b. If a Boeing 767-300 aircraft is full of 213 adult male passengers and each is assumed to have 20 lb of carry-on baggage, find the probability that the mean passenger weight (including carry-on baggage) is greater than 195 lb. Based on that probability, does a pilot have to be concerned about exceeding this weight limit?

8. Assessing Normality Listed below are the current salaries (in thousands of dollars) of players on the New York Yankees baseball team.

a. Do these salaries appear to come from a population that has a normal distribution? Why or why not?

b. Can the mean of this sample be treated as a value from a population having a normal distribution? Why or why not?

403	1250	16500	1400	6000	433	403	13000	414	21600	3750	13000	2125
6550	400	5500	13100	422	455	15000	33000	15286	5400	20625	433	5000

9. Genetics Experiment In one of Mendel's experiments with plants, 1064 offspring consisted of 787 plants with long stems. According to Mendel's theory, 3/4 of the offspring plants should have long stems. Assuming that Mendel's proportion of 3/4 is correct, find the probability of getting 787or fewer plants with long stems among 1064 offspring plants. Based on the result, is 787 offspring plants with long stems unusually low? What does the result imply about Mendel's claimed proportion of 3/4?

10. Job Applicant Background Check There is an 80% chance that a prospective employer will check the educational background of a job applicant (based on data from the Bureau of National Affairs, Inc.). Sixty-four job applications are randomly selected.

a. Find the probability that at least 50 of the applicants have their educational backgrounds checked.

b. Find the probability that exactly 50 of the applicants have their educational backgrounds checked.

Cumulative Review Exercises

Please be aware that some of the following problems may require knowledge of concepts presented in previous chapters.

1. Miami Heat The following are current annual salaries (in thousands of dollars) for the starting players on the Miami Heat basketball team: 14,500, 14,500, 14,000, 5000, 3500.

a. Find the mean $\bar{x}$ and express the result in dollars instead of thousands of dollars.

b. Find the median and express the result in dollars instead of thousands of dollars.

c. Find the standard deviation s and express the result in dollars instead of thousands of dollars.

d. Find the variance s^2 and express the result in appropriate units.

e. Convert the first salary of $14,500,000 to a z score.

f. What level of measurement (nominal, ordinal, interval, ratio) describes this data set?

g. Are the salaries discrete data or continuous data?

h. Do the given salaries appear to be representative of all players for the Miami Heat team? Why or why not?