**Chapter 2: Descriptive Statistics**

1. **Name the four types of distributions. Describe the qualities of kurtosis and skewness.**

***Types:*** *normal, leptokurtic, platykurtic, and bimodal.*

***Kurtosis:*** *Often, though not always, a frequency distribution will be mound shaped. The shape of the mound is referred to as kurtosis.*

***Skewness:*** *There are two kinds of distributions, which are variations on the normal distribution, and these are called skewed distributions; positively skewed distribution are skewed to the right, and negatively skewed distributions are skewed to the left.*

1. **Describe the qualities of kurtosis and skewness.**

***Kurtosis:*** *Often, though not always, a frequency distribution will be mound shaped. The shape of the mound is referred to as kurtosis.*

***Skewness:*** *There are two kinds of distributions, which are variations on the normal distribution, and these are called skewed distributions; positively skewed distribution are skewed to the right, and negatively skewed distributions are skewed to the left.*

1. **Using the following information, construct a bar graph, and remember to label both axes of the graph. A clinical psychologist is comparing her net income for the first six months of the year. In January, she made $8,500; in February, $5,000; in March, $2,500; in April, $3,750; in May, $4,500; and in June, $4,900.**

****

1. **A psychologist studying intelligence tested the intelligence of 30 college psychology students using the Wechsler Adult Intelligence Scale–Third Edition (WAIS-III). Following is a table of the full-scale intelligence scores the psychologist obtained:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 103 | 92 | 113 | 110 | 122 | 122 |
| 115 | 100 | 133 | 111 | 131 | 108 |
| 108 | 121 | 110 | 124 | 100 | 107 |
| 98 | 110 | 109 | 127 | 99 | 111 |
| 122 | 109 | 103 | 97 | 113 | 101 |

**For the data presented above,**

1. **Create a table showing the cumulative frequency distribution of the individual scores.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Score* | *Frequency* | *Score* | *Frequency* | *Score* | *Frequency* |
| 92 | 1 | 106 | 0 | 120 | 0 |
| 93 | 0 | 107 | 1 | 121 | 1 |
| 94 | 0 | 108 | 2 | 122 | 3 |
| 95 | 0 | 109 | 2 | 123 | 0 |
| 96 | 0 | 110 | 3 | 124 | 1 |
| 97 | 1 | 111 | 2 | 125 | 0 |
| 98 | 1 | 112 | 0 | 126 | 0 |
| 99 | 1 | 113 | 2 | 127 | 1 |
| 100 | 2 | 114 | 0 | 128 | 0 |
| 101 | 1 | 115 | 1 | 129 | 0 |
| 102 | 0 | 116 | 0 | 130 | 0 |
| 103 | 2 | 117 | 0 | 131 | 1 |
| 104 | 0 | 118 | 0 | 132 | 0 |
| 105 | 0 | 119 | 0 | 133 | 1 |

1. **Create a stem-and-leaf plot of the data.**

 9 | 2 7 8 9

10 | 0 0 1 3 3 7 8 8 9 9

11 | 0 0 0 1 1 3 3 5

12 | 1 2 2 2 4 7

13 | 1 3

1. **Create a table using intervals to summarize the data.**

|  |  |
| --- | --- |
| *Interval* | *Frequency* |
| 91–95 | 1 |
| 96–100 | 5 |
| 101–105 | 3 |
| 106–110 | 8 |
| 111–115 | 5 |
| 116–120 | 0 |
| 121–125 | 5 |
| 126–130 | 1 |
| 131–135 | 2 |

*Note that the above is a sample response only, as different intervals may be used.*

1. **Based on the table you created for response 4c above, create a frequency distribution graph. Describe the graph’s shape and skewness, if any.**

*Because the graph and its description may vary depending on the intervals selected by the student, a sample answer is omitted.*