

# 1 Chart: That's a Long Time!

How long could you sit in a barrel? How long do you think you could live in a tree? People have set many time records doing all kinds of wacky things. Take a look at this chart to learn about a few unusual records. Then answer the questions.

## Longest Time Spent Doing Stuff

Activity	Name of Person(s)	Time Spent
Standing in a tub of ice cubes	Wim Hof (Netherlands)	1 hr 6 min
Beating on a drum	Paskaran Srcekaram (Singapore)	27 hr 45 min
Kissing on television	Rick Langley and Louisa Almedovar (USA)	30 hr 59 min
Watching movies	Chinnawatra Boomrasn, et al. (Thailand)	50 hr 55 min
Lying on a bed of nails	Inge Wilda Svinjen (Norway)	274 hours
Sitting in a barrel	Vernon Kruger (South Africa)	67 days
Staying in a tree	Bungkas (Indonesia)	21 years

Source: *Guinness Book of Records*, 2004



1. What is the longest time spent sitting in a barrel?
2. Who holds the record for the longest time spent standing in a tub of ice cubes?
3. What is the record for longest time kissing on TV?
4. What is the record for the longest time spent watching movies?
5. Who holds the record for the longest time spent lying on a bed of nails?

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## 2 Table: Cold Enough for Ya?

Every New Year's Day, members of the Jacksonport Polar Bear Club gather at the shore of Lake Michigan, strip down to their bathing suits, and plunge into the icy water! Look at the table for details on this zany event. Then answer the questions.

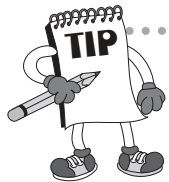


**Polar Bear Plunges (1993–2004)**

Year	Number of Participants	Air Temperature (Fahrenheit)
1993	23	4°
1994	52	33°
1995	71	18°
1996	106	22°
1997	110	25°
1998	290	34°
1999	175	10°
2000	600	33°
2001	700	26°
2002	700	30°
2003	800	28°
2004	600	32°

Source: Jacksonport Polar Bear Club ([www.doorbell.net/pbc](http://www.doorbell.net/pbc))

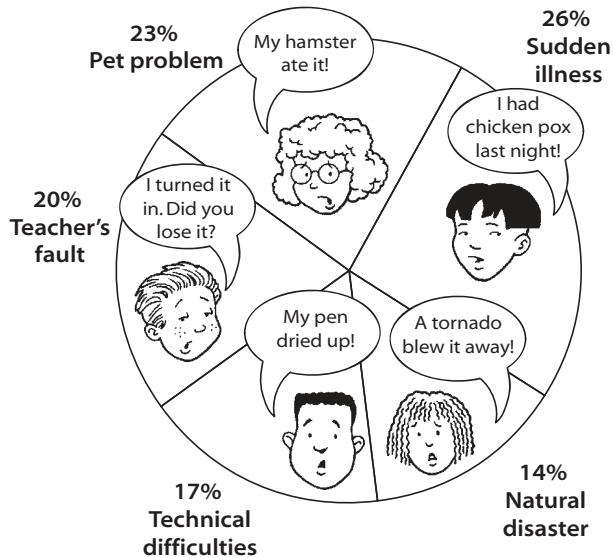
- In which two years did the Polar Bears have the coldest air temperatures for their plunge? \_\_\_\_\_
- In what year did the greatest number of people take part in this event, and in what year did the fewest take the plunge? \_\_\_\_\_
- In general, how has the popularity of this event changed over the years since 1993? Tell how you know.  
\_\_\_\_\_
- What do you notice about the changes in the number of participants and the air temperatures from 1998 to 1999? Do you think these two factors are related?  
\_\_\_\_\_



Read each question carefully to make sure you understand what information it's asking for.

# 3 Circle Graph: And If You Believe THAT One . . .

Ms. Hearditall keeps track of hard-to-believe excuses her students give for not doing their homework. Check out this circle graph to find out what kinds of excuses Ms. Hearditall gets. Then answer the questions.



