

3.1-3.2 Review

Name \_\_\_\_\_

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

- 1) Which of the following is the properly rounded mean for the given data? 1) \_\_\_\_\_  
7, 8, 13, 9, 10, 11  
A) 9                      B) 9.67                      C) 9.7                      D) 10
- 2) What is the median of the following set of values? 2) \_\_\_\_\_  
5, 19, 17, 13, 17, 12, 13, 17  
A) 17                      B) 13                      C) 11                      D) 15

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

- 3) Find the mode for the following data? 3) \_\_\_\_\_  
5, 4, 3, 4, 5, 6, 5, 5, 3, 4
- 4) What is the midrange of the following data set? 4) \_\_\_\_\_  
3, 9, 8, 10, 2, 10, 16, 16, 16
- 5) A student received the following grades last semester. Find the student's semester grade point average. 5) \_\_\_\_\_

Course	Credits	Grade/Points
Statistics	4	A / 4.0
Physics	5	A / 4.0
Sociology	3	B / 3.0
Literature	2	B / 3.0
Tennis	1	D / 1.0

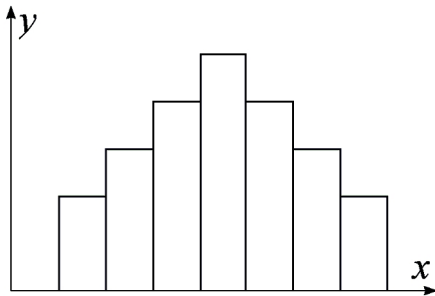
- 6) Use the given frequency distribution to approximate the mean. 6) \_\_\_\_\_

Class	Frequency
0 – 4	15
5 – 9	10
10 – 14	15
15 – 19	10
20 – 24	17

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

7) In a unimodal, symmetrical distribution as shown in the figure below,

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



- A) the median and the mode are the same, but the mean can be different.
- B) the mean is the same as the median, but the mode can be different.
- C) the mean, the median, and the mode are the same.
- D) the mean, the median, and the mode are different.

8) A characteristic or measure obtained by using all the data values for a specific population is called a \_\_\_\_\_.

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

- A) variable
- B) mode
- C) parameter
- D) statistic

9) A weighted mean is used when the values of the data set are not all equally represented.

9) \_\_\_\_\_

- A) False
- B) True

10) The median can be a more appropriate measure of central tendency if the distribution of the data is extremely skewed.

10) \_\_\_\_\_

- A) True
- B) False

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

11) A \_\_\_\_\_ is the midpoint in a data array.

11) \_\_\_\_\_

12) The \_\_\_\_\_ is the mode for grouped data.

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

13) The \_\_\_\_\_ and \_\_\_\_\_ are two measures of variation used to describe the spread of the data in a data set.

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

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

- 14) A distribution in which approximately 68% of the data values fall within one standard deviation of the mean behaves according to 14) \_\_\_\_\_
- A) a boxplot. B) a symmetrical distribution.  
C) differential statistics. D) the empirical rule.

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

- 15) The \_\_\_\_\_ is the average of the squares of the distance each value is from the mean. 15) \_\_\_\_\_
- 16) Determine the range for the following data set. 16) \_\_\_\_\_  
4, 7, 3, 16, 5, 22, 8
- 17) Find the sample standard deviation for the following data set: 17) \_\_\_\_\_  
36 14 29 20 26
- 18) Find the population variance for the following data set: 18) \_\_\_\_\_  
13 27 34 16 20
- 19) The average age of Stokes County school board members over the last 40 years has been 50, but members have ranged from 30 to 65. Use the range rule of thumb to estimate the standard deviation of the members' ages. 19) \_\_\_\_\_
- 20) The costs per load (in cents) of 30 dish-washing detergents tested by a consumer organization are shown here. Find the standard deviation of the sample. 20) \_\_\_\_\_

<b>Class limits</b>	<b>Frequency</b>
20-28	4
29-37	12
38-46	8
47-55	6

- 21) The average resident of Metro City produces 660 pounds of solid waste each year, and the standard deviation is approximately 90 pounds. Use Chebyshev's theorem to find the weight range that contains at least 75% of all residents' annual garbage weights. 21) \_\_\_\_\_
- 22) A paint manufacturer discovers that the mean volume of paint in a gallon-sized pail is 0.9 gallons with a standard deviation of 0.1 gallons. The paint volumes are approximately bell-shaped. Estimate the percent of pails with volumes between 0.80 gallons and 1.00 gallon. 22) \_\_\_\_\_
- 23) A consumer advocacy group tested the "on-air" lifetimes a random sample of 185 cell phone batteries. The mean lifetime was 3.1 hours with a standard deviation of 0.5 hours. The lifetimes are approximately bell-shaped. Estimate the number of batteries with lifetimes between 2.6 hours and 3.6 hours. 23) \_\_\_\_\_
- 24) According to Chebyshev's theorem, the maximum proportion of data values from a data set that are more than 2 standard deviations from the mean is \_\_\_\_\_ . 24) \_\_\_\_\_
- 25) If a data set has 9 values and a standard deviation 8.4, then the variance is \_\_\_\_\_ . 25) \_\_\_\_\_
- 26) If a set of data has mean 24 and variance 16, then it's coefficient of variation is \_\_\_\_\_ . 26) \_\_\_\_\_

Answer Key

Testname: 3.1-3.2 QUIZB

- 1) C
- 2) D
- 3) 5
- 4) 9
- 5) 3.47
- 6) 12.8
- 7) C
- 8) C
- 9) B
- 10) A
- 11) median
- 12) modal class
- 13) Choose two of the following three: variance, standard deviation, and range.
- 14) D
- 15) variance
- 16) 19
- 17) 8.4
- 18) 58
- 19) 8.8
- 20) 8.8
- 21) Between 480 and 840 pounds
- 22) 68%
- 23) 126
- 24) 0.25
- 25) 70.6
- 26) 16.7%