1-9 Statistics: Analyzing Data by Using Tables and Graphs *(Pages 50–55)*

Numerical information, or **data**, can be analyzed using a variety of means. In basic statistics, the most common forms of data representation are tables, bar graphs, circle graphs, and line graphs. A **table** displays individual pieces of data in row and column form. **Bar graphs** are picture representations of data that consist of a series of rectangles, or bars, that compare different categories of data. Bar graphs can also display multiple sets or types of data simultaneously. A **circle graph** represents data as a piece, or percentage, of a whole set. The total pieces, or percentages, in a circle graph should have a sum of 100%. **Line graphs** consist of a series of ordered pairs that are connected to form a line. A line graph is particularly useful when displaying change. Also, a line graph can be beneficial when making predictions of future change or future trends.

Example

Malik collected the following data from his classmates. The data are a representation of the month in which the birthday of each of Malik's 25 classmates occurs.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Boys	1	0	2	1	0	2	2	0	1	1	1	1
Girls	2	1	1	3	0	0	2	2	0	1	0	1
Total	3	1	3	4	0	2	4	2	1	2	1	2

Practice

Use the table above to answer each question.

1. How many total students in Malik's class have a birthday in either January or February?
   a. 3   **b.** 4   **c.** 5

2. How many more students have a birthday in July than in June?
   a. 0   **b.** 1   **c.** 2

3. **Standardized Test Practice** Malik would like to display the data he collected in a different form. He would like to make a graph that would compare the number of boys' birthdays to the number of girls' birthdays for each month. Which type of graph should he construct to show the comparison of the two different types of data?
   A bar graph   **B** circle graph   **C** line graph

Answers: 1. b 2. c 3. A