EXERCISES

Each year the study *Monitoring the Future: A Continuing Study of American Youth* surveys students on a wide range of topics related to behaviors, attitudes, and values. These exercises are based on data collected from the 2011 survey of 12th grade students.

Table 13.12 organizes data on gender and responses to the following question:

How intelligent do you think you are compared with others your age?

Responses to this question have been boiled down into three categories: Below Average, Average, and Above Average.

		Intelligence		
		Below Average	Average	Above Average
Gender	Female	437	2243	4072
	Male	456	1643	4593

Table 13.12. Results from questions on gender and intelligence.

Refer to Table 13.12 for questions 1 and 2.

1. a. Copy Table 13.12. Add a row to the bottom and a column to the right-end of your table. Compute the marginal totals and enter them into your table.

b. What percentage of the students who answered both questions were male? Female? Show your calculations. (Round percentages to one decimal.)

c. What percentage of the students rated their intelligence as above average? What does this tell you about 12th grade students' assessment of their intelligence?

2. a. Compute conditional distributions of Intelligence for males and females. Record your results in a table. Show calculations. (Round percentages to one decimal.)

b. Represent the distributions in your table from (a) in a bar chart.

c. Write a brief description of how the male respondents rated their intelligence compared to female respondents.

Table 13.13 organizes data on gender and responses to the following question:

How would you describe your political preference?

Responses to this question have been categorized as Rep (Republican), Ind (Independent), Dem (Democrat), Oth (Other), and No Pref/Hvnt Decid (No preference or haven't decided).

		Political Preference				
		Rep	Ind	Dem	Oth	No Pref/ Hvnt Decid
Gender	Female	1275	723	1633	89	2917
	Male	1620	871	1332	183	2577

Table 13.13. Results from questions on gender and political preference.

Questions 3 and 4 refer to Table 13.13.

3. a. Create a table showing the joint distribution (percentage) of gender and political preference. Add a row to the bottom and a column to the right end of your table. Enter the marginal distributions for gender and political preference into the added row and column. (Round percentages to one decimal.)

b. Create a table showing the conditional percentages for Political Preference for each gender. (Round percentages to one decimal.)

c. Create a table showing the conditional percentages of Gender for each category of Political Preference. (Round percentages to one decimal.)

4. Use the tables you created in question 3 to answer (a) – (d).

a. What percent of the respondents were females and Democrats? What percent of the respondents were males who were Independents?

b. Were male students or female students more likely to respond they were Republicans? Include relevant percentages in your answer.

c. Were Republicans more likely to be male or female? Be sure to include relevant percentages in your answer. Explain how this question differs from (b).

d. Make a graphic display that represents the distribution of Political Preference for each gender. Compare the political preferences of the 12th grade male students to the 12th grade female students.