

Name _____

Each of the 16 questions is worth 7 points for a total of 112 possible points.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**Find the mean for the given sample data.**

- 1) Six college buddies bought each other Christmas gifts. They spent: 1) _____
 \$283.06 \$162.93 \$266.58
 \$263.07 \$184.60 \$276.02
 What was the mean amount spent? Round your answer to the nearest cent.
 A) \$359.07 B) \$275.25 C) \$239.38 D) \$287.25

Find the median for the given sample data.

- 2) The weights (in ounces) of 21 cookies are shown. Find the median weight. 2) _____
 0.76 1.45 0.87 1.62 0.67 0.61 1.38
 1.45 1.53 0.98 0.76 1.14 1.23 0.77
 0.47 1.14 0.61 1.23 1.72 0.67 0.56
 A) 1.45 ounces B) 0.88 ounces C) 0.98 ounces D) 0.77 ounces

Classify the variable as categorical or quantitative.

- 3) The verdict of a jury 3) _____
 A) Quantitative B) Categorical
- 4) A monthly electric bill in dollars 4) _____
 A) Quantitative B) Categorical

Find the mean of the data.

- 5) Here are the number of hours that Bill has exercised each week since he started keeping records. 5) _____
 7.4 6.9 7.2 6.7 8.3 7.4
 8.7 7.2 6.8 7.4 6.7 6.9
 6.7 6.9 6.9 8.2 8.3 8.7

Round your answer to the nearest tenth.

- A) 9.3 hours B) 7.6 hours C) 7.0 hours D) 7.8 hours E) 7.4 hours

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

- 6) Here are the highest temperatures ever recorded (in °F) in 32 different U.S. states: 6) _____
 100 100 105 105 106 106 107 107
 108 110 110 112 112 112 114 114
 114 115 116 117 118 118 118 118
 118 119 120 121 122 125 128 134
 A) 134 B) 100 C) 128, 134 D) 100, 134 E) None

Solve the problem.

- 7) Which set has the largest standard deviation? 7) _____

Set 1	Set 2
3 8 8 8 11	3 7 8 9 11

- A) Neither, because set 1 and set 2 have the same standard deviation.
- B) Set 2, because 8 and 8 in set 2 are farther from 8 than 7 and 9 in set 1.
- C) Set 2, because 7 and 9 in set 2 are farther from 8 than 8 and 8 in set 1.
- D) Set 1, because 8 and 8 in set 1 are farther from 8 than 7 and 9 in set 2.
- E) Set 1, because 7 and 9 in set 1 are farther from 8 than 8 and 8 in set 2.

- 8) Here are the commutes (in miles) for a group of six employees. Find the standard deviation. 8) _____

14.7 16.3 34.0 33.7 22.6 16.0

- A) 8.93
- B) 3141.9
- C) 3540.2
- D) 22.6
- E) 33.9

- 9) The test scores of 19 students are listed below. Find the range. 9) _____

91 99 86 54 72
 85 97 91 90 66
 82 83 78 88 77
 80 92 94 98

- A) (54, 99)
- B) 44
- C) 45
- D) (66, 99)
- E) 33

- 10) The weekly salaries (in dollars) of 24 randomly selected employees of a company are shown below. 10) _____

310 320 450 460 470 500 520 540
 580 600 650 700 710 840 870 900
 1000 1200 1250 1300 1400 1720 2500 3700

Find the mean and the median. Which is the most appropriate measure of center?

- A) Mean: \$979; Median: \$705
 The median is the most appropriate measure of center, because of the outliers.
- B) Mean: \$979; Median: \$705
 The median is the most appropriate measure of center, because the outliers are not significant in the distribution.
- C) Mean: \$979; Median: \$705
 The mean is the most appropriate measure of center, because the outliers are not significant in the distribution.
- D) Mean: \$979; Median: \$705
 The mean is the most appropriate measure of center, because of the outliers.
- E) Mean: \$942; Median: \$700
 The median is the most appropriate measure of center, because of the outliers.

Use summary statistics to answer the question.

- 11) Here are some statistics for the annual Wildcat golf tournament: lowest score = 60, mean score = 93, median = 101, range = 90, IQR = 96, Q1 = 37, standard deviation = 12. Suppose it was very windy and all the golfers' scores went up by 7 strokes. Tell the new value for each of the summary statistics. 11) _____
- A) Lowest score: 67, mean: 100, median: 108, range: 83, IQR: 96, Q1: 44, SD: 12
 - B) Lowest score: 67, mean: 100, median: 108, range: 83, IQR: 96, Q1: 44, SD: 19
 - C) Lowest score: 67, mean: 100, median: 108, range: 90, IQR: 96, Q1: 44, SD: 12
 - D) Lowest score: 67, mean: 100, median: 108, range: 83, IQR: 103, Q1: 44, SD: 12
 - E) Lowest score: 67, mean: 93, median: 101, range: 83, IQR: 96, Q1: 44, SD: 12
- 12) Here are some summary statistics for annual snowfall in a certain town compiled over the last 15 years: lowest amount = 10 inches, mean = 41 inches, median = 34 inches, range = 90 inches, IQR = 51, Q1 = 16, standard deviation = 10 inches. Between what two values are the middle 50% of snowfall found? 12) _____
- A) 16 and 67
 - B) 8.5 and 25.5
 - C) 41 and 34
 - D) 10.25 and 30.75
 - E) 10 and 100

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

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

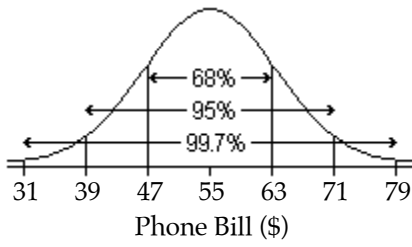
Solve the problem.