1. Which kind of excuse do Ms. Hearditall's students give most often?

\_\_\_\_\_

2. What percentage of the excuses are "pet problems"?

\_\_\_\_\_

3. Find the percentage of "teacher's fault" excuses. How is this number written as a fraction?

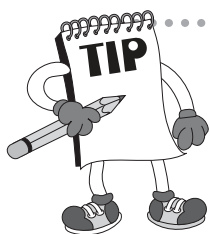
\_\_\_\_\_

4. Which kind of excuse makes up 17% of the total?

\_\_\_\_\_

5. Which kind of excuse is used *least*?

\_\_\_\_\_



Circle graphs are sometimes called "pie charts" because they sort of look like pies sliced in different ways. Each "slice" represents a portion or percentage of the total pie. All the pieces added together should equal 100 percent.

# 4 Pictograph: Better Skip the Dessert

In 2003, Sonya Thomas set a stomach-popping world record by eating 65 boiled eggs in 6 minutes and 40 seconds! To burn off that 5,000-calorie meal, Sonya probably needed to do a little exercise. Look at the pictograph to find out just how much exercise time that would take. Then answer the questions.

**Exercise Time Needed to Burn 5,000 Calories**

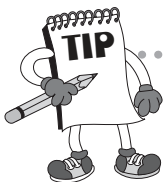


Bicycling	
In-line skating	
Jumping rope	
Running	
Swimming	
Step aerobics	

KEY: = 1 hour of exercise

Source: International Federation of Competitive Eating and [fittersource.com](http://fittersource.com)

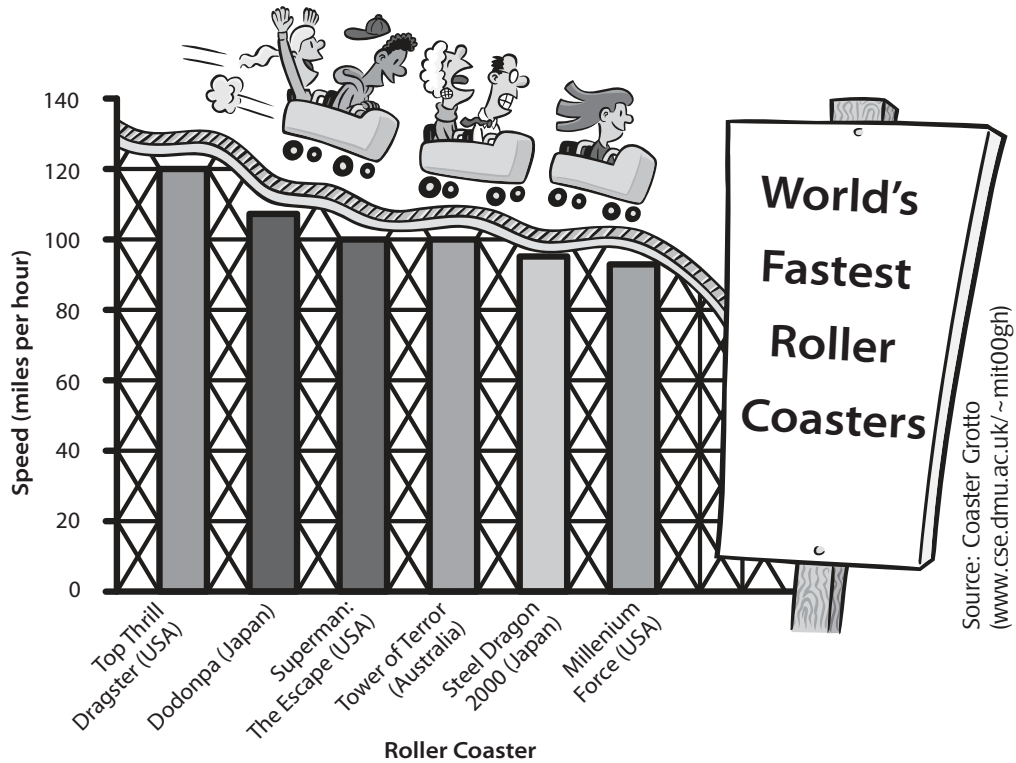
- Which exercise burns calories the fastest? \_\_\_\_\_
- Which exercise would Sonya have to do for the longest time to burn off 5,000 calories? \_\_\_\_\_
- Which two exercises burn calories at the same rate? \_\_\_\_\_
- To burn off 5,000 calories, how long would Sonya have to swim? \_\_\_\_\_
- Which exercise takes about 13 hours to burn 5,000 calories? \_\_\_\_\_



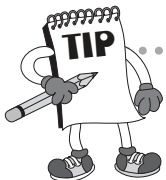
To read a pictograph, look for the key that tells what each picture represents.

