

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

Find the mean for the given sample data.

- 1) The local Tupperware dealers earned these commissions last month: 1) _____
- \$4814.12 \$1765.45 \$4682.07 \$1259.14
 \$1393.03 \$2129.30 \$2162.67
 \$2334.58 \$3823.00 \$1876.20

What was the mean commission earned? Round your answer to the nearest cent.

- A) \$2617.96 B) \$3279.95 C) \$2915.51 D) \$2623.96

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) 0.77 ounces B) 1.45 ounces C) 0.98 ounces D) 0.88 ounces

Solve the problem.

- 3) The harmonic mean is often used as a measure of center for data sets consisting of rates of change, such as speeds. It is found by dividing the number of values (n) by the sum of the reciprocals of all values, expressed as 3) _____

$$\frac{n}{\sum(1/x)}$$

Pierre drives to work (a distance of 49 miles) at a speed of 66 mi/h and returns home at a speed of 52 mi/h. What is his average speed for the round trip? Use the harmonic mean.

- A) 59.9 mi/h B) 58.2 mi/h C) 59.0 mi/h D) 58.6 mi/h

Find the range for the given data.

- 4) Jeanne is currently taking college economics. The instructor often gives quizzes. On the past five quizzes, Jeanne got the following scores: 4) _____
- 6 16 1 14 10
- Compute the range.
- A) 1 B) 4 C) 16 D) 15

Find the standard deviation for the given data. Round your answer to one more decimal place than the original data.

- 5) 2, 6, 15, 9, 11, 22, 1, 4, 8, 19 5) _____
- A) 6.3 B) 6.8 C) 2.1 D) 7.1

Use the empirical rule to solve the problem.

- 6) The systolic blood pressure of 18-year-old women is normally distributed with a mean of 120 mmHg and a standard deviation of 12 mmHg. What percentage of 18-year-old women have a systolic blood pressure between 96 mmHg and 144 mmHg? 6) _____
- A) 99.74% B) 68.26% C) 95.44% D) 89.99%

Solve the problem.

- 7) The heights of the adults in one town have a mean of 67.2 inches and a standard deviation of 3.5 inches. What can you conclude from Chebyshev's theorem about the percentage of adults in the town whose heights are between 60.2 and 74.2 inches? 7) _____
- A) The percentage is at most 95% B) The percentage is at most 75%
C) The percentage is at least 75% D) The percentage is at least 95%

Solve the problem. Round results to the nearest hundredth.

- 8) Scores on a test have a mean of 73 and a standard deviation of 8. Michelle has a score of 57. 8) _____
Convert Michelle's score to a z-score.
- A) 16 B) -16 C) -2 D) 2

Find the z-score corresponding to the given value and use the z-score to determine whether the value is unusual. Consider a score to be unusual if its z-score is less than -2.00 or greater than 2.00. Round the z-score to the nearest tenth if necessary.

- 9) A test score of 52.8 on a test having a mean of 68 and a standard deviation of 8. 9) _____
- A) -15.2; unusual B) -1.9; unusual
C) 1.9; not unusual D) -1.9; not unusual

Determine which score corresponds to the higher relative position.

- 10) Which is better, a score of 92 on a test with a mean of 71 and a standard deviation of 15, or a score of 688 on a test with a mean of 493 and a standard deviation of 150? 10) _____
- A) A score of 688
B) A score of 92
C) Both scores have the same relative position.

Find the indicated measure.

- 11) Use the given sample data to find Q₃. 11) _____
49 52 52 52 74 67 55 55
- A) 6.0 B) 67.0 C) 61.0 D) 55.0

Provide an appropriate response.

- 12) Human body temperatures have a mean of 98.20° F and a standard deviation of 0.62°. Sally's temperature can be described by $z = 1.5$. What is her temperature? Round your answer to the nearest hundredth. 12) _____
- A) 99.70°F B) 100.62°F C) 99.13°F D) 97.27°F

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 13) On an exam on probability concepts, Sue had an answer of $\frac{13}{8}$ for one problem. Explain how she knew that this result was incorrect. 13) _____
- 14) What important question must you answer before computing an "or" probability? How does the answer influence your computation? 14) _____

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

Answer the question.

- 15) What is the probability of an impossible event? 15) _____
A) 1 B) 0 C) -1 D) 0.1

Find the indicated probability.

- 16) A bag contains 6 red marbles, 3 blue marbles, and 7 green marbles. If a marble is randomly selected from the bag, what is the probability that it is blue? 16) _____
A) $\frac{1}{7}$ B) $\frac{1}{13}$ C) $\frac{3}{16}$ D) $\frac{1}{3}$
- 17) A class consists of 82 women and 40 men. If a student is randomly selected, what is the probability that the student is a woman? 17) _____
A) $\frac{41}{61}$ B) $\frac{41}{20}$ C) $\frac{20}{61}$ D) $\frac{1}{122}$

Determine whether the events are mutually exclusive.

- 18) Read a book by Mark Twain. 18) _____
Read about Tom Sawyer.
A) Yes B) No

Find the indicated probability.

- 19) The probability that Luis will pass his statistics test is 0.40. Find the probability that he will fail his statistics test. 19) _____
A) 0.20 B) 2.50 C) 0.60 D) 0.67

- 20) The table below describes the smoking habits of a group of asthma sufferers. 20) _____

	Nonsmoker	Occasional smoker	Regular smoker	Heavy smoker	Total
Men	345	40	78	50	513
Women	417	36	72	37	562
Total	762	76	150	87	1075

If one of the 1075 people is randomly selected, find the probability of getting a regular or heavy smoker.

- A) 0.540 B) 0.140 C) 0.119 D) 0.220
- 21) A study of consumer smoking habits includes 183 people in the 18-22 age bracket (51 of whom smoke), 141 people in the 23-30 age bracket (37 of whom smoke), and 88 people in the 31-40 age bracket (26 of whom smoke). If one person is randomly selected from this sample, find the probability of getting someone who is age 23-30 or smokes. 21) _____
A) 0.09 B) 0.619 C) 0.529 D) 0.262
- 22) Find the probability of correctly answering the first 3 questions on a multiple choice test if random guesses are made and each question has 5 possible answers. 22) _____
A) $\frac{5}{3}$ B) $\frac{3}{5}$ C) $\frac{1}{243}$ D) $\frac{1}{125}$

- 23) In one town, 71% of adults have health insurance. What is the probability that 4 adults selected at random from the town all have health insurance? 23) _____
- A) 2.84 B) 0.71 C) 0.254 D) 0.056

Answer Key

Testname: SAMPLE TEST1

- 1) D
- 2) C
- 3) B
- 4) D
- 5) D
- 6) C
- 7) C
- 8) C
- 9) D
- 10) B
- 11) C
- 12) C
- 13) Probabilities cannot exceed 1.
- 14) Are the events mutually exclusive or might the events occur simultaneously? If the events can occur simultaneously you must be careful to count so that each outcome is counted only once.
- 15) B
- 16) C
- 17) A
- 18) B
- 19) C
- 20) D
- 21) C
- 22) D
- 23) C