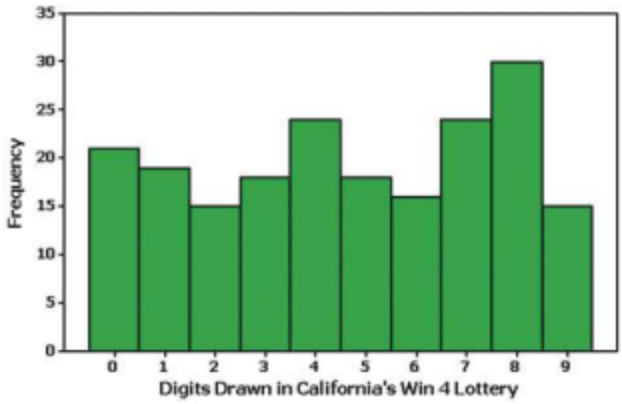
9. Lottery: Interpreting a Graph Shown below is a histogram of digits selected in California's Win 4 lottery. Each drawing involves the random selection (with replacement) of four digits between 0 and 9 inclusive.

a. If the lottery works correctly, what should be the shape of the histogram in the long run? Does the histogram shown here depict the expected distribution?

b. Does the display depict a normal distribution? Why or why not?



10. Lottery: Goodness-of-Fit The bars in the histogram included with Exercise 9 depict these frequencies: 21, 19, 15, 18, 24, 18, 16, 24, 30, and 15. Test the claim that the digits are selected from a population in which the digits are all equally likely. Is there a problem with the lottery?

Technology Project

Chocolate Chips Revisited The Chapter Problem for Chapter 3 includes counts of chocolate chips in cookies from five different brands. The counts were obtained by the author. Use the counts listed in Table 3-1 with technology to conduct a test of the null hypothesis that the brands of Chips Ahoy (regular), Chips Ahoy (chewy), Chips Ahoy (reduced fat), Keebler, and Hannaford have the same mean number of chocolate chips. Obtain a printout of the results from technology. (If using a TI-83/84 Plus calculator, write the exact results displayed on the screen.) Write a brief report that includes comments about a check of the requirements and a statement of the final conclusion. After completing the analysis of variance test, explore the data and comment on any notable differences among the numbers of chocolate chips in the five brands.