

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

**Find the mean of the data.**

- 1) Jody got a bank statement each month that listed the balance, in dollars, in her checking account. Here are the balances on several statements. 1) \_\_\_\_\_

\$315.89    \$486.78    \$247.65    \$357.35    \$469.70  
\$512.81    \$302.17    \$372.42    \$352.59

Round your answer to the nearest cent.

- A) \$427.17            B) \$357.35            C) \$379.71            D) \$488.19            E) \$373.04

**Find the median of the data.**

- 2) A store manager kept track of the number of newspapers sold each week. The results are shown below. 2) \_\_\_\_\_

34 19 229 104 269 245 232

- A) 232 newspapers  
B) 229 newspapers  
C) 269 newspapers  
D) 162 newspapers  
E) 104 newspapers

**Solve the problem.**

- 3) The weights, in pounds, of 18 randomly selected adults are given below. Find the range. 3) \_\_\_\_\_

120 165 187 143 119 132  
127 156 179 159 180 202  
114 146 151 168 173 144

- A) 78 lb  
B) (120, 202) lb  
C) (114, 202) lb  
D) 88 lb  
E) 202 lb

- 4) The ages of the 21 members of a track and field team are listed below. Find the standard deviation. 4) \_\_\_\_\_

15 18 18 19 22 23 24  
24 24 25 25 26 26 27  
28 28 30 32 33 40 42

- A) 6.5                    B) 6.4                    C) 6.6                    D) 6.7                    E) 6.3

**Identify potential outliers, if there are any, in the given data.**

5) The test scores of 15 students are listed below.

5) \_\_\_\_\_

34 49 55 65 67  
69 71 72 75 76  
79 82 87 90 99

- A) 34                      B) 34, 49                      C) 99                      D) 34, 99                      E) None

**Use summary statistics to answer the question.**

6) Here are the summary statistics for the monthly payroll for an accounting firm:

6) \_\_\_\_\_

lowest salary = \$60,000, mean salary = \$140,000, median = \$100,000, range = \$240,000, IQR = \$120,000, first quartile = \$70,000, standard deviation = \$80,000.

Suppose that business has been good and the company gives every employee a \$10,000 raise. Give the new value of each of the summary statistics.

- A) Minimum: 70,000; Mean: 140,000; Median: 110,000; Range: 240,000;  
IQR: 120,000; Q1: 80,000; SD: 80,000  
B) Minimum: 70,000; Mean: 150,000; Median: 110,000; Range: 240,000;  
IQR: 120,000; Q1: 80,000; SD: 80,000  
C) Minimum: 60,000; Mean: 150,000; Median: 110,000; Range: 240,000;  
IQR: 120,000; Q1: 80,000; SD: 80,000  
D) Minimum: 60,000; Mean: 140,000; Median: 100,000; Range: 240,000;  
IQR: 120,000; Q1: 80,000; SD: 80,000  
E) Minimum: 70,000; Mean: 150,000; Median: 100,000; Range: 240,000;  
IQR: 120,000; Q1: 80,000; SD: 80,000

7) Here are some summary statistics for the recent English exam: lowest score = 33, mean score = 68, median = 82.2, range = 77, IQR = 59, Q1 = 27, standard deviation = 8.3. Between what two values are the middle 50% of the scores found?

7) \_\_\_\_\_

- A) 17 and 51  
B) 68 and 82.2  
C) 27 and 86  
D) 33 and 110  
E) 20.55 and 61.65

**Find the number of standard deviations from the mean. Round to the nearest hundredths.**

8) The mean test score on the Chapter 5 mathematics test was 52 with a standard deviation of 14. How many standard deviations from the mean is a test score of 95?

