

# GRAPHS

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A graph is a picture to show data. It gives facts quickly because little reading is required. Some graphs have a vertical axis and a horizontal axis. Along an axis you will find a description of the information the graph gives.

Below is a list of the different kinds of graphs.

**The Vertical Bar Graph** uses bars, or heavy lines, going from the horizontal axis upward and parallel with the vertical axis. This is an easy graph to make and to read.

**The Horizontal Bar Graph** uses bars or lines beginning at the vertical axis and extending parallel with the horizontal axis. This too is an easy graph to make and to read.

**The Broken Line Graph** uses straight lines to connect dots placed at positions to give specific information. This is an easy graph to read and to construct. You see many broken line graphs, as well as both types of bar graphs, in the business sections of newspapers.

**The Pictograph** uses a symbol to show facts. The symbol, which represents a stated amount, is usually a picture relating to the topic of the graph. A pictograph is easy to make and to read.

**The Circle Graph** deals with a certain amount or 100 percent. This graph is easily read but may be difficult to make.

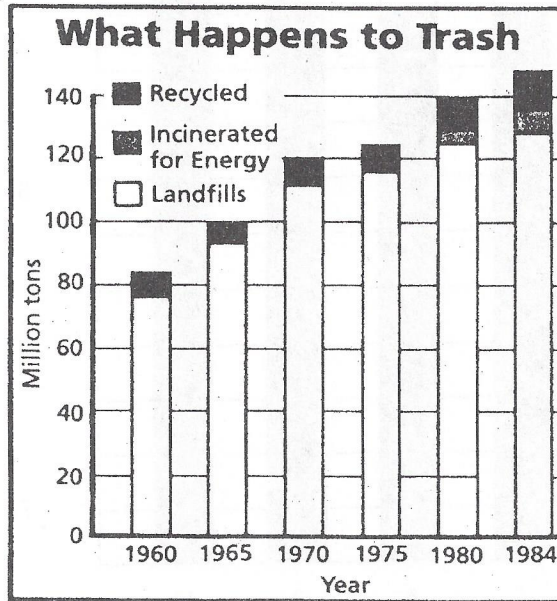
Name \_\_\_\_\_

# CURRENT SCIENCE

Date \_\_\_\_\_

## SKILLBUILDERS ISSUE 3

### Trash Feature (PAGES 6-7)



#### Part 1: Bar Graph (50 points)

Refer to the graph to answer the following questions. (10 points each)

1. How much trash was generated in 1980? \_\_\_\_\_
2. By what percent did the amount of trash increase between 1965 and 1970? \_\_\_\_\_
3. Between what 5 years did the quantity of trash increase the most? \_\_\_\_\_
4. Between what 10 years did the number of landfills increase the most? \_\_\_\_\_
5. In what year was the greatest amount of trash recycled relative to the total amount of trash collected? \_\_\_\_\_

#### Part 2: Short Answer (50 points)

1. (5 points) How many pounds of trash is in 220 million tons? \_\_\_\_\_  
\_\_\_\_\_
2. (10 points) What are landfills? \_\_\_\_\_  
\_\_\_\_\_
3. (20 points) Give two solutions to the nation's growing solid waste problem. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. (15 points) Explain how electricity can be generated from trash. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Bar Graphs and Line Segment Graphs

The **double bar graph** shows the maximum and minimum temperatures for January. Use the graph to answer the questions.

1. What was the minimum temperature in Nashville?

\_\_\_\_\_

2. Which two cities had the same minimum temperature?

\_\_\_\_\_

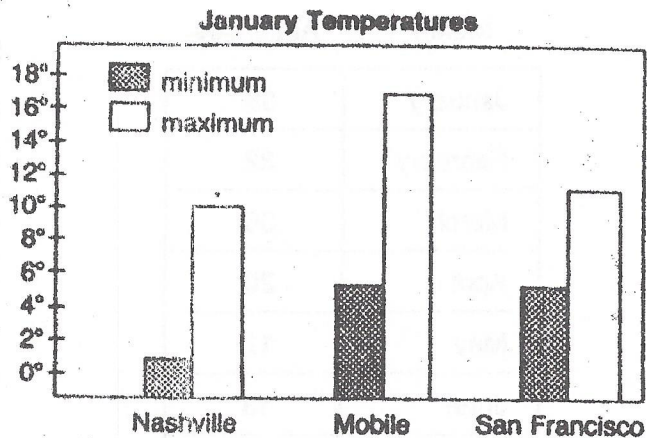
3. Which city had the highest maximum temperature?