- 14) The mean weights for medium navel oranges is 9.8 ounces. Suppose that the standard deviation for the oranges is 3.3 ounces. Which would be more likely, an orange weighing 14 ounces or an orange weighing 4.9 ounces? Explain. 14) _____
- A) A 14 ounce orange is more likely ($z = -1.48$) compared with an orange weighing 4.9 ounces ($z = 1.27$).
 - B) A 4.9 ounce orange is more likely ($z = 1.27$) compared with an orange weighing 14 ounces ($z = -1.48$).
 - C) A 14 ounce orange is more likely ($z = 1.27$) compared with an orange weighing 4.9 ounces ($z = -1.48$).
 - D) A 4.9 ounce orange is more likely ($z = 1.48$) compared with an orange weighing 14 ounces ($z = 4.24$).
 - E) A 4.9 ounce orange is more likely ($z = -1.48$) compared with an orange weighing 14 ounces ($z = 1.27$).

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

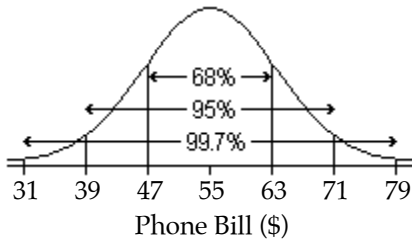
- 15) The amount of Jen's monthly phone bill is normally distributed with a mean of \$55 and a standard deviation of \$8. Draw and label the Normal model for Jen's monthly phone bill. In what interval would you expect the central 68% of bills to be found? 15) _____

A)



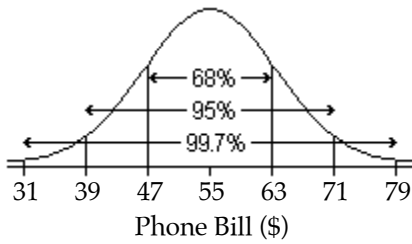
; \$47 to \$71

B)



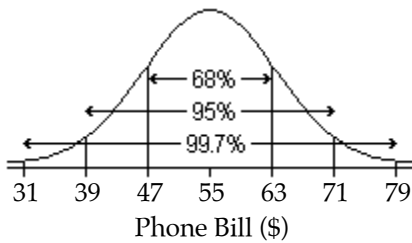
; \$47 to \$63

C)



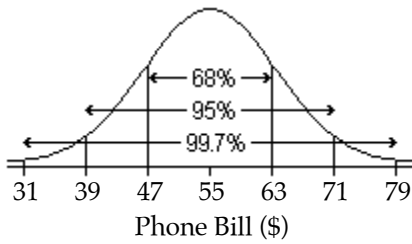
; \$31 to \$79

D)



; \$39 to \$71

E)

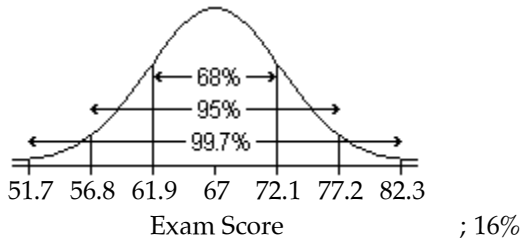


; \$39 to \$63

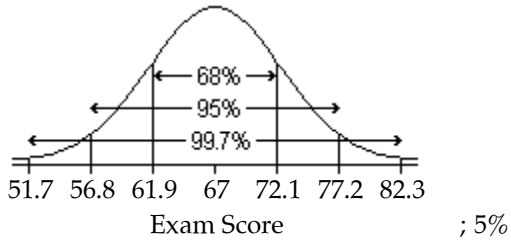
16) An English instructor gave a final exam and found a mean score of 67 points and a standard deviation of 5.1 points. Assume that a Normal model can be applied. Draw and label the Normal model for the exam scores. Then find the percent of scores above 72.1 points.

16) _____

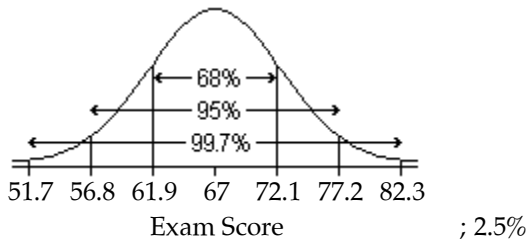
A)



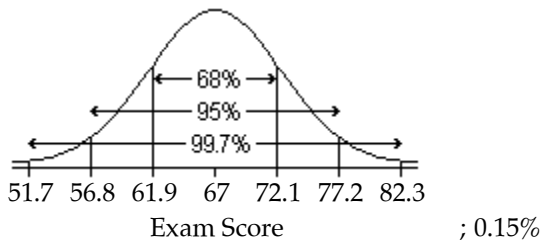
B)



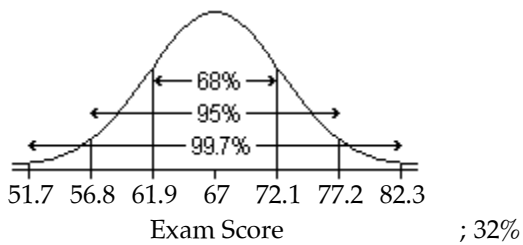
C)



D)



E)



Answer Key

Testname: QUIZ1

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