R Exams

Statistics Exam 2019-03-14 **Exam ID 00003**

Name: _____

Student ID: _____

Signature: _____

1.	(a)	X	(b)		(c)	
2.	(a)		(b)	X	(c)	
3.	(a)		(b)	X	(c)	
4.	(a)		(b)		(c)	X
5.	(a)		(b)		(c)	X
6.	(a)		(b)	X	(c)	
7.	(a)		(b)		(c)	X
8.	(a)		(b)		(c)	X
9.	(a)		(b)		(c)	X
10.	(a)		(b)	X	(c)	
11.	(a)		(b)	X	(c)	
12.	(a)		(b)		(c)	X

13. (a) [ ] (b) [ ] (c) [X]

14. (a) [ ] (b) [X] (c) [ ]

15. (a) [ ] (b) [ ] (c) [ ] (d) [X] (e) [ ]

16. (a) [ ] (b) [ ] (c) [X] (d) [ ] (e) [ ]

17. (a) [ ] (b) [ ] (c) [ ] (d) [ ] (e) [X] (f) [ ] (g) [ ]

18. (a) [ ] (b) [ ] (c) [ ] (d) [ ] (e) [ ] (f) [X] (g) [ ]

19. (a) [X] (b) [ ] (c) [ ] (d) [ ]

20. (a) [ ] (b) [X] (c) [ ]

21. (a) [X] (b) [ ] (c) [ ]

22. (a) [X] (b) [ ] (c) [ ] (d) [ ]

23. (a) [ ] (b) [ ] (c) [X] (d) [ ] (e) [ ]

24. (a) [ ] (b) [X] (c) [X] (d) [X] (e) [ ] (f) [ ]

1. **Problem**
   Population parameters are used to estimate sample statistics.

   (a) FALSE
   (b) Not enough information
   (c) TRUE

   Solution

   (a) True.
   (b) False.
   (c) False.

2. **Problem**
   Sample statistics are usually represented using Roman letters (normal ABCs).

   (a) FALSE
   (b) TRUE
   (c) Not enough information

   Solution

   (a) False.
   (b) True.
   (c) False.

3. **Problem**
   The standard deviation of quantitative variables is often represented with a Greek sigma (σ) for the sample statistic.

   (a) Not enough information
   (b) FALSE
   (c) TRUE

   Solution

   (a) False.
   (b) True.
   (c) False.

4. **Problem**
   A characteristic of interest is called a statistic when it refers to the characteristic in an entire population.

   (a) TRUE
   (b) Not enough information
   (c) FALSE

   Solution

   (a) False.

(b) False.

(c) True.

5. **Problem**
What is the statistical meaning of population?

(a) There's no such concept in statistics.

(b) It's always all of the people in an entire country.

(c) All of the members of a group you're interested in.

Solution

(a) False.

(b) False.

(c) True.

6. **Problem**
Data are skewed when there are extreme values on one side of the distribution.

(a) FALSE

(b) TRUE

(c) Not enough information

Solution

(a) False.

(b) True.

(c) False.

7. **Problem**
If data are normally distributed, the mean and the medial will not be equal.

(a) Not enough information

(b) TRUE

(c) FALSE

Solution

(a) False.

(b) False.

(c) True.

8. **Problem**
The mode is always an actual value in the data set.

(a) FALSE

(b) Not enough information

(c) TRUE

Solution

(a) False.
(b) False.
(c) True.

9. **Problem**
The mean is not affected by outliers.

(a) TRUE
(b) Not enough information
(c) FALSE

Solution

(a) False.
(b) False.
(c) True.

10. **Problem**
When the mean is larger than the median, there are unusually large values in the data set.

(a) FALSE
(b) TRUE
(c) Not enough information

Solution

(a) False.
(b) True.
(c) False.

11. **Problem**
Outliers strongly influence the mean, the variance, and the range.

(a) Not enough information
(b) TRUE
(c) FALSE

Solution

(a) False.
(b) True.
(c) False.

