

**2. Frequency Distribution** Use the hand lengths in Exercise 1 to construct a frequency distribution. Use a class width of 10 mm, and use 150 mm as the lower class limit of the first class.

**3. Histogram** Use the frequency distribution from Exercise 2 to construct a histogram.

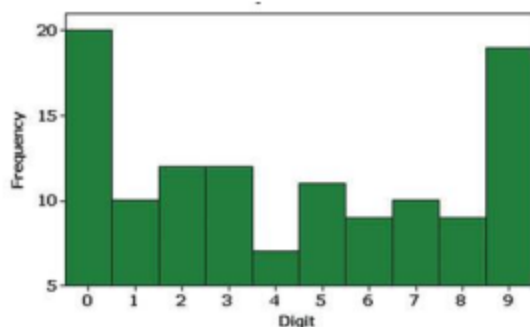
**4. Stemplot** Use the hand lengths from Exercise 1 to construct a stemplot.

**5. Descriptive Statistics** Use the hand lengths in Exercise 1 and find the following: (a) mean; (b) median; (c) standard deviation; (d) variance; (e) range. Include the appropriate units of measurement.

**6. Normal Distribution** Instead of using the hand lengths in Exercise 1, a much larger sample of hand lengths is used and a frequency distribution is created. The frequencies listed in order are 1, 8, 56, 237, 382, 228, 48, 4, 1. Does it appear that the sample is from a population having a normal distribution? Explain.

**7. Sampling** Shortly after the World Trade Center towers were destroyed, America Online ran a poll of its Internet subscribers and asked this question: "Should the World Trade Center towers be rebuilt?" Among the 1,304,240 responses, 768,731 answered "yes," 286,756 answered "no," and 248,753 said that it was "too soon to decide." Given that this sample is extremely large, can the responses be considered to be representative of the population of the United States? Explain.

**8. Histogram** The accompanying histogram depicts outcomes of digits from the California Daily 4 lottery. What is the major flaw in this histogram?



## Technology Project

When dealing with large data sets, manual entry of data can become quite tedious and time-consuming. There are better things to do with your time, such as rotating the tires on your car or folding laundry. Refer to Data Set 1 in Appendix B, which includes a variety of real body measurements from randomly selected males and females. Instead of manually entering the data, use a TI-83/84 Plus calculator or STATDISK, Minitab, Excel, StatCrunch, or any other statistics software package. Load the data sets, which are available on the CD included with this book. Identify a variable to be used as a basis for comparison between the two genders. Proceed to generate histograms, any other suitable graphs, and find appropriate statistics that allow you to compare the two sets of data. Are there any outliers? Do both data sets have properties that are basically the same? Are there any significant differences? What would be a consequence of having significant differences? Write a brief report including your conclusions and supporting graphs.