

R Exams

Statistics Exam 2019-03-14

Exam ID 00002

Name: _____

Student ID: _____

Signature: _____

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13. (a) ☐ (b) ☐ (c) ☒
14. (a) ☐ (b) ☒ (c) ☐
15. (a) ☐ (b) ☐ (c) ☐ (d) ☐ (e) ☒
16. (a) ☐ (b) ☐ (c) ☐ (d) ☒ (e) ☐
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20. (a) ☐ (b) ☒ (c) ☐
21. (a) ☐ (b) ☒ (c) ☐
22. (a) ☐ (b) ☐ (c) ☒ (d) ☐
23. (a) ☐ (b) ☒ (c) ☐ (d) ☐ (e) ☐
24. (a) ☒ (b) ☒ (c) ☒ (d) ☐ (e) ☐ (f) ☐

1. **Problem**

Population parameters are used to estimate sample statistics.

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

Solution

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

2. **Problem**

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

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

Solution

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

3. **Problem**

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

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

Solution

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

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) Not enough information
- (c) TRUE

Solution

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

7. **Problem**

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

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

Solution

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

8. **Problem**

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

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

Solution

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

9. **Problem**

The mean is not affected by outliers.

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

Solution

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

11. **Problem**

Outliers strongly influence the mean, the variance, and the range.

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

Solution

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

12. **Problem**

IQR stands for "I quit reading."

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

Solution

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

13. Problem

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

- (a) TRUE
- (b) Not enough information
- (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) 4
- (b) 3
- (c) 2
- (d) 1.58
- (e) 2.5

Solution

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

16. **Problem**

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

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

Solution

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

17. **Problem**

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

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

Solution

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

18. **Problem**

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

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

(g) 3.16

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

Solution

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

20. Problem

Histograms are useful 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) Not enough information
- (b) FALSE
- (c) TRUE

Solution

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

22. **Problem**

What type of plot is appropriate for ordinal level data.

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

Solution

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

23. **Problem**

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

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

Solution

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

24. **Problem**

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

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

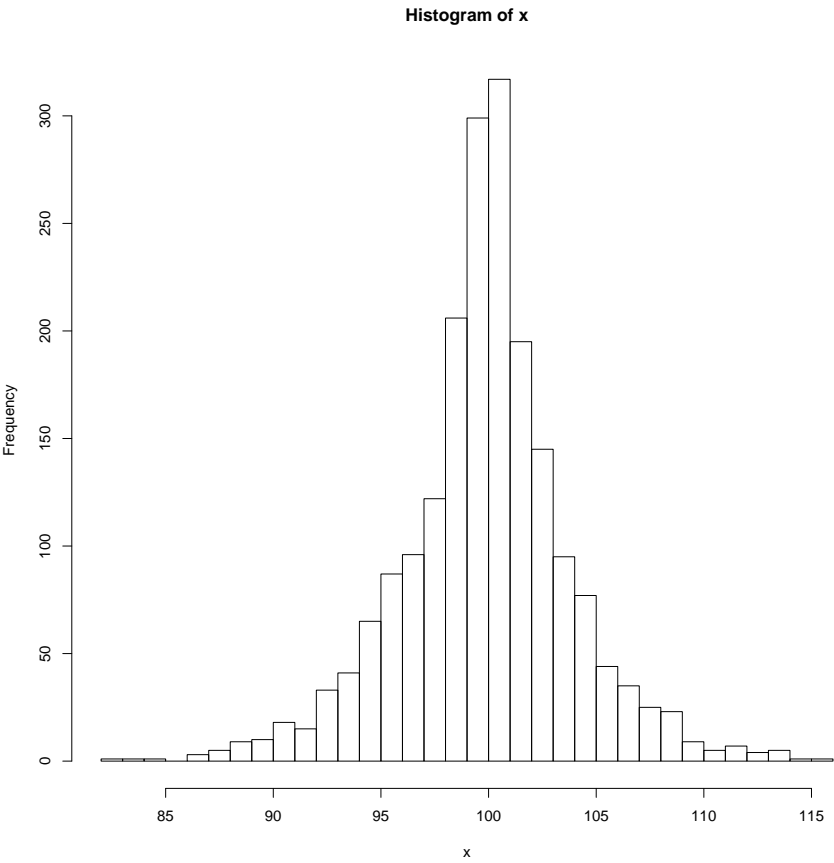


Figure 1:

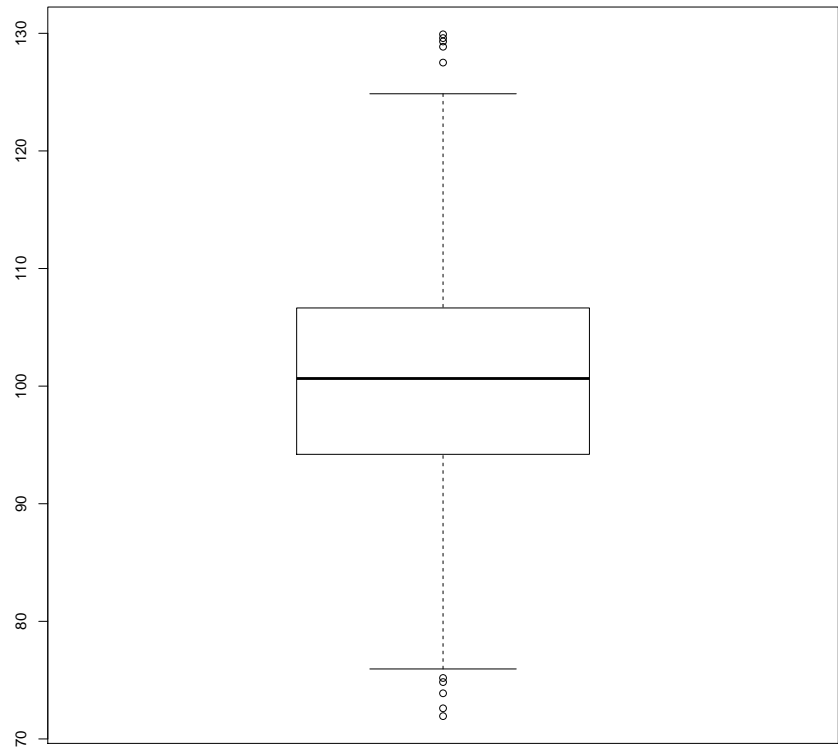


Figure 2:

Solution

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