

## -CHAPTER 2

# DESCRIBING DATA: FREQUENCY TABLES, FREQUENCY DISTRIBUTIONS AND GRAPHIC PRESENTATION

### Exercise 2.1

This is the first in a series of exercises designed to check your comprehension of the material just presented. We suggest that you work all parts of the exercise.

The SaveMore Rental Car Agency at the Cincinnati airport would like to examine records from last summer in order to plan for the coming summer demand. The data for last year's demand, broken down by type of vehicle requested, is shown in the table below.

- a. Construct a frequency bar chart for the data.
- b. Construct a pie chart to display the relative frequency information.

Vehicle Type	Frequency	Relative Frequency
Sub-compact	545	0.183
Compact	892	0.299
Full-size	740	0.248
Luxury	360	0.121
SUV	280	0.094
Van	168	0.056
<b>Total</b>	2985	1.001*

\* Total is not equal to 1.000 due to rounding error.

### Exercise 2.3

The Jansen Motor Company has developed a new engine to further reduce gasoline consumption. The new engine was installed in 20 mid-sized cars and the number of miles per gallon recorded (to the nearest mile per gallon).

- a. Use the "2 to the k rule" to determine the number of classes.
- b. Determine the class interval.
- c. Develop a frequency distribution.

29	32	20	30	39
27	28	21	36	20
27	18	32	37	29
30	23	25	19	30

Car miles per gallon	Frequency
18-23	5
23-28	4
28-33	8
33-38	2
38-43	1

**Exercise 2.4**

Use the Jansen Motor Company data in Exercise 2.3 to construct a relative frequency distribution.

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**Exercise 2.5**

Use the Jansen Motor Company data in Exercise 2.3 to construct a histogram below.

