sell country music? Why or why not?

Directions: Use what you know about graphs to answer each question



1. What type of graph is shown?

2. Which pet is owned by the fewest number of people?

3. What is the difference between the most owned pet and the least owned pet?

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

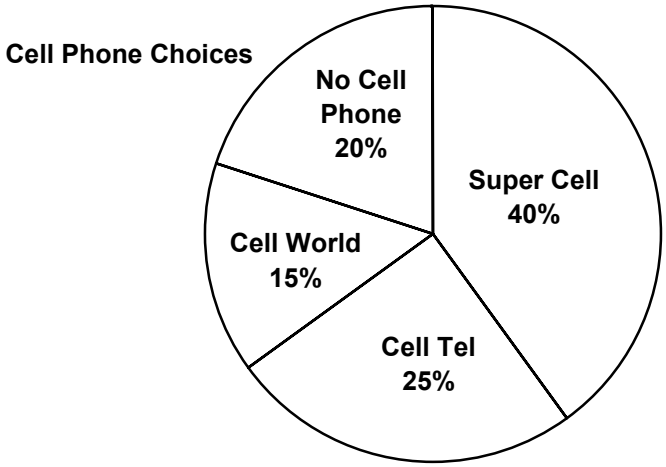
Guided Practice on Problem Solving Strategies

Directions: Complete the following practice problems with your partner. Your teacher will review the answers. Make sure you show all your work, check your answers, and write your answers in complete sentences.

1. There are a certain number of people riding a bus. At the first stop, 3 people get off and 5 passengers get on. At the second stop, 6 people get off and 2 get on. At the third stop, 1 person gets off and 5 get on. At the fourth stop, 7 people get off and 3 get on. There are now 12 people on the bus. How many people were on the bus originally?

2. A rectangular bedroom needs to be painted. It has 4 walls that are 9 feet high. Two of the walls are 10 feet long, and the other 2 walls are 12 feet long. There is a door on one wall that is 3 feet by 6 feet. There is a window on another wall that is 3 feet by 4 feet. How many square feet of wall space need to be painted? Assume that the window and door are not going to be painted.

3. The circle graph shown below shows the percent of people who choose phone service from different cell phone companies.



There are 100 people who do not have cell phone service. How many people use Super Cell for their service?

4. A room contains people with 2 legs, animals with 4 legs, and insects with 6 legs. The number of people is 1 more than the number of animals and the number of animals is 1 more than the number of insects. There are 80 legs in the room altogether. How many insects are there?

Problem Solving

Directions: Use problem-solving strategies to solve the word problems. Make sure you show all your work, check your answers, and write your answers in complete sentences.

1. A tile floor has a mosaic design that is 560 tiles long and 74 tiles wide. In a mosaic, all the tiles in the design are equal in size. How many tiles are in the design?

2. A recipe calls for $1\frac{3}{4}$ cups of sugar. How many cups of sugar are needed to triple the recipe?

3. A bag contains 24 servings of granola. Each serving of granola weighs 1.1 grams. How many grams of granola are in the bag?

4. A triangular flag is shown below. What is the area of the flag?