

Practice 02

- 3.1 Measures of Central Tendency
- 3.2 Measures of Variation
- 3.3 Measures of Position

1) Find the mean for the following data set: 1) \_\_\_\_\_  
 17    24    12    22    15    10  
 A) 14 B) 16.7

2) A random sample of weights (in carats) of sapphires in a jeweler's collection is shown. 2) \_\_\_\_\_  
 Find the mean of the sample.

Class Boundaries	Frequency
0.95-2.95	12
2.95-4.95	18
4.95-6.95	11
6.95-8.95	6
8.95-10.95	2

A) 9.80                      B) 4.46                      C) 5.95                      D) 4.64

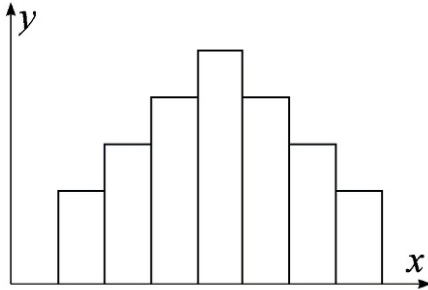
3) Find the weighted mean for a particular student's scores on three exams if the first one 3) \_\_\_\_\_  
 was worth 75 points and the student received a score of 70%, the second was worth 50  
 points and the student received a score of 80%, and the third was worth 30 points and  
 the student received a score of 95%?  
 A) 78.1                      B) 81.7                      C) 49.4                      D) 54.0

4) If the mean of five values is 8.8 and four of the values are 6, 7, 6, and 12, find the fifth 4) \_\_\_\_\_  
 value.  
 A) 14    B) 13

5) What is the median of the following set of values? 5) \_\_\_\_\_  
 8, 6, 3, 1, 12  
 A) 6    B) 5

- 6) Find the mean, mode, median, and midrange for the following data set. 6) \_\_\_\_\_  
 12, 15, 18, 18, 15, 22, 15, 30, 12
- |                 |                 |
|-----------------|-----------------|
| A) mean = 17.4  | B) mean = 17.4  |
| mode = 18       | mode = 15       |
| median = 15     | median = 15     |
| midrange = 21.0 | midrange = 21.0 |

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



- A) the mean, the median, and the mode are different.  
 B) the mean, the median, and the mode are the same.

- 8) The median can be a more appropriate measure of central tendency if the distribution of the data is extremely skewed. 8) \_\_\_\_\_

- A) True B) False

- 9) Determine the range for the following data set. 9) \_\_\_\_\_

4, 7, 3, 16, 5, 22, 8

- A) 14 B) 19

- 10) Find the sample variance for the following data set: 10) \_\_\_\_\_

15 22 29 28 35

- A) 57.7 B) 7.6



- 19) Chebyshev's theorem can be used to find the minimum percentage of the values in a data set that will fall within a certain distance of the mean. 19) \_\_\_\_\_  
A) True B) False
- 20) The average resident of Metro City produces 630 pounds of solid waste each year, and the standard deviation is approximately 70 pounds. Use Chebyshev's theorem to find the weight range that contains at least 75% of all residents' annual garbage weights. 20) \_\_\_\_\_  
A) Between 490 and 770 pounds B) Between 420 and 840 pounds  
C) Between 350 and 910 pounds D) Between 560 and 700 pounds
- 21) According to Chebyshev's theorem, the maximum proportion of data values from a data set that are more than 1.5 standard deviations from the mean is \_\_\_\_\_. 21) \_\_\_\_\_  
A) 0.44 B) 0.17
- 22) A population has a mean  $\mu = 53$  and standard deviation  $\sigma = 14$ . Find the z-score for a population value of 29. 22) \_\_\_\_\_  
A) -1.7 B) 2.1

Answer Key

Testname: STA2023\_PRACTICE02

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