\_\_\_\_\_

4. What was San Francisco's maximum temperature?

\_\_\_\_\_

Temperature in degrees Centigrade



5. What is the difference between the maximum temperature of Nashville and the maximum temperature of Mobile?

\_\_\_\_\_

Use the **line segment graph** to answer each question.

6. What was April's mean temperature?

\_\_\_\_\_

7. How much did the mean temperature rise between April and May?

\_\_\_\_\_

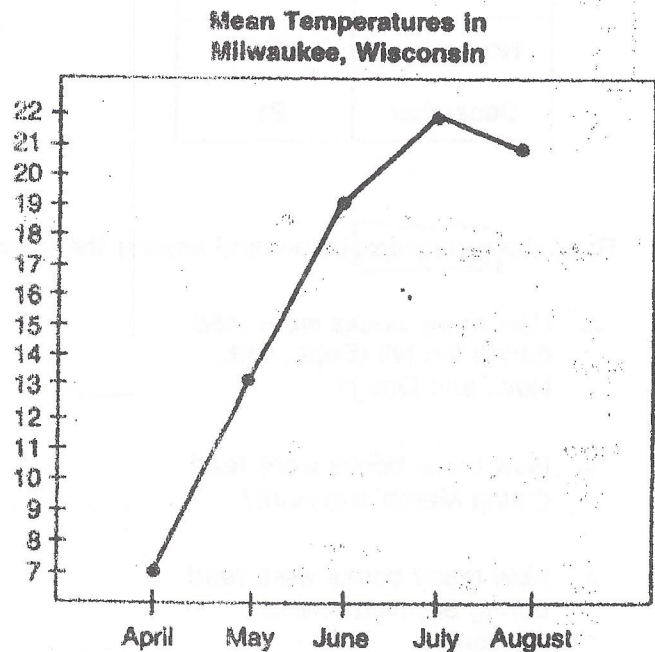
8. What was the mean temperature in June?