# 5 Bar Graph: The Need for Speed

Did you ever wonder where you can find the fastest roller coasters in the world, or how fast they really go? Well, here's your chance to find out. Check out this bar graph. Then answer the questions.



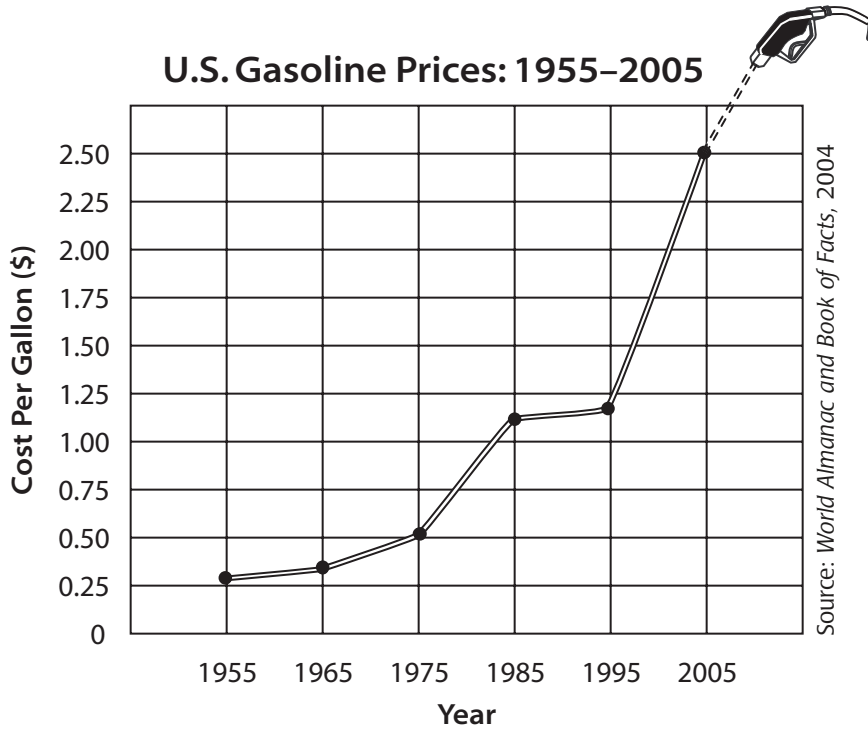
- Which is the fastest roller coaster? \_\_\_\_\_
- How fast does the fastest roller coaster go? \_\_\_\_\_
- Which two roller coasters have the same top speed?  
\_\_\_\_\_
- What is the name of the fastest coaster outside the United States?  
\_\_\_\_\_
- What is the top speed for Steel Dragon 2000? \_\_\_\_\_



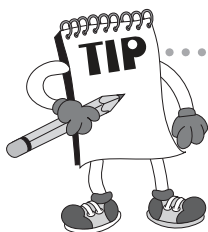
Bar graphs are good for making comparisons—just compare the lengths of the bars.

# 6 Line Graph: A Gassy Subject

Have you ever heard an old-timer say, "Gee, when I was a kid, you could get a gallon of gas for a quarter"? Well, that was probably true. But look at this graph to see what gasoline costs now! Then answer the questions.



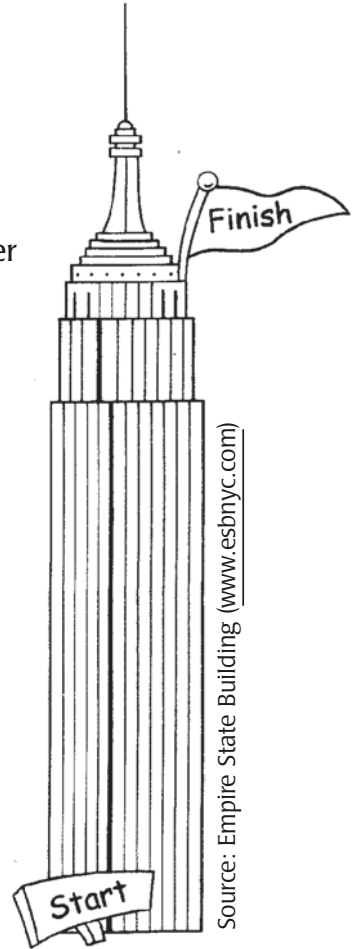
1. How much did a gallon of gasoline cost in 1955? \_\_\_\_\_
2. When you look at the graph, what do you notice about 1985 and 1995?  
\_\_\_\_\_
3. Which 10-year period saw the greatest increase in the price of gasoline? \_\_\_\_\_
4. How much has the price of gasoline changed since 1955? \_\_\_\_\_



