

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

**Find the mean for the given sample data.**

1)

Bill kept track of the number of hours he spent exercising each week. The results for four months are shown below. Find the mean number of hours Bill spent exercising per week. Round your answer to two decimal places.

7.70 8.90 6.70 7.10 7.60 7.70

6.90 6.70 6.80 7.70 7.10 8.40

8.20 8.90 8.90 6.90 7.60 6.90

A) 7.81 B) 7.59 C) 8.04 D) 7.19

**Find the median for the given sample data.**

2) The salaries of ten randomly selected doctors are shown below.

\$ 148,000 \$ 116,000 \$ 169,000 \$ 207,000 \$ 244,000

\$ 142,000 \$ 113,000 \$ 817,000 \$ 219,000 \$ 193,000 the median salary.

A) \$ 181,000 B) \$ 237,000 C) \$ 263,000 D) \$ 169,000

**Find the range for the given data.**

3)

The owner of a small manufacturing plant employs six people. As part of their personnel file, she asked each one to record to the nearest one-tenth of a mile the distance they travel one way from home to work. The six distances are listed below:

2.5 5.7 1.9 4.8 6.8 3.1 the range.

A) 4.9 B) 5.7 C) 0.6 D) 1.9

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

4) The weights (in ounces) of 10 cookies are shown.

0.86 1.36 0.96 0.85 1.02

0.65 1.03 1.04 0.54 0.88 the variance.

A) 0.038 B) 0.042 C) 0.051 D) 0.046

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

5) The normal monthly precipitation (in inches) for August is listed for 12 different U.S. cities.

.5 1.6 2.4 3.7 4.1 3.9

.0 3.6 4.2 3.4 3.7 2.2 the standard deviation.

A) 1.09 B) 1.00 C) 1.05 D) 12.03

**Use the empirical rule to solve the problem.**

6) The amount of Jen's monthly phone bill is normally distributed with a mean of \$ 75 and a standard deviation of \$ 9. What percentage of her phone bills are between \$ 48 and \$ 102?

A) 99.74% B) 95.44% C) 68.26% D) 89.99%

**Solve the problem.**

7) The heights of the adults in one town have a mean of 67.4 inches and a standard deviation of 3.4 inches. What can you conclude from Chebyshev's theorem about the percentage of adults in the town whose heights are between 57.2 and 77.6 inches?

- A) The percentage is at least 99.7% B) The percentage is at most 88.9%  
C) The percentage is at least 88.9% D) The percentage is at most 99.7%

**Solve the problem. Round results to the nearest hundredth.**

8)

The mean of a set of data is 3.50 and its standard deviation is 4.03. Find the z score for a value of 13.95.

- A) 2.59 B) 2.89 C) 2.33 D) 2.85

**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 weight of 110 pounds among a population having a mean weight of 167 pounds and a standard deviation of 22.1 pounds.

- A) 2.6; not unusual B) -57.5; unusual  
C) -2.6; not unusual D) -2.6; unusual

**Determine which score corresponds to the higher relative position.**

10)

Which is better: a score of 82 on a test with a mean of 70 and a standard deviation of 8, or a score of 82 on a test with a mean of 75 and a standard deviation of 4?

- A) Both scores have the same relative position.  
B) The first 82  
C) The second 82

**Find the indicated probability.**

11)

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?

- A)  $\frac{1}{13}$  B)  $\frac{1}{3}$  C)  $\frac{3}{16}$  D)  $\frac{1}{7}$

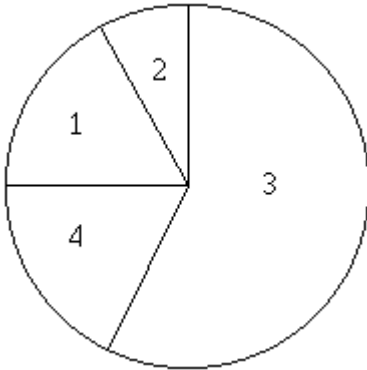
**Answer the question, considering an event to be "unusual" if its probability is less than or equal to 0.05.**

- 12) Is it "unusual" to get a 12 when a pair of dice is rolled?  
A) No B) Yes

**Find the indicated probability.**

- 13) If  $P(A) = \frac{12}{19}$ , find  $P(\bar{A})$ .  
A)  $\frac{7}{19}$  B)  $\frac{12}{31}$  C)  $\frac{19}{12}$  D) 0

- 14) 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 of getting someone who carools or someone who works full time.



- . Public transportation: 8 full time, 10 part time
  - 2. Bicycle: 3 full time, 3 part time
  - . Drive alone: 27 full time, 35 part time
  - . Carpool: 6 full time, 8 part time
- A) 0.17 B) 0.24 C) 0.52 D) 0.46

- 15)  
A card is drawn from a well-shuffled deck of 52 cards. What is the probability of drawing a face card or a 6?  
A)  $\frac{16}{52}$  B)  $\frac{2}{13}$  C)  $\frac{4}{13}$  D)  $\frac{12}{13}$

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

1) B

2) A

3) A

4) C

5) C

6) A

7) C

8) A

9) D

10) C

11) C

12) B

13) A

14) C

15) C