Chapter 3 Wrap-Up

EXTRA PRACTICE

1. Calculate a bin width that would form six uniform intervals for the following data.

(a) 5, 7, 9, 10, 11, 11, 12, 12, 12, 13, 13, 13, 13, 13, 14, 14, 14, 14, 14, 14, 15, 15, 15, 15, 16, 16, 17, 18, 20

(b) 5.1, 4.7, 8.1, 0.2, 1.1, 2.7, 4.2, 5.8, 10.2, 5.3, 2.7, 7.9, 9.1, 4.0, 4.5, 6.1, 8.8, 4.7, 10.8, 0.6, 8.4, 4.7, 6.3, 7.0, 1.4, 8.6, 2.4, 6.2, 0.4, 4.0

(c) 136, 132, 151, 142, 156, 145, 139, 164, 107, 137, 118, 156, 130, 165, 144, 106, 139, 97, 152, 165, 157, 116, 115, 145, 167, 163, 197, 127, 145, 109

2. Using the bin width calculated for each part in Question 1, create a frequency distribution and an effective histogram of the data.

3. Calculate the mean, median, and mode for the data in Question 1. Which measure best describes the central tendency of the data? Why?

4. The number of repairs performed on each car owned by ABC rental cars is listed in the table below.

Number of Repairs	0–4	5–9	10–14	15–19	20–24	25–29
Frequency	25	15	6	3	2	4

(a) Calculate the mean, median, and modal interval of the data given.

(b) Which measure is most effective in describing the distribution?

5. Listed below are the number of tech-support questions successfully answered each day by Jamil and Antonia over a two-week period.

Antonia	11	13	12	15	10	16
	14	10	10	17	14	13
Jamil	8	15	10	11	16	10
	9	15	11	13	14	17

(a) Who is the more effective employee?

(b) Who is the more consistent employee?

6. A local high school wishes to purchase light bulbs with an average life that is normally distributed 9900 h with a standard deviation of 3000 h. Assuming the lifespans of the light bulbs are normally distributed,

(a) what percent of the bulbs will last at least 13 000 h?

(b) what percent will burn out before 8000 h?