

**Additional Practice****Investigation 1****Data Distributions**

For Exercises 1 and 2, use the table below.

**New M&M's® Candies**

Bag #	Green	Yellow	Orange	Blue	Brown	Red	Total
1	14	7	8	10	17	3	59
2	14	10	16	7	7	3	57
3	14	17	7	11	9	2	60
4	13	13	8	11	6	7	58
5	15	11	7	15	6	5	59
6	11	6	16	14	5	5	57
7	20	9	8	13	7	2	59
8	10	14	8	14	10	3	59
9	17	11	8	14	10	3	63
10	17	10	14	14	4	2	61
11	14	11	11	5	9	7	57
12	9	7	20	8	12	1	57
13	12	13	9	17	7	2	60
14	8	8	12	11	17	4	60
15	18	8	13	9	7	4	59
<b>TOTAL</b>							

1.
  - a. On a separate piece of paper, make a bar graph for each set of data for Bags 1, 2, and 3. Each bar graph shows the percent of all candies for each color found in that bag.
  - b. Write two or more comparison statements that describe the data for the three bags of candy.
  
2.
  - a. Determine the totals for each color of M&M's candies found in all 15 bags. On a separate piece of paper, make a bar graph for these data that shows percent of all candies for each color found in the fifteen bags.
  - b. Describe the data by writing two or more comparison statements.
  
  - c. Compare this graph with the graphs you made for the Bags 1, 2, and 3 of M&M's candies. Is there some plan to the distribution of colors in bags of M&M's candies? Explain your reasoning.

**Additional Practice** *(continued)***Investigation 1****Data Distributions**

For Exercises 3–5, use the table of data.

**Immigrants to the United States**

Decade	Immigrants From Canada	Total Immigrants	Percent of Immigrants From Canada
1820	209	8,385	2%
1821–30	2,277	143,439	2%
1831–40	13,624	599,125	2%
1841–50	41,723	1,713,251	2%
1851–60	59,309	2,598,214	2%
1861–70	153,878	2,314,824	7%
1871–80	383,640	2,812,191	14%
1881–90	393,304	5,246,613	7%
1891–1900	3,311	3,687,564	0%
1901–10	179,226	8,795,386	2%
1911–20	742,185	5,735,811	13%
1921–30	924,515	4,107,209	23%
1931–40	108,527	528,431	21%
1941–50	171,718	1,035,039	17%
1951–60	377,952	2,515,479	15%
1961–70	413,310	3,321,677	12%
1971–80	169,939	4,493,314	4%
1981–90	156,938	7,338,062	2%
1991–1996	127,481	9,095,417	1%

Source: Brownstone, D. M. & Franck, I. M. (2001). *Facts about the American immigration*, Bronx, NY: H. W. Wilson, p. 487.

3. a. In each of the decades from 1911–1920 and 1941–1950, how many people immigrated from Canada?
- b. Add these bars to the bar graph of Exercise 5 titled, “Number of Immigrants from Canada.”