12. **Problem**
IQR stands for “I quit reading.”

(a) Not enough information
(b) TRUE
(c) FALSE

Solution

(a) False.
(b) False.
(c) True.

13. **Problem**
Variance is the sum of all deviation scores squared divided by the total number of scores.

(a) Not enough information
(b) TRUE
(c) FALSE

Solution

(a) False.
(b) False.
(c) True.

14. **Problem**
The standard deviation units are squared units.

(a) TRUE
(b) FALSE
(c) Not enough information

Solution

(a) False.
(b) True.
(c) False.

15. **Problem**
Given the following data set [1,2,3,4,5], what is the variance?

(a) 1.58
(b) 3
(c) 2
(d) 2.5
(e) 4

Solution

(a) False.
(b) False.
(c) False.
(d) True.
(e) False.

16. **Problem**
Given the following data set [1,2,3,4,5], what is the standard deviation?

(a) 2
(b) 4
(c) 1.58
(d) 2.5
(e) 3

Solution

(a) False.
(b) False.
(c) True.
(d) False.
(e) False.

17. **Problem**
Given the following data set [1,3,5,7,9], what is the first quartile?

(a) 4
(b) 3.16
(c) 5
(d) 7
(e) 3
(f) 8
(g) 10

Solution

(a) False.
(b) False.
(c) False.
(d) False.
(e) True.
(f) False.
(g) False.

18. **Problem**
Given the following data set [1,2,3,4,5], what is the median?

(a) 3.16
(b) 7
(c) 4
(d) 10
(e) 3
(f) 5

(g) 8

Solution

(a) False.
(b) False.
(c) False.
(d) False.
(e) False.
(f) True.
(g) False.

19. **Problem**
A data point has the value of 7.5 and the mean of the data set is 10. What is the deviation score?

(a) -2.5
(b) 3
(c) -3
(d) 7

Solution

(a) True.
(b) False.
(c) False.
(d) False.

20. **Problem**
Histograms are usefule for seeing how data are distributed.

(a) FALSE
(b) TRUE
(c) Not enough information

Solution

(a) False.
(b) True.
(c) False.

21. **Problem**
Probable outliers can't be seen on a histogram.

(a) FALSE
(b) Not enough information
(c) TRUE

Solution

(a) True.
(b) False.
(c) False.

22. **Problem**
What type of plot is appropriate for ordinal level data.

(a) bar chart
(b) histogram
(c) box plot
(d) scatter plot

Solution

(a) True.
(b) False.
(c) False.
(d) False.

23. **Problem**

Based on the plot, select the statements that are true.

(a) The data are platykurtic.
(b) The data are left skewed.
(c) The data are leptokurtic.
(d) The data are right skewed.
(e) The data are normally distributed.

Solution

(a) False.
(b) False.
(c) True.
(d) False.
(e) False.

24. **Problem**

Based on the plot, select the statements that are true.

(a) There are no outliers.
(b) There are outliers with large values.
(c) The data are symetrically distributed.
(d) There are outliers with small values.
(e) The data are left skewed.
(f) The data are right skewed.