\_\_\_\_\_

9. During which month was the mean temperature highest?

\_\_\_\_\_

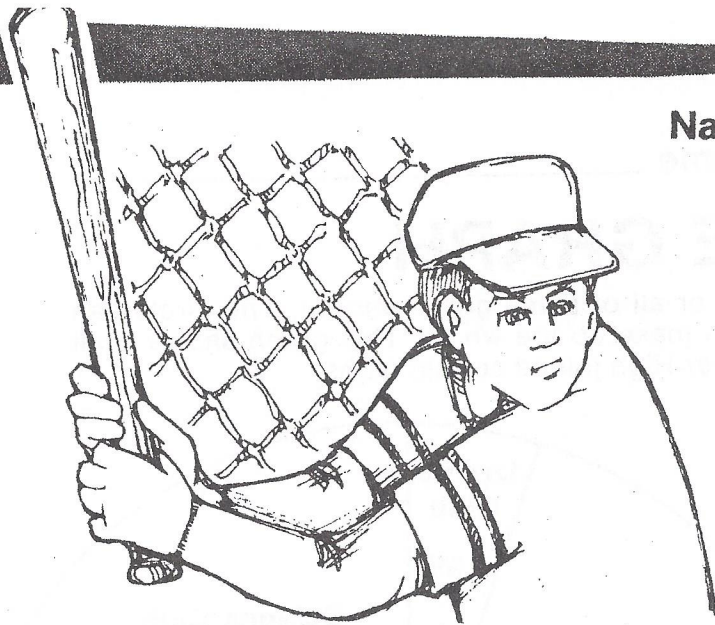
Temperature in degrees Centigrade



10. What is the difference between the highest and lowest mean temperature?

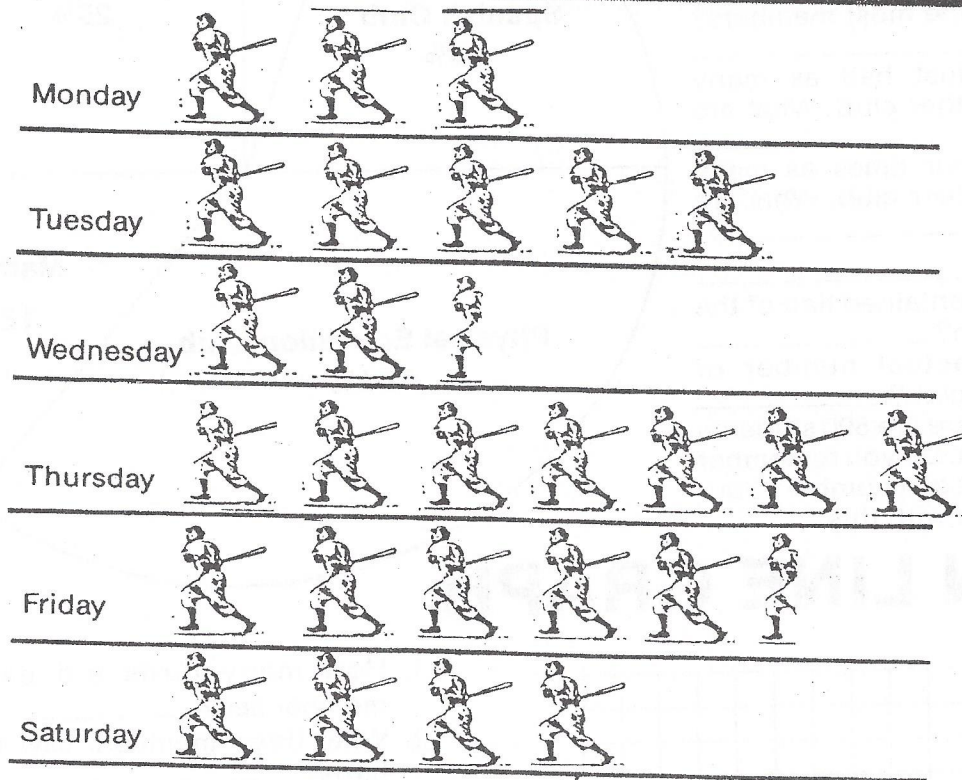
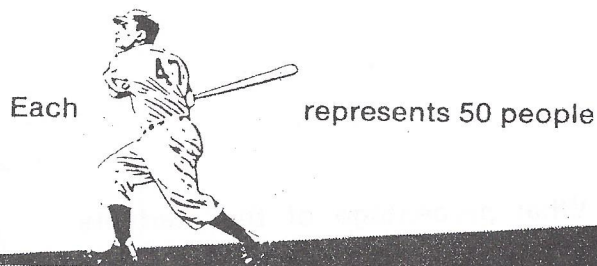
\_\_\_\_\_