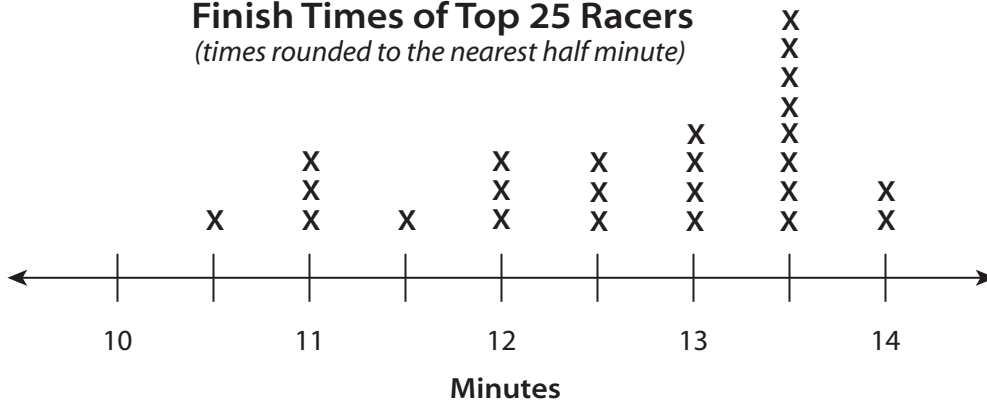
A line graph is used to show a change that occurs over a certain period of time. Sometimes a dotted line is used to estimate or predict what will happen next.

# 7 Line Plot: Who Needs the Elevator?

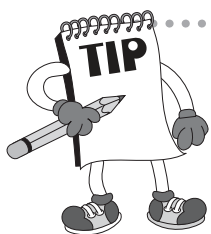
The Empire State Building Run-Up may just be the world’s wackiest race. Each year, racers of all ages scramble up 1,576 steps to the Observatory deck on the 86th floor of the famous New York skyscraper. Look at the line plot to see how quickly the nimblest racers reach the top. Then answer the questions.



**2004 Empire State Building Run-Up:  
Finish Times of Top 25 Racers**  
*(times rounded to the nearest half minute)*



1. What was the winner’s time for the race? \_\_\_\_\_
2. How many racers finished in 13 minutes or less? \_\_\_\_\_
3. What was the most common finish time among the top 25 racers? \_\_\_\_\_
4. How many racers finished in less than 12 minutes? \_\_\_\_\_
5. What general trend (or shape) do you see in these data?  
\_\_\_\_\_

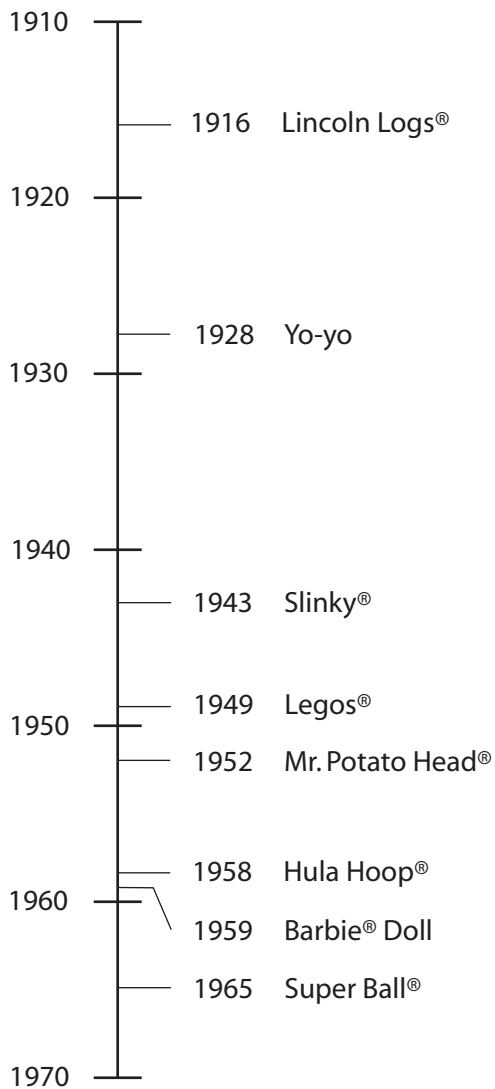


A line plot can be used to show the “shape” of a set of results, or data. It kind of resembles a tally chart, only it faces upward instead of sideways. Each X is one result, or data point. Results often bunch up in the middle or at one end of the line.

