

Practice 01

- 1) Determine which branch of statistics was used to make the following statement. 1) _____
 Because of the current economy, 49% of 18 to 34 year olds have taken a job to pay the bills.
 A) inferential statistics B) descriptive statistics
- 2) Determine which branch of statistics was used to make the following statement. In 2) _____
 2011, there were 34 deaths from the avian flu.
 A) descriptive statistics B) inferential statistics
- 3) Which one of the following data are continuous? 3) _____
 A) the number of musicians performing in the MP3 file
 B) the time remaining for an MP3 music download
- 4) The number of birds in a tree is an example of a continuous variable. 4) _____
 A) True B) False
- 5) What are the boundaries of the class 12-15? 5) _____
 A) 10.5 and 16.5 B) 3
 C) 11.5 and 15.5 D) 12 and 15
- 6) State the reason why the following frequency distribution is incorrectly constructed. 6) _____
- | <u>Class</u> | <u>Frequency</u> |
|--------------|------------------|
| 45-51 | 1 |
| 52-58 | 2 |
| 59-65 | 4 |
| 66-74 | 5 |
| 75-81 | 2 |
- A) class limits overlap B) a class has been omitted
 C) there is no percent column D) class width is not uniform

7) A recent statistics exam yielded the following 25 scores. Construct a grouped frequency distribution with the class limits shown below. 7) _____

67 89 75 54 64
53 83 69 68 92
87 84 43 80 88
76 83 76 98 55
73 80 41 85 95

A)

Class Limits	Frequency
41-50	2
51-60	3
61-70	4
71-80	6
81-90	7
91-100	3

B)

Class Limits	Frequency
41-50	3
51-60	2
61-70	4
71-80	7
81-90	6
91-100	3

8) The following frequency distribution presents the weights in pounds (lb) of a sample of visitors to a health clinic. Construct a relative frequency histogram.

Clinic Visitor Weights	
Weight (lb)	Frequency
120-129	6
130-139	7
140-149	21
150-159	35
160-169	38
170-179	31
180-189	12

9) Find the mean for the following data set: 9) _____
17 24 12 22 15 10

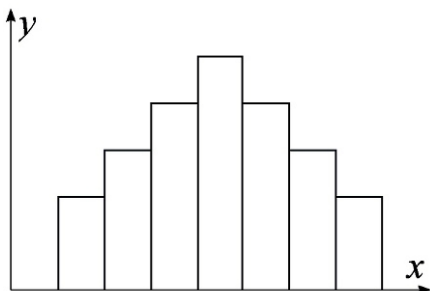
A) 5.0 B) 14 C) 16.7 D) 16

10) If the mean of five values is 8.8 and four of the values are 6, 7, 6, and 12, find the fifth value. 10) _____

A) 31 B) 14 C) 13 D) 9

- 11) Find the mean, mode, median, and midrange for the following data set. 11) _____
 12, 15, 18, 18, 15, 22, 15, 30, 12
- | | |
|---|---|
| A) mean = 21.0
mode = 15
median = 15
midrange = 17.4 | B) mean = 17.4
mode = 15
median = 15
midrange = 21.0 |
| C) mean = 17.4
mode = 18
median = 15
midrange = 21.0 | D) mean = 15
mode = 15
median = 17.4
midrange = 21.0 |

- 12) In a unimodal, symmetrical distribution as shown in the figure below, 12) _____



- A) the mean is the same as the median, but the mode can be different.
 B) the median and the mode are the same, but the mean can be different.
 C) the mean, the median, and the mode are the same.
 D) the mean, the median, and the mode are different.
- 13) Determine the range for the following data set. 13) _____
 5, 15, 9, 7, 21
- | | | | |
|------|------|-------|-------|
| A) 5 | B) 9 | C) 21 | D) 16 |
|------|------|-------|-------|
- 14) Find the sample variance for the following data set: 14) _____
 15 22 29 28 35
- | | | | |
|-------|---------|--------|---------|
| A) 20 | B) 57.7 | C) 7.6 | D) 46.2 |
|-------|---------|--------|---------|
- 15) Find the sample standard deviation for the following data set: 15) _____
 23 27 12 17 16
- | | | | |
|---------|---------|--------|------|
| A) 35.5 | B) 28.4 | C) 5.3 | D) 6 |
|---------|---------|--------|------|

16) The following table presents the heights (in inches) of a sample of college basketball players. 16) _____

Height (in.)	Frequency
68 - 71	16
72 - 75	41
76 - 79	70
80 - 83	60
84 - 87	15

Considering the data to be a population, approximate the standard deviation of the heights.

- A) 4 B) 4.2 C) 78.3 D) 17.7

17) The height of basketball players on a high-school team averages 79.1 inches, with the shortest player being 71 inches tall, and the tallest 85 inches tall. Use the range rule of thumb to estimate the standard deviation of the height. 17) _____

- A) 3.5 inches B) 2.0 inches C) 12.3 inches D) 39.0 inches

18) A consumer advocacy group tested the "on-air" lifetimes a random sample of 120 cell phone batteries. The mean lifetime was 3.2 hours with a standard deviation of 0.1 hours. The lifetimes are approximately bell-shaped. Estimate the number of batteries with lifetimes between 3.0 hours and 3.4 hours. 18) _____

- A) almost all (greater than 114) B) 6
 C) 82 D) 114

19) 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. 19) _____

- A) Between 490 and 770 pounds B) Between 560 and 700 pounds
 C) Between 350 and 910 pounds D) Between 420 and 840 pounds

20) If a student scored 77 points on a test where the mean score was 84.5 and the standard deviation was 5.1. The student's z score is _____. 20) _____

- A) 16.57 B) 0.29 C) -1.47 D) -0.29

21) For the data set below, find the first quartile. 21) _____

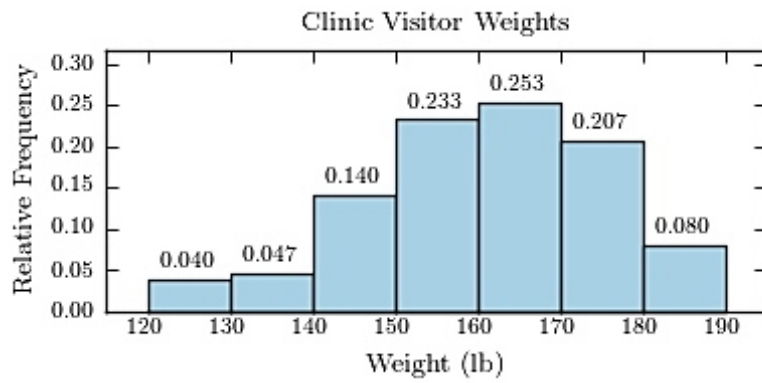
62	65	75	72	68	63	65	67	78	70	74
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- A) 65 B) 51.5 C) 62 D) 74

Answer Key

Testname: STA2023_PRACTICE01B

- 1) A
- 2) A
- 3) B
- 4) B
- 5) C
- 6) D
- 7) A
- 8)



- 9) C
- 10) C
- 11) B
- 12) C
- 13) D
- 14) B
- 15) D
- 16) B
- 17) A
- 18) D
- 19) A
- 20) C
- 21) A