Name \_\_\_\_\_



# PICTOGRAPH

Paid attendance at  
Belton Junior High Baseball Camp

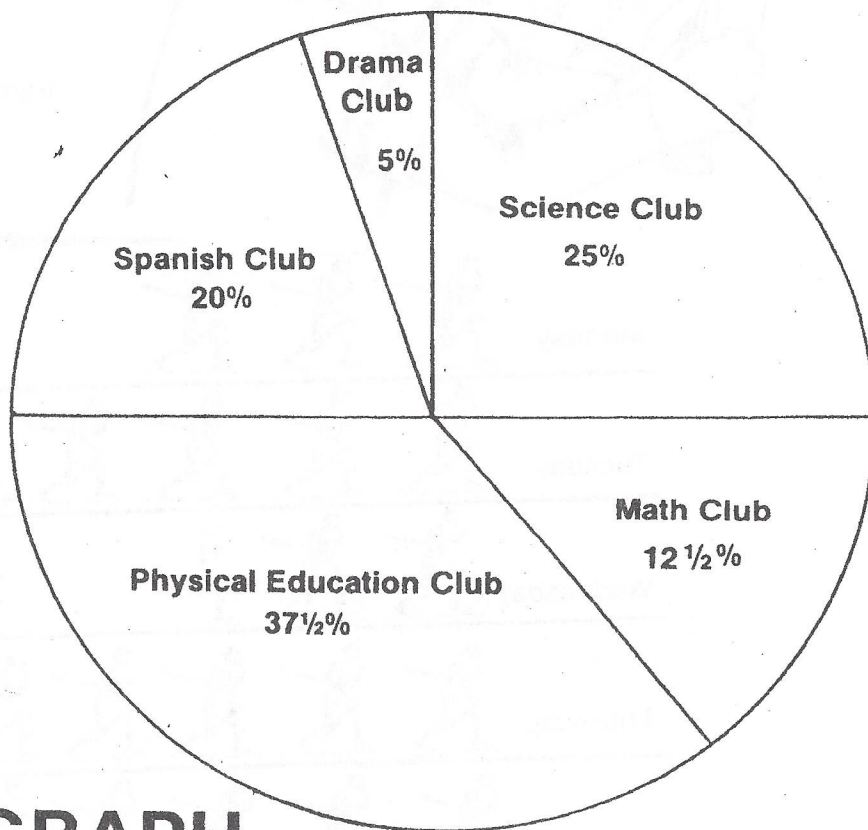


1. How many people attended camp on each day it was open? \_\_\_\_\_
2. Which day had the highest attendance? \_\_\_\_\_
3. Which day had the smallest attendance? \_\_\_\_\_
4. On what two days was the total attendance 450? \_\_\_\_\_
5. What was the difference between the highest and the lowest attendance? \_\_\_\_\_
6. How many fewer people attended the camp on Saturday than on Friday? \_\_\_\_\_
7. If the price of admission was 75¢ how much money was collected on Monday and Tuesday? \_\_\_\_\_
8. How much money was collected on the day when attendance was lowest? \_\_\_\_\_
9. How much was collected on the day when attendance was highest? \_\_\_\_\_
10. How much money was collected during the entire camp week? \_\_\_\_\_

Name \_\_\_\_\_

# CIRCLE GRAPH

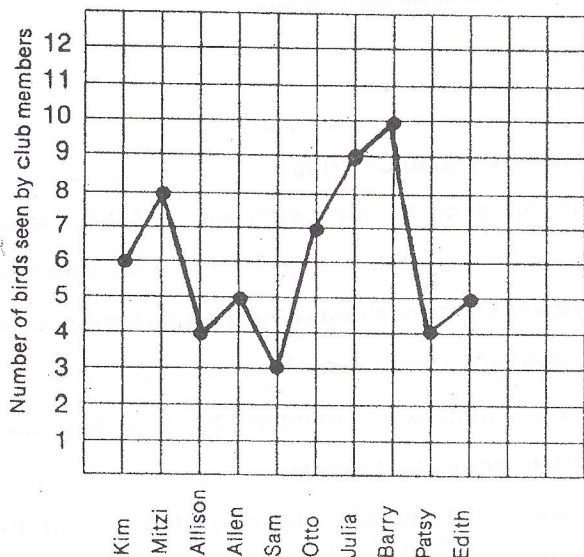
A circle graph represents 100 percent or all of some given amount. The circle can be divided, however, to show parts which make up the whole. This graph shows what percent of the 600 students in Belton Junior High joined certain clubs.



- What percentage of the students joined each club? \_\_\_\_\_
- Which club had the most members? \_\_\_\_\_
- One club had just half as many members as another club. What are these two clubs? \_\_\_\_\_
- One club had four times as many members as another club. What are these two clubs? \_\_\_\_\_

- What two clubs contained half of the students at Belton? \_\_\_\_\_
  - What was the actual number of students in each club? \_\_\_\_\_
- Remember that there are 600 students at Belton Junior High. Do you remember how to find a percent of a number? Your teacher will help you with this.