# 8 Time Line: Oldies but Goodies

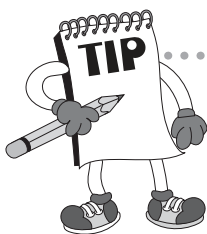
The world’s best toys have never gone out of style. Some all-time favorites have been around since your great-grandparents were in diapers. Use this time line to find out when some classic toys were invented. Then answer the questions.

## 20th-Century Toys



Source: Great Idea Finder ([www.ideafinder.com](http://www.ideafinder.com))

1. What is the oldest toy shown on the time line?  
\_\_\_\_\_
2. In what year did Barbie® dolls first appear?  
\_\_\_\_\_
3. Which two toys were introduced in the 1940s?  
\_\_\_\_\_  
\_\_\_\_\_
4. When was Mr. Potato Head® introduced?  
\_\_\_\_\_
5. What toy appeared 30 years after the yo-yo was introduced?  
\_\_\_\_\_

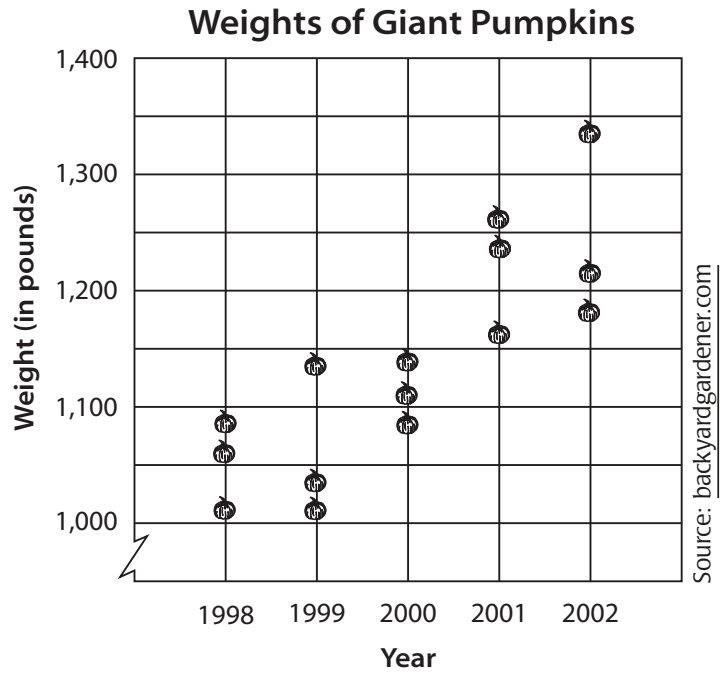


Time lines usually show important events—when they happened and in what sequence. Time lines may be vertical (like this one), horizontal, or diagonal.

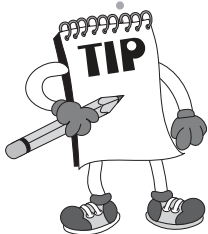


# 10 Scatterplot: Giant Pumpkins

Have you ever seen a really, *really* big pumpkin? Chances are, it was a midget next to these babies—the biggest pumpkins ever grown in the United States and Canada. Use the scatterplot at right to find the weights of the heftiest pumpkins grown in recent years. Then answer the questions.



1. About how much did the heaviest giant pumpkin weigh? \_\_\_\_\_
2. In what year did all three giant pumpkins weigh less than 1,100 pounds? \_\_\_\_\_
3. In which two years did the heaviest pumpkin weigh between 1,125 and 1,150 pounds? \_\_\_\_\_
4. What trend do you notice in these data? Describe the trend and tell whether it is positive or negative.  
 \_\_\_\_\_  
 \_\_\_\_\_



**TIP** A scatterplot shows data points based on **two** values—such as height and weight, for example. The data points on a scatterplot may show a **positive trend**, which means that as one value goes up, the other value does, too. For example, as you grow taller, your weight increases. The scatterplot may show a **negative trend** instead, or **no trend at all**.