1. If a student scored 85 points on a test where the mean score was 79 and the standard deviation was 3. The student's z-score was

A) 2.00 B) 26.33 C) 28.33 D) 0.67

2. In a unimodal, symmetrical distribution as shown in the figure below.



- A) The median and the mode are the same, but the mean can be different.
- B) The mean, the median, and the mode are different.
- C) The mean, the median, and the mode are the same.
- D) The mean is the same as the median, but the mode can be different.
- 3. What is the mean of the following numbers? 4, 6, 9, 11, 15
 - A) 8 B) 10 C) 6 D) 9
- 4. The range of the set of numbers {4, 15, 3, 10, 5} is

A) 9 B) 12 C) 15 D) 3

5. For the table below, calculate the cumulative percent of the students that fell within the B class.

Grade	Class Boundaries	Frequency
А	89.5–99.5	4
В	79.5-89.5	7
С	69.5-79.5	11
D	59.5-69.5	3
F	49.5-59.5	3

A) 25% B) 11% C) 39% D) 14%

6. If the mean of a set of data is 19.00, and 23.50 has a z-score of 0.75, then the standard deviation must be:

A) 36.00 B) 3.00 C) 18.00 D) 6.00

7. Which of the following is the correct mean for the given data? 7, 8, 13, 9, 10, 11

A) 9.67 B) 10 C) 9 D) 9.7

8. According to Chebyshev's theorem, the proportion of values from a data set that is further than 2 standard deviations from the mean is:

A) 0.25 B) 0.50 C) 0.13 D) 1.00

- 9. If the boxplot for one set of data is much wider than the boxplot for a second set of data, then
 - A) the median of the first set of data must be larger than the median of the second set of data
 - B) the second set of data must contain several outliers
 - C) the mean of the first set of data must be larger than the mean of the second set of data
 - D) none of the above need to be true
- 10. If a set of data has 64 points and variance 16, then the standard deviation is

A) 0.50 B) 2.00 C) 4.00 D) 0.06

11. Determine the range for this data: 4, 7, 3, 16, 5, 22, and 8.

A) 14 B) 19 C) 3 D) 4

- 12. If the mean of a set of data is 19.00, and 11.20 has a z-score of -1.30, then the standard deviation must be:
 - A) 18.00 B) 6.00 C) 36.00 D) 3.00
- 13. What is the median of the following numbers? -13, 1, -1, -5, -1, -6, -5, -1
 - A) -3 B) -5 C) -1 D) -7
- 14. If a set of 9 numbers has standard deviation 10, then it's variance is

A) 30.00 B) 100.00 C) 3.33 D) 33.33

15. In the figure below, what class boundary has 30% of the data?



A) 40.5–60.5 B) 60.5–80.5 C) 20.5–40.5 D) 0.5–20.5

16. Find the mode for the number of police officers in selected city districts. 24, 26, 24, 30, 23, 28, 19, 31, 24, 26, 19

A) 28 B) 23 C) 24 D) 26

17. The minimum of the set of numbers $\{-6, 18, -5, 11, 5\}$ is

A) 10.5 B) -6 C) 24 D) 18

18. Find the z score for each student and indicate which one is higher.

Art MajorX = 46 $\overline{X} = 50$ s = 5Theater MajorX = 70 $\overline{X} = 75$ s = 7

- A) The theater major has a higher score than the art major.
- B) Both students have the same score.
- C) Neither student received a positive score; therefore, the higher score cannot be determined.
- D) The art major has a higher score than the theater major.

19. Given the following boxplot where *m* is the median value, what statement could be made about the distribution of the data?



- A) No statement can be made about the data because no data values are shown on the plot.
- B) The distribution is negatively skewed.



C) The distribution is approximately symmetric.



D) The distribution is positively skewed.



20. If the value 6 has z-score of -0.5 in a dataset, then the mean of that dataset is

A) 5.5 B) It cannot be determined from the data given C) 6 D) 6.5

Chapter 3 Practice Test A

Answer Key

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