8) \_\_\_\_\_

- A) About 3.07 standard deviations above the mean  
B) About 0.55 standard deviations above the mean  
C) About 0.40 standard deviations above the mean  
D) About 0.40 standard deviations below the mean  
E) About 3.07 standard deviations below the mean

- 9) The average number of average number of hours per day a college student spends on homework is 6 hours with a standard deviation of 0.75 hours. How many standard deviations from the mean is 2 hours spent on homework? 9) \_\_\_\_\_
- A) About 5.33 standard deviations above the mean
  - B) About 2.67 standard deviations below the mean
  - C) About 2.67 standard deviations above the mean
  - D) About 5.33 standard deviations below the mean
  - E) About 3.00 standard deviations above the mean

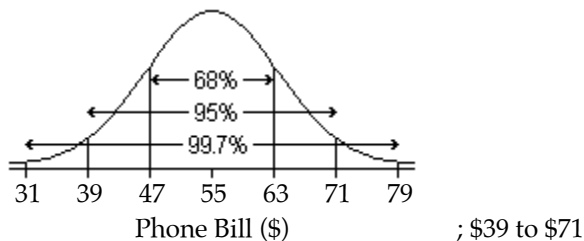
**Solve the problem.**

- 10) A town's snowfall in December averages 19 inches with a standard deviation of 8 inches while in February, the average snowfall is 43 inches with a standard deviation of 14 inches. In which month is it more likely to snow 32 inches? Explain. 10) \_\_\_\_\_
- A) It is equally likely in either month. One can't predict Mother Nature.
  - B) December. Snowfall of 32 inches is  $-\frac{11}{14}$  from the mean while snowfall of 32 inches is  $\frac{13}{8}$  from the mean in February.
  - C) February. Snowfall of 32 inches is  $\frac{13}{8}$  from the mean while snowfall of 32 inches is  $-\frac{11}{14}$  from the mean in December.
  - D) December. Snowfall of 32 inches is  $\frac{13}{8}$  from the mean while snowfall of 32 inches is  $-\frac{11}{14}$  from the mean in February.
  - E) February. Snowfall of 32 inches is  $-\frac{11}{14}$  from the mean while snowfall of 32 inches is  $\frac{13}{8}$  from the mean in December.

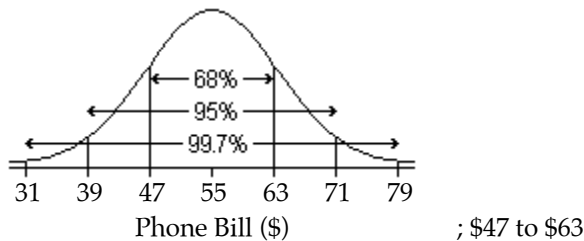
**Draw the Normal model and use the 68–95–99.7 Rule to answer the question.**

- 11) The amount of Jen's monthly phone bill is normally distributed with a mean of \$55 and a standard deviation of \$8. Draw and label the Normal model for Jen's monthly phone bill. In what interval would you expect the central 68% of bills to be found? 11) \_\_\_\_\_

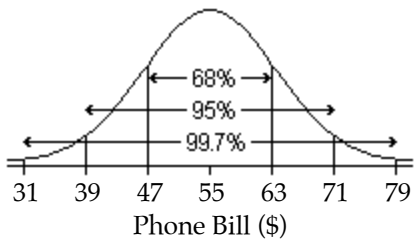
A)



B)

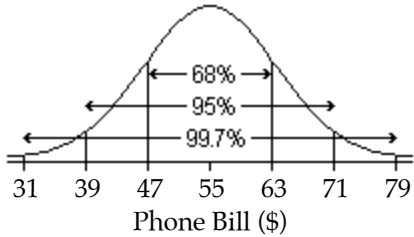


C)



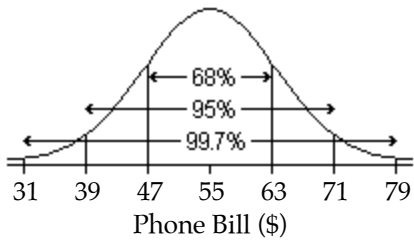
; \$31 to \$79

D)



; \$39 to \$63

E)

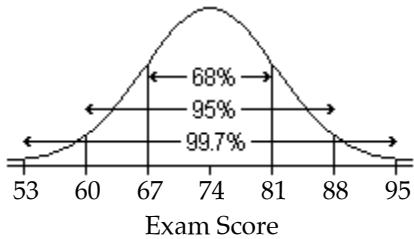


; \$47 to \$71

12) An English instructor gave a final exam and found a mean score of 74 points and a standard deviation of 7.0 points. Assume that a Normal model can be applied. Draw and label the Normal model for the exam scores. What percent of scores should be between 81 and 88 points?