# BROKEN LINE GRAPH

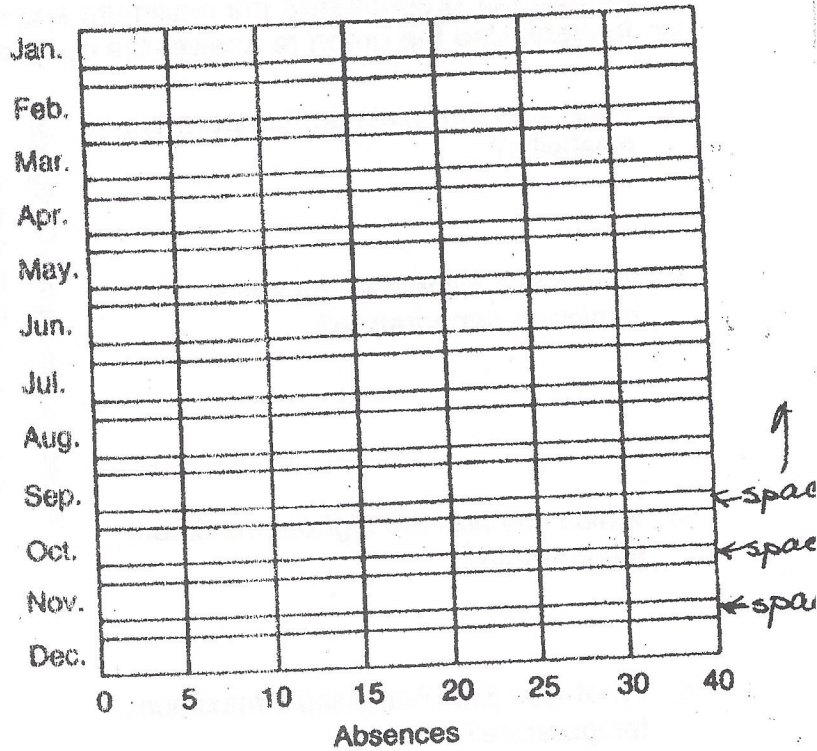


1. How many birds did each club member see? \_\_\_\_\_
2. What three members saw the most birds? \_\_\_\_\_  
How many did they see in all? \_\_\_\_\_
3. Barry saw twice as many birds as two other students saw. Who were these two students? \_\_\_\_\_
4. Who saw the fewest birds? How many more birds must he see to have seen as many birds as Barry saw? \_\_\_\_\_
5. Who besides Allison saw 4 birds? \_\_\_\_\_
6. Only one club member saw 9 birds. Who was this person? \_\_\_\_\_
7. What was the total number of birds the members saw? \_\_\_\_\_

Name \_\_\_\_\_

1. The list below shows the average number of students absent from school each month of the school year. Chart the information on the left as a **bar graph**.

Month	Absences
January	36
February	32
March	35
April	20
May	12
June	13
July	—
August	—
September	10
October	14
November	19
December	21



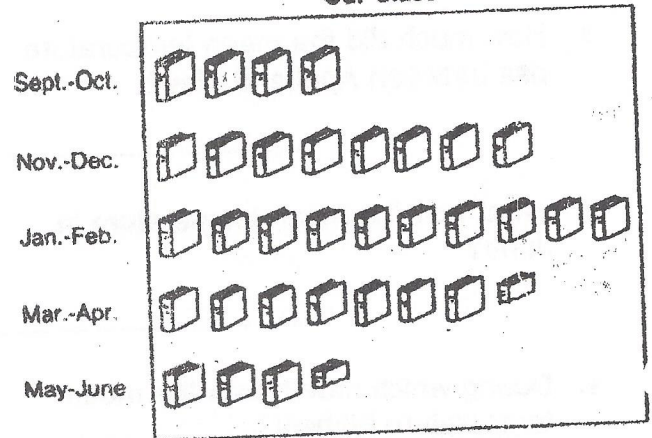
What conclusions can you make about absences after looking at your graph?

\_\_\_\_\_

Read the **pictograph** below and answer the following questions.

