NAME _____ DATE _____ PERIOD _____

2-2 Study Guide and Intervention

Bar Graphs and Line Graphs

A **graph** is a visual way to display data. A **bar graph** is used to compare data.
A **line graph** is used to show how data changes over a period of time.

EXAMPLE 1 **Make a bar graph of the data. Compare the number of students in jazz class with the number in ballet class.**

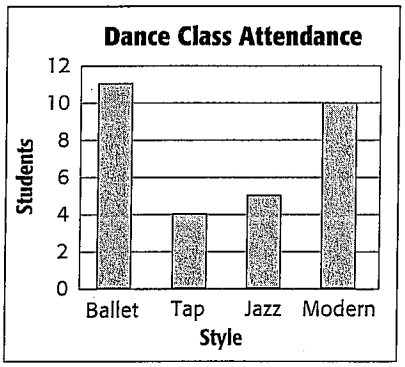
Dance Classes	
Style	Students
Ballet	11
Tap	4
Jazz	5
Modern	10

Step 1 Decide on the scale and interval.

Step 2 Label the horizontal and vertical axes.

Step 3 Draw bars for each style.

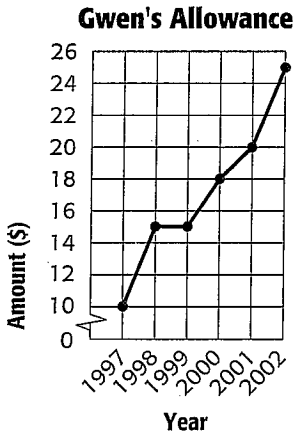
Step 4 Label the graph with a title.



About twice as many students take ballet as take jazz.

EXAMPLE 2 **Make a line graph of the data. Then describe the change in Gwen's allowance from 1998 to 2002.**

Gwen's Allowance						
Year	1997	1998	1999	2000	2001	2002
Amount ($)	10	15	15	18	20	25



Step 1 Decide on the scale and interval.

Step 2 Label the horizontal and vertical axes.

Step 3 Draw and connect the points for each year.

Step 4 Label the graph with a title.

Gwen's allowance did not change from 1998 to 1999 and then increased from 1999 to 2002.

EXERCISES

Make the graph listed for each set of data.

1. bar graph

Riding the Bus	
Student	Time (min)
Paulina	10
Omar	40
Ulari	20
Jacob	15
Amita	35

2. line graph

Getting Ready for School	
Day	Time (min)
Monday	34
Tuesday	30
Wednesday	37
Thursday	20
Friday	25

NAME _____ DATE _____ PERIOD _____

2-2 Reading to Learn Mathematics

Bar Graphs and Line Graphs

Pre-Activity *Complete the activity at the top of page 56 in your textbook. Write your answers below.*

1. What type of roller coaster is most common?

2. What might be an advantage of organizing data in a table? Are there any disadvantages of organizing data in this way?

Reading the Lesson

Compare the frequency table at the top of page 56 with the bar graph in the middle of the same page.

3. How are they similar?

4. How are they different?

5. For purposes of comparison, which do you find easier to use to compare differences among frequencies—the frequency table or the bar graph? Explain.

Refer to the line graph at the bottom of page 56.

6. Represent the same data in a table that uses only numbers.

7. Compare the table you just created with the line graph. Which do you think presents the data in a way that is easier to compare changes over periods of time? Explain.

U.S. Wooden Roller Coasters	

Helping You Remember

8. Explain how the information in a line graph differs from the information in a bar graph.

Lesson 2–2