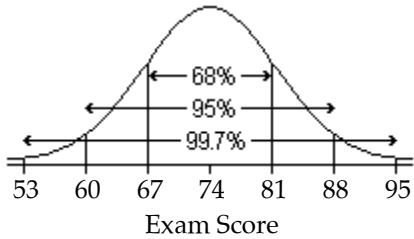
12) \_\_\_\_\_

A)



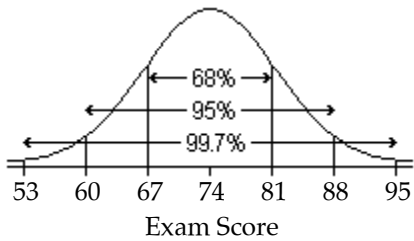
; 32%

B)



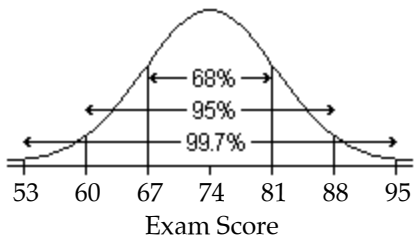
; 27%

C)



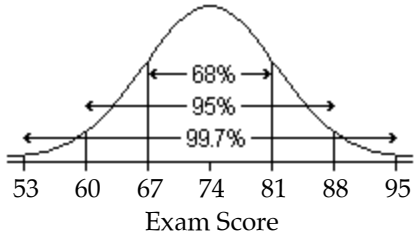
; 16%

D)



; 13.5%

E)

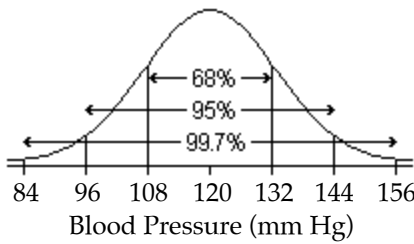


; 35.2857143%

13) The systolic blood pressure of 18-year-old women is normally distributed with a mean of 120 mm Hg and a standard deviation of 12 mm Hg. Draw and label the Normal model for systolic blood pressure. What percentage of 18-year-old women have a systolic blood pressure between 96 mm Hg and 144 mm Hg?

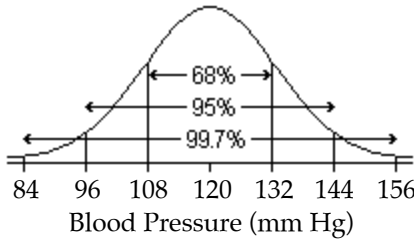
13) \_\_\_\_\_

A)



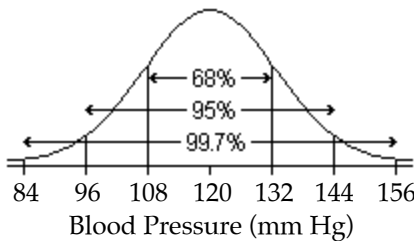
; 34%

B)



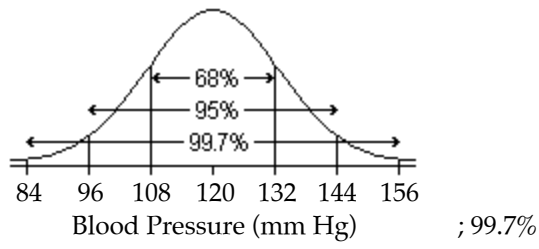
; 84%

C)

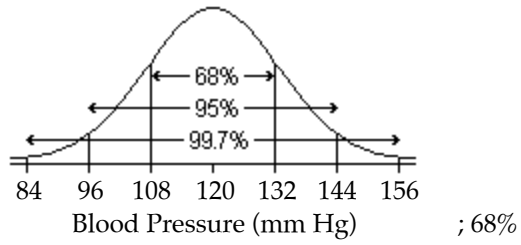


; 95%

D)



E)



## Answer Key

Testname: CHAPTER 5-6 IN CLASS EXERCISES

- 1) C
- 2) B
- 3) D
- 4) D
- 5) A
- 6) B
- 7) C
- 8) A
- 9) D
- 10) E
- 11) B
- 12) D
- 13) C