

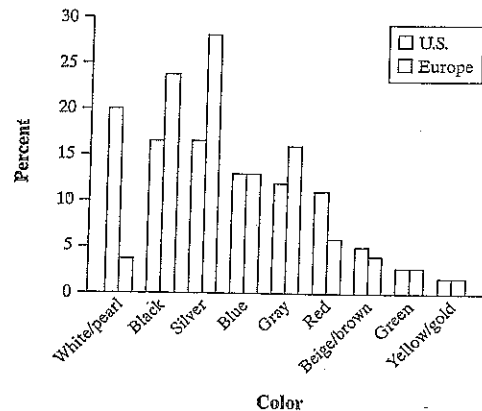
19. Attitudes toward recycled products Recycling is supposed to save resources. Some people think recycled products are lower in quality than other products, a fact that makes recycling less practical. People who use a recycled product may have different opinions from those who don't use it. Here are data on attitudes toward coffee filters made of recycled paper from a sample of people who do and don't buy these filters:<sup>16</sup>

Think quality is	Buy recycled filters?	
	Yes	No
Higher	20	29
The same	7	25
Lower	9	43

- (a) How many people does this table describe? How many of these were buyers of coffee filters made of recycled paper?
- (b) Give the marginal distribution (in percents) of opinion about the quality of recycled filters. What percent of the people in the sample think the quality of the recycled product is the same or higher than the quality of other filters?

21. Attitudes toward recycled products Exercise 19 gives data on the opinions of people who have and have not bought coffee filters made from recycled paper. To see the relationship between opinion and experience with the product, find the conditional distributions of opinion (the response variable) for buyers and nonbuyers. What do you conclude?

23. Popular colors—here and there Favorite vehicle colors may differ among countries. The side-by-side bar graph shows data on the most popular colors of cars in a recent year for the United States and Europe. Write a few sentences comparing the two distributions.



25. Snowmobiles in the park Yellowstone National Park surveyed a random sample of 1526 winter visitors to the park. They asked each person whether they owned, rented, or had never used a snowmobile. Respondents were also asked whether they belonged to an environmental organization (like the Sierra Club). The two-way table summarizes the survey responses.

	Environmental Club		Total
	No	Yes	
Never used	445	212	657
Snowmobile renter	497	77	574
Snowmobile owner	279	16	295
<b>Total</b>	<b>1221</b>	<b>305</b>	<b>1526</b>

Do these data suggest that there is an association between environmental club membership and snowmobile use among visitors to Yellowstone National Park? Give appropriate evidence to support your answer.

*Multiple choice: Select the best answer for Exercises 27 to 34.*

*Exercises 27 to 30 refer to the following setting. The National Survey of Adolescent Health interviewed several thousand teens (grades 7 to 12). One question asked was "What do you think are the chances you will be married in the next ten years?" Here is a two-way table of the responses by gender:*<sup>18</sup>

	Female	Male
Almost no chance	119	103
Some chance, but probably not	150	171
A 50-50 chance	447	512
A good chance	735	710
Almost certain	1174	756

27. The percent of females among the respondents was  
(a) 2625.      (c) about 46%.      (e) None of these.  
(b) 4877.      (d) about 54%.
28. Your percent from the previous exercise is part of  
(a) the marginal distribution of females.  
(b) the marginal distribution of gender.  
(c) the marginal distribution of opinion about marriage.  
(d) the conditional distribution of gender among adolescents with a given opinion.  
(e) the conditional distribution of opinion among adolescents of a given gender.
29. What percent of females thought that they were almost certain to be married in the next ten years?  
(a) About 16%      (c) About 40%      (e) About 61%  
(b) About 24%      (d) About 45%
30. Your percent from the previous exercise is part of  
(a) the marginal distribution of gender.  
(b) the marginal distribution of opinion about marriage.  
(c) the conditional distribution of gender among adolescents with a given opinion.  
(d) the conditional distribution of opinion among adolescents of a given gender.  
(e) the conditional distribution of "Almost certain" among females.