

Algebra 1

Data Updates

Chapter 3

Lesson 3.8, page 180, Example 1, Spending

How can you present this information so it is easier to understand?

Estimated Spending for Clothes and Food in the United States in 1999		
Clothing & Shoes	Restaurants	Food at Home
\$189	\$230 billion	\$316 billion

Solution

One solution is to find the average rate of spending *per person* so that people can compare themselves to the average. You can do this by dividing by the total population, which was about 273 million in 1999.

Clothing and shoes: about \$692 per person

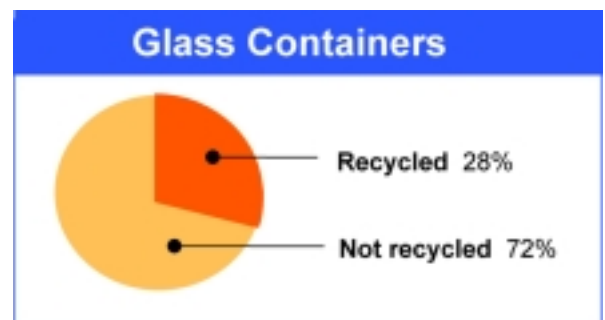
Restaurants: about \$842 per person

Food at home: about \$1158 per person

Lesson 3.8, page 182, Example 6, Glass Recycling

Note: Based on the most recent data (published in 1999), the amount of glass containers decreased from 3.2 million tons to 2.9 million tons. Accordingly, the percent of recycled glass containers changed from 29% to 28% and the category *not recycled* changed from 71% to 72%. The final answer changes to 10.4 million tons of glass containers were used that year. (See below for complete example update.)

The circle graph shows the percent of glass containers recycled in the United States in a recent year. About 2.9 million tons of glass containers were recycled. Estimate the total weight of glass containers used that year.



Solution

Percent of glass containers recycled = 0.28 (no units)

Total weight of glass containers used = x (tons)

Weight of glass containers recycled = 2,900,000 (tons)

$$0.28 \bullet x = 2,900,000$$

$$x = \frac{2900000}{0.28}$$

$$x \approx 10,357,142.86$$

Write algebraic model.

Divide each side by 0.28.

Simplify.

About 10.4 million tons of glass containers were used that year.