

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

Find the mean for the given sample data.

- 1) Frank's Furniture employees earned the following amounts last week: 1) _____
 \$289.00 \$325.36 \$470.72 \$240.75 \$294.84
 \$256.08 \$211.10 \$188.50 \$162.65
 What was the mean amount earned by an employee last week? Round your answer to the nearest cent.
 A) \$271.00 B) \$264.33 C) \$348.43 D) \$304.88

Find the median for the given sample data.

- 2) The distances traveled (in miles) to 7 different swim meets are given below: 2) _____
 22, 24, 39, 45, 65, 68, 84
 Find the median distance traveled.
 A) 45 miles B) 39 miles C) 50 miles D) 65 miles

Find the mode(s) for the given sample data.

- 3) -20, -36, -46, -36, -49, -36, -45 3) _____
 A) -38.9 B) -36 C) -46 D) -49

Solve the problem.

- 4) The quadratic mean (or root mean square) is usually used in physical applications. In power distribution systems, for example, voltages and currents are usually referred to in terms of their root mean square value. The quadratic mean of a set of values is obtained by squaring each value, adding the results, dividing by the number of values (n), and then taking the square root of that result, expressed as 4) _____

$$\text{quadratic mean} = \sqrt{\frac{\sum x^2}{n}}$$

Find the root mean square of these power supplies (in volts): 63, 1, 91, 108.

- A) 65.8 volts B) 77.3 volts C) 131.5 volts D) 38.7 volts

Find the range for the given data.

- 5) Jeanne is currently taking college economics. The instructor often gives quizzes. On the past five quizzes, Jeanne got the following scores: 5) _____
 6 16 1 14 10
 Compute the range.
 A) 16 B) 15 C) 1 D) 4

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

- 6) 6.3, 3.8, 8.0, 4.4, and 8.8 6) _____
 A) 4.65 B) 3.80 C) 12.91 D) 4.75

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

- 7) 2, 6, 15, 9, 11, 22, 1, 4, 8, 19 7) _____
A) 2.1 B) 6.8 C) 7.1 D) 6.3

Use the empirical rule to solve the problem.

- 8) 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? 8) _____
A) 89.99% B) 99.74% C) 68.26% D) 95.44%

Solve the problem.

- 9) 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? 9) _____
A) The percentage is at most 95% B) The percentage is at least 75%
C) The percentage is at most 75% D) The percentage is at least 95%

Solve the problem. Round results to the nearest hundredth.

- 10) The mean of a set of data is -2.89 and its standard deviation is 2.73. Find the z score for a value of 5.62. 10) _____
A) 3.42 B) 3.43 C) 2.81 D) 3.12

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.

- 11) A test score of 52.8 on a test having a mean of 68 and a standard deviation of 8. 11) _____
A) -1.9; not unusual B) -15.2; unusual
C) 1.9; not unusual D) -1.9; unusual

Determine which score corresponds to the higher relative position.

- 12) 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? 12) _____
A) Both scores have the same relative position.
B) A score of 688
C) A score of 92

Find the indicated measure.

- 13) Use the given sample data to find Q₃. 13) _____
49 52 52 52 74 67 55 55
A) 6.0 B) 61.0 C) 67.0 D) 55.0

Provide an appropriate response.

- 14) 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. 14) _____
A) 99.70°F B) 99.13°F C) 97.27°F D) 100.62°F

Answer the question.

- 15) What is the probability of an event that is certain to occur? 15) _____
A) 0.99 B) 0.5 C) 1 D) 0.95

Find the indicated probability.

- 16) On a multiple choice test, each question has 7 possible answers. If you make a random guess on the first question, what is the probability that you are correct? 16) _____
A) $\frac{1}{7}$ B) 0 C) 1 D) 7
- 17) Two 6-sided dice are rolled. What is the probability that the sum of the two numbers on the dice will be 5? 17) _____
A) 4 B) $\frac{8}{9}$ C) $\frac{5}{6}$ D) $\frac{1}{9}$

Answer the question, considering an event to be "unusual" if its probability is less than or equal to 0.05.

- 18) Is it "unusual" to get 8 when a pair of dice is rolled? 18) _____
A) No B) Yes

Determine whether the events are mutually exclusive.

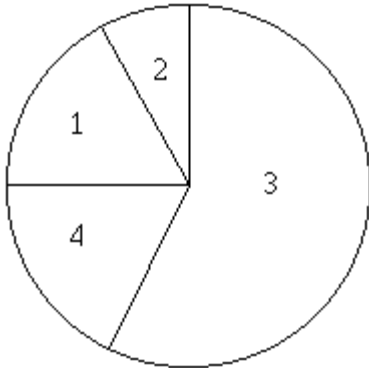
- 19) Find a ten dollar bill on the sidewalk.
Find a ten dollar bill on the grass. 19) _____
A) Yes B) No

Find the indicated probability.

- 20) A sample of 100 wood and 100 graphite tennis rackets are taken from the warehouse. If 12 wood and 13 graphite are defective and one racket is randomly selected from the sample, find the probability that the racket is wood or defective. 20) _____
A) 0.56
B) 0.125
C) 0.565
D) There is insufficient information to answer the question.

21) 100 employees of a company are asked how they get to work and whether they work full time or part time. The figure below shows the results. If one of the 100 employees is randomly selected, find the probability that the person drives alone or cycles to work.

21) _____



1. Public transportation: 6 full time, 10 part time

2. Bicycle: 4 full time, 4 part time

3. Drive alone: 31 full time, 28 part time

4. Carpool: 10 full time, 7 part time

A) 0.39

B) 0.67

C) 0.35

D) 0.59

Answer Key

Testname: SAMPLE TEST 1

- 1) A
- 2) A
- 3) B
- 4) B
- 5) B
- 6) D
- 7) C
- 8) D
- 9) B
- 10) D
- 11) A
- 12) C
- 13) B
- 14) B
- 15) C
- 16) A
- 17) D
- 18) A
- 19) B
- 20) C
- 21) B