

2-2 Basic Skills and Concepts

Statistical Literacy and Critical Thinking

1. Frequency Distribution Table 2-2 on page 45 is a frequency distribution summarizing the IQ scores of a group of children with low lead exposure. Is it possible to identify the original list of the 78 individual IQ scores from Table 2-2? Why or why not?

2. Relative Frequency Distribution After construction of a relative frequency distribution summarizing the times that males spend each day thinking about females, what should be the sum of the relative frequencies?

3. Do You Believe? In a Harris Interactive survey, 2303 adults were asked whether they believe in five different things, and the accompanying table summarizes the results. Does this table describe a relative frequency distribution? Why or why not?

4. Analyzing a Frequency Distribution The accompanying frequency distribution summarizes the heights of a sample of people in Vassar Road Elementary School. What can you conclude about the people included in the sample?

In Exercises 5–10, identify the class width, class midpoints, and class boundaries for the given frequency distribution. The frequency distributions are based on real data from Appendix B.

5.

Age (years) of Best Actress When Oscar Was Won	Frequency
20–29	27
30–39	34
40–49	13
50–59	2
60–69	4
70–79	1
80–89	1

6.

Age (years) of Best Actor When Oscar Was Won	Frequency
20–29	1
30–39	26
40–49	35
50–59	13
60–69	6
70–79	1

7.

Verbal IQ Score of Subject Exposed to Lead	Frequency
50–59	4
60–69	10
70–79	25
80–89	43
90–99	26
100–109	8
110–119	3
120–129	2

8.

Years President Lived after First Inauguration	Frequency
0–4	8
5–9	2
10–14	5
15–19	7
20–24	4
25–29	6
30–34	0
35–39	1

Table for Exercise 3

Believe in the devil	60%
Believe in hell	61%
Believe in UFOs	32%
Believe in astrology	26%
Believe in reincarnation	20%

Table for Exercise 4

Height (in.)	Frequency
35–39	6
40–44	31
45–49	67
50–54	21
55–59	0
60–64	0
65–69	6
70–74	10