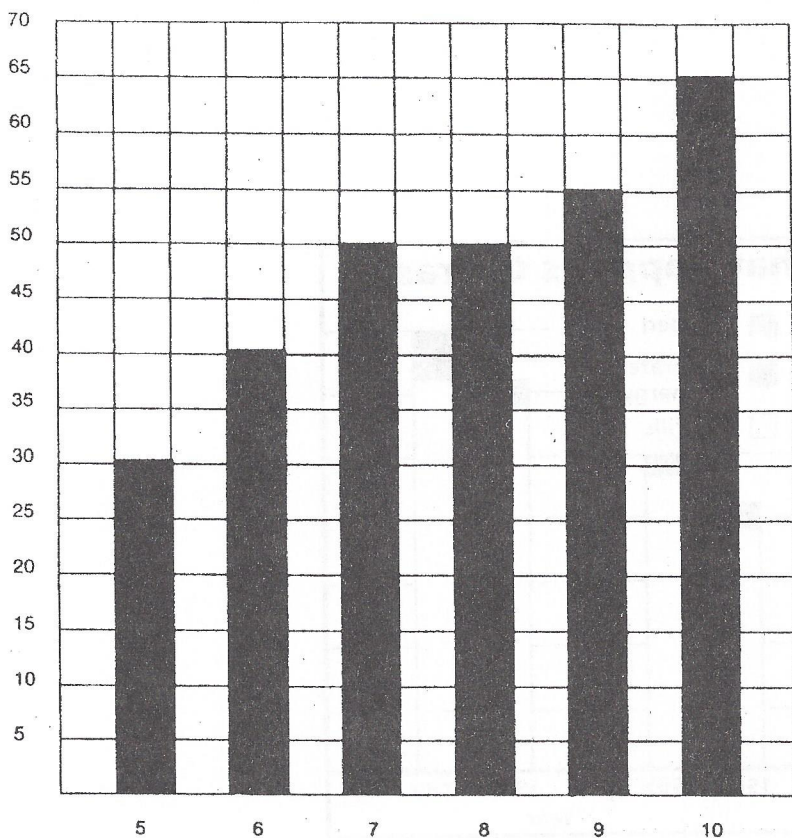
- How many books were read during the fall (Sept., Oct., Nov., and Dec.)? \_\_\_\_\_
- How many books were read during March and April? \_\_\_\_\_
- How many books were read during September and October? \_\_\_\_\_
- During which 2-month period were the most books read? \_\_\_\_\_

Number of Books Read by Students in Our Class



Each  stands for 30 books.