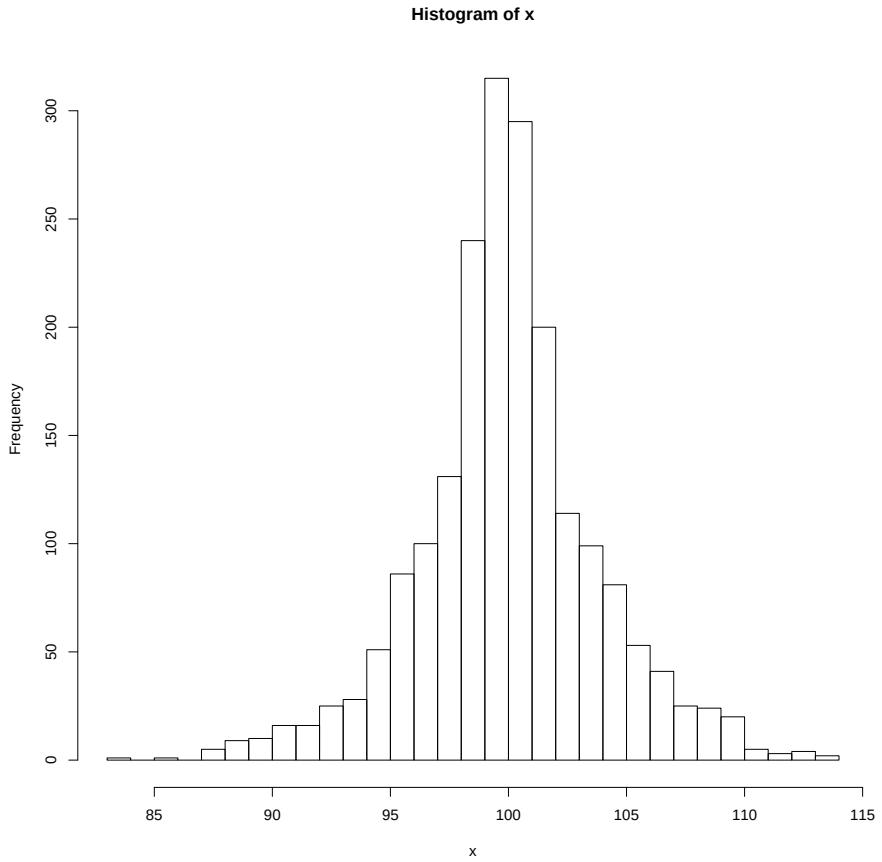
Histogram of x
Frequency
0
50
100
150
200
250
300
85
90
95
100
105
110
115
x

Figure 1:

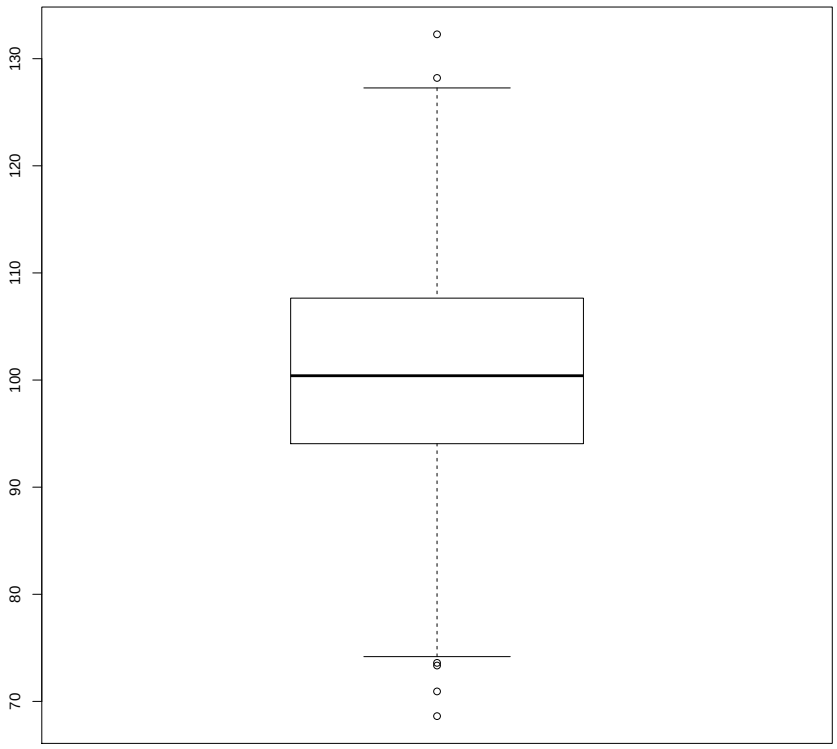

Figure 2:

Solution

(a) False.
(b) True.
(c) True.
(d) True.
(e) False.
(f) False.