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.*

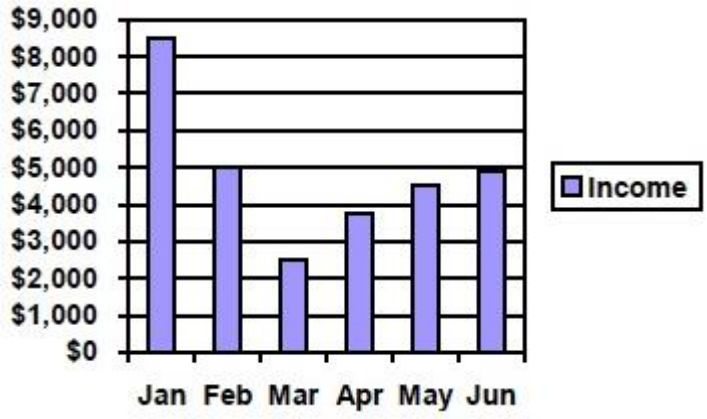
   Skewness: *There are two kinds of distributions, which are variations on the normal distribution, and these are called skewed distributions; positively skewed distribution are skewed to the right, and negatively skewed distributions are skewed to the left.*

2. **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.*

3. **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.**



4. **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,

a. **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

b. **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
```

c. **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.

5. 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.