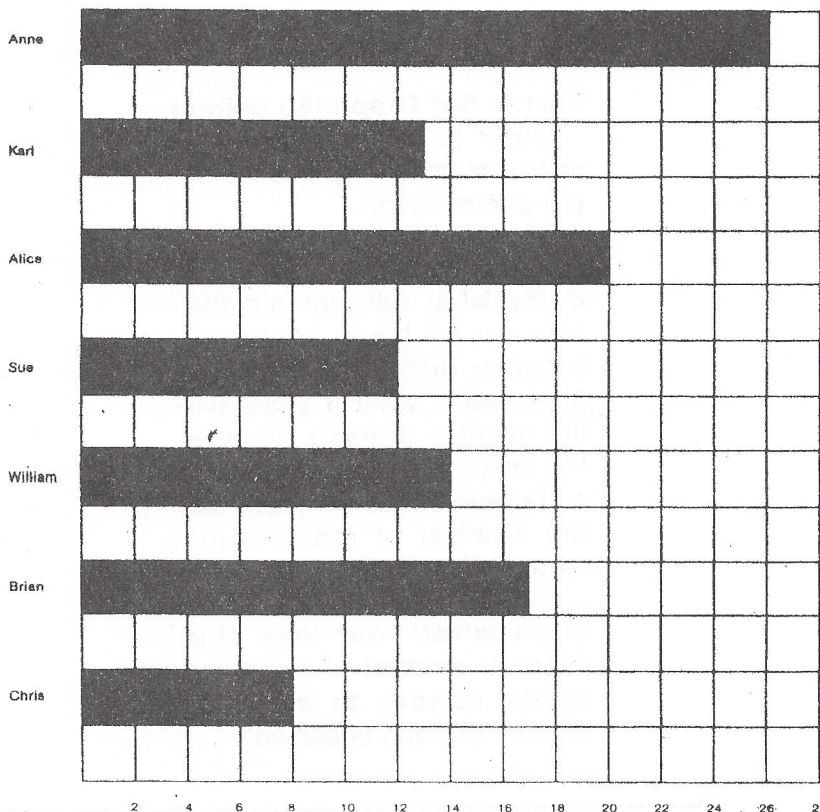
# VERTICAL BAR GRAPH



- How many books did each grade read during the week? \_\_\_\_\_
- Which grade read the most books? \_\_\_\_\_  
Which one read the fewest? \_\_\_\_\_
- What two grades read the same number of books? \_\_\_\_\_
- How many more books did the 7th and 10th grades read than the 5th and 9th grades read? \_\_\_\_\_
- How many more books would the 6th grade need to read to have read as many books as the 10th grade? \_\_\_\_\_
- Did the 5th and 6th grades read more books than the 10th grade? \_\_\_\_\_  
How many more or how many fewer? \_\_\_\_\_
- How many books were read in all? \_\_\_\_\_

# HORIZONTAL BAR GRAPH

- How many tickets did each student sell? \_\_\_\_\_
- Who sold the fewest tickets? \_\_\_\_\_
- Who sold the most tickets? \_\_\_\_\_
- Anne sold how many more tickets than Karl sold? \_\_\_\_\_
- How many fewer tickets did Chris sell than Alice? \_\_\_\_\_
- If the price of a ticket was \$1.50, how much money did Karl earn for the club? \_\_\_\_\_
- How much did Anne earn for the club? \_\_\_\_\_
- How many tickets were sold in all? \_\_\_\_\_
- What was the total amount of money these students earned for the club? \_\_\_\_\_

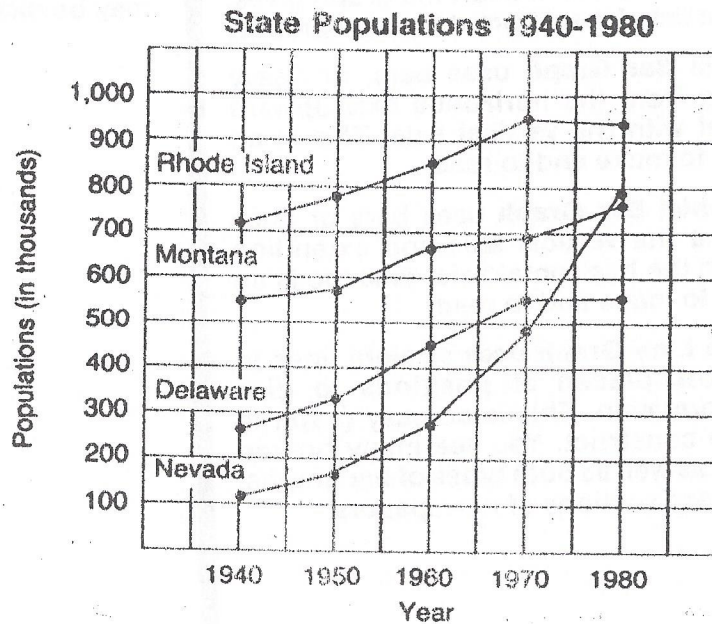


Name \_\_\_\_\_

To follow text page 3

## A Population Graph

This graph shows the populations of the states of Rhode Island, Montana, Delaware, and Nevada from 1940 through 1980. Use the graph to answer the questions below.



- Which state had the smallest population  
in 1940? \_\_\_\_\_  
in 1950? \_\_\_\_\_  
in 1960? \_\_\_\_\_  
in 1970? \_\_\_\_\_  
in 1980? \_\_\_\_\_
- Which state's population decreased  
between 1970 and 1980?  
\_\_\_\_\_
- Which state had the smallest  
increase in population between  
1960 and 1970?  
\_\_\_\_\_
- Which state had the largest increase  
in population between 1960 and 1980?  
\_\_\_\_\_
- The population of Nevada surpassed  
the population of Delaware between  
\_\_\_\_\_ and \_\_\_\_\_.
- What was the difference between the  
population of Nevada and Rhode Island  
in 1940? \_\_\_\_\_  
in 1960? \_\_\_\_\_  
in 1980? \_\_\_\_\_  
Is this difference increasing or  
decreasing?  
\_\_\_\_\_