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Line Up for Cell Phones

By Carli Entin

- Complete a line graph to see the growing number of cell-phone subscribers over the years.

Twelve-year-old Brandon Green is never too far away from his cellular phone. "I use it about 10 times a day!" Brandon, from Maryland, told *MATH*. Maddie Mcquillian, a 13-year-old from Portland, Oregon, doesn't have a cell phone--but wishes she did. "I want to be able to call people and not have to use my home phone," she said.

Like so many Americans, Brandon and Maddie have become part of a cell-phone nation. There are more than 200 million cell-phone subscribers in the U.S. today--about 2/3 of the population. The phones allow friends and family members to stay in touch when they're not at home. They're also popular for text messaging and even accessing the Internet.

However, cell phones can also be very distracting. "I was at a play, and people were just talking on their cell phones," Maddie told us. "It was really disruptive." And Brandon added, "If you're driving and talking on the phone, you can cause an accident."

Even with the negatives, it seems cell phones--in one form or another--are here to stay. Make a line graph to see how the number of subscribers has risen over the years. You'll have to do it yourself--cell phones can do lots of functions these days, but they still can't draw line graphs!

What to Do

Our line graph shows the number of U.S. cell-phone subscribers (individuals with cell-phone accounts) in 2000 and 2001. Use the chart to extend the graph to 2007. On the graph, plot the number of subscribers every year. (First, round each number to the nearest million. Then estimate where the number should be plotted above its year.) Continue the line we started to connect all the points. Use the completed graph to answer our questions.

(See picture, "Line Graph & Chart: Cell Phone Usage.")

1. About how many more cell-phone subscribers were there in 2005 than in 2001?

2a. Between which two years shown did the number of subscribers increase the least?

b. How can you tell by looking at the graph?

3. In 1990, there were only about 5,000,000 cell-phone subscribers in the U.S. About how many times as many subscribers were there in 2007?

4. Based on the completed line graph, what conclusion can you draw?

A. The number of cell-phone subscribers is starting to decrease.

B. Many teenagers are not allowed to have cell phones.

C. The increase is starting to level off, probably because there are fewer people left who don't have cell phones.

Talk About It

Have a discussion in class about cell-phone manners. How could we make cell-phone use less disruptive?

Answers

1. About 80,000,000 more subscribers

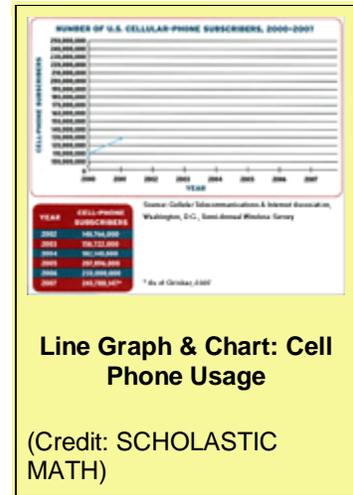
2a. Accept either 2001-2002 or 2006-2007

b. The line is least steep.

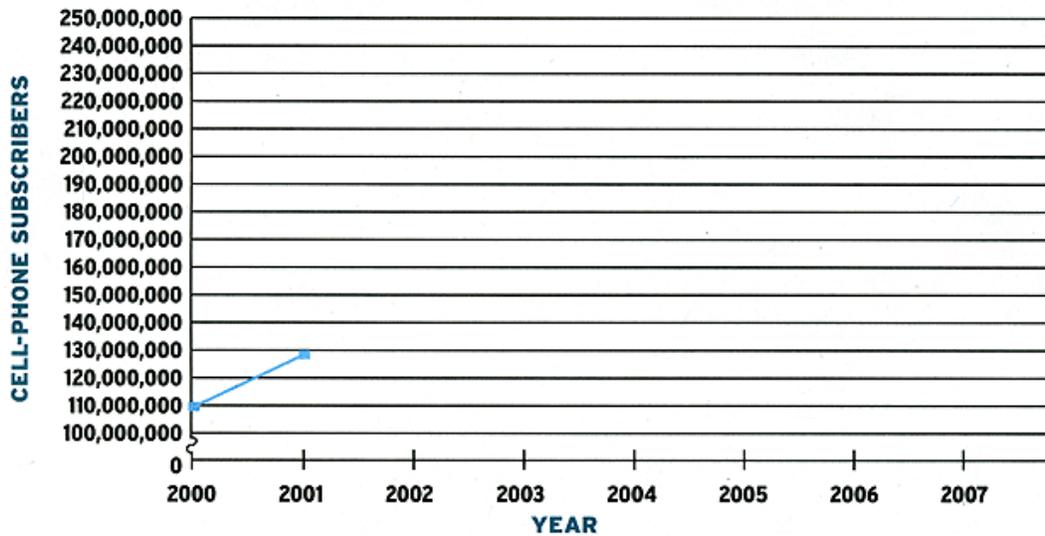
3. About 49 times as many

4. C

Talk About It: Answers will vary. Could discuss turning phones to vibrate, not talking so loudly, wiring certain public places so phones won't work...



NUMBER OF U.S. CELLULAR-PHONE SUBSCRIBERS, 2000-2007



| YEAR | CELL-PHONE SUBSCRIBERS |
|------|------------------------|
| 2002 | 140,766,000 |
| 2003 | 158,722,000 |
| 2004 | 182,140,000 |
| 2005 | 207,896,000 |
| 2006 | 233,000,000 |
| 2007 | 245,788,147* |

Source: Cellular Telecommunications & Internet Association, Washington, D.C., Semi-Annual Wireless Survey

* As of October, 2007