**Additional Practice** *(continued)***Investigation 1****Data Distributions**

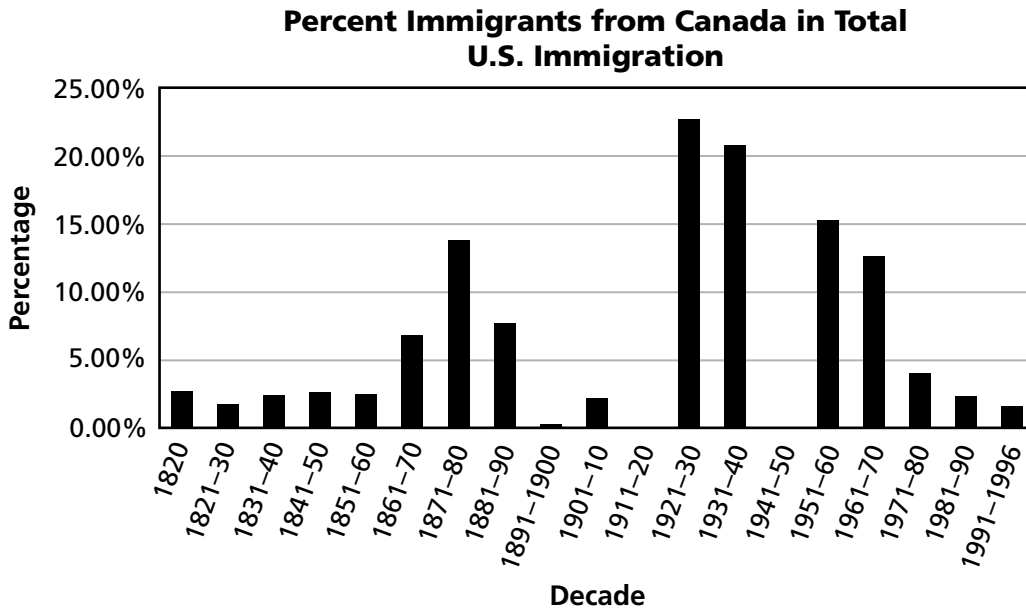
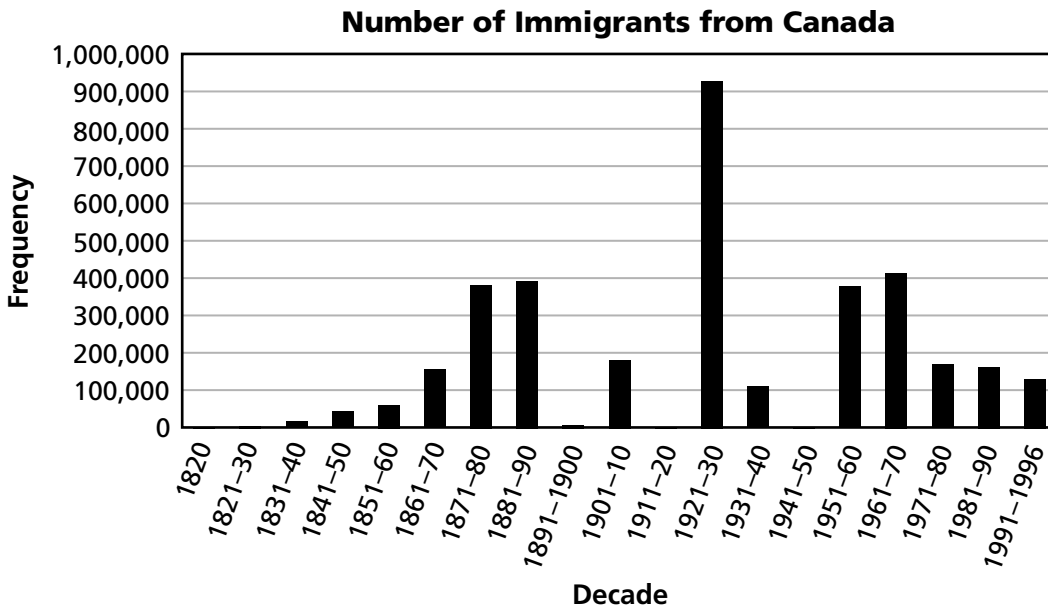
- c. Which of the statements below are true?
- i. There are more immigrants who came to the U.S. in the decade between 1911–20 than in 1941–50.
  - ii. About the same number of immigrants came to the U.S. in the decade between 1911–20 and in the decade between 1941–50.
  - iii. The number of immigrants in the decade between 1911–20 is about 250,000 more than the number of immigrants who came to the U.S. in the decade between 1941–50.
  - iv. None of the above is true.
  - v. All of the above are true.
4. a. In each of the decades from 1911–1920 and 1941–1950, how many people were immigrants to the U.S. from all countries?
- b. What percent of each of these numbers were immigrants from Canada?
- c. Add these bars to a copy of the bar graph from Exercise 5 titled, “Percentage of Immigrants from Canada in Total U.S. Immigration.”
- d. Write two comparison statements about how these data values are similar to or different from the data values for other decades.

**Additional Practice** *(continued)*

**Investigation 1**

**Data Distributions**

5. a. How has the pattern of immigration from Canada to the United States changed between 1820 and 1996? Explain.



- b. What does it mean that the bar for 1931-40 looks so different on the two bar graphs above?

**Additional Practice** *(continued)***Investigation 1****Data Distributions**

For Exercise 6, use the table.

**US Population by Region (in millions)**

	Northeast	Midwest	South	West	TOTAL
1980	49.1	58.9	75.4	43.2	
1985	49.9	58.8	81.4	47.8	
1990	50.8	59.7	85.5	52.8	
1995	51.5	61.7	92.0	57.7	

**Percent of US Population by Region**

	Northeast	Midwest	South	West
1980				
1985				
1990				
1995				

6. a. For each year, determine the total population and percent of the total population found in each region. Record this information in the two tables.
- b. On a separate paper, make a bar graph for each region showing the percent of population for each of the four years shown. You will have four bar graphs, each of which has four bars, one for each of the years 1980, 1985, 1990, and 1995.
- c. Which region had the greatest increase in numbers of people in the population from 1980 to 1995? Which region had the smallest increase in numbers of people in the population from 1980 to 1995?
- d. Which region had the greatest increase in percentage of total population from 1980 to 1995? Which region had the greatest decline in percentage of total population from 1980 to 1995?
- e. Write two or more comparison statements that describe the data for the four years.
- f. Which statements below are true?
- The South had the most people in each year.
  - The population in the Northeast increased from 1980 to 1995.
  - The percentage of population in the Northeast increased from 1980 to 1995.
  - The distribution of population is more uneven in 1995 than in 1980.

## Additional Practice *(continued)*

### Investigation 1

#### Data Distributions

7. Make a line plot, matching the criteria below, to show the distribution of hand widths in a class:

There are 20 students in the class.

The range of hand widths is from 8 cm to 12.5 cm.

The mode hand width is 9.5 cm; there are 6 values at the mode.

The median hand width is 9 cm.

8. Make a line plot, matching the criteria below, to show the distribution of hand widths in a class:

There are 20 students in the class

The range of hand widths is from 8 cm to 12.5 cm.

The mode hand width is 9.5 cm; there are 6 values at the mode.

The median hand width is 10 cm.