Biostatistics

Archive

Lecture 3

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1. One of the following measures often dencyneed(s) data organization:
a. Mean
b. Median
c. Mode
d. Two of the above

Answer: b. Median

2. Average of values when each value has a degree of importance is called:
a. Arithmetic mean
b. Weighted mean
c. Geometric mean
d. Harmonic mean

Answer: b. Weighted mean

3. The median of this set of data (2, 4, 3, 6, 1, 8, 9, 2, 5, 7) is:
a. 2
b. 4
c. 4.5
d. 4.7

Answer: c. 4.5

4. One of the following is true regarding arithmetic mean:
a. It is not always easily handled
b. It does not exist all the time
c. It summarizes the data by only one representative value
d. It is not affected by skewness nor outliers

Answer: c. It summarizes the data by only one representative value

5. Grouped mean uses all of the following except:
a. Sum of the observations' values
b. Number of the observations
c. Frequencies of the observations
d. Cumulative frequency of the observations

Answer: d. Cumulative frequency of the observations

6. One of the following we do not need to measure grouped mean:
a. Midpoints of intervals
b. Class intervals
c. Frequency of the class
d. Cumulative frequency

Answer: d. Cumulative frequency of the observations

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7. During 10 months, the numbersofcholera cases in an area were: (20, 20, 50, 56, 60, 5000, 678, 858, 345, 456) The Desk central tendency measurement is? Select one
a. Mean
b. Range c. Median
d. Mode e. SD

Answer: c. Median

8. A distribution which has more than one point of concentration is called? Select one
a. Positively skewed
b. Multi modal
c. bimodal
d. Symmetrical

Answer: b. Multi modal

9. A distribution which has two points of concentration is called? Select one
a. Positively skewed
b. Multi modal
c. bimodal
d. Symmetrical

Answer: c. bimodal

10. The median is? Select one
a. The difference between the largest and the smallest value of observations
b. The values that occurs most frequently in a set of data
c. It is the sum of all observation divided by number of observations
d. It is the middle value in ordered array data
e. A measure of variation

Answer: d. It is the middle value in ordered array data

11. In this set of data 8, 4, 6, 2, 6, 9, which of the followings is the median? Select one
a. 5.5
b. 6.5 c. 6
d. 8 e. 4.5

Answer: c. 6

12. The correct answer regarding the marks of 9 students, 30, 51, 51, 51, 35, 58, 45, 38, 41 is? Select one
a. Mean is 31
b. Range is 30-58
c. Median is 15
d. Mode is 15
e. Mode is 58

Answer: b. Range is 30-58

13. The value in a series of data withahighestfrequencyistermedas?Selectone
a. Mean
b. Standard error c. Median
d. Mode e. Range

Answer: d. Mode

14. Variation between the highest and lowest values in a set of data is termed as?
Select one:
a. Mid-point
b. Standard Deviation c. Class Interval
d. Range e. Standard error

Answer: d. Range

15. A distribution of 6 scores has a median of 21. If the highest score increases 3 points, the median will be:
a. 24 b. 18
c. 21.5 d. 21
e. Further information is needed

Answer: D. 21

16. The median for the following set of data: "2, 7, 50, 14, 2, 50, 34, 50, 12, 39 and 40" is:
a. 7
b. 50 c. 34
d. 2 e. 14

Answer: C. 34

17. All of the following are false regarding arithmetic mean Except:
a. It is not necessarily a unique value
b. It is not affected by extreme values
c. It is the most commonly used measure of central tendency in statistical analysis
d. It can be used with all types of variables
e. It is not affected by skewed data

Answer: C. It is the most commonly used measure of central tendency in statistical analysis

18. In a group of 12 scores, the largest score has increased by 36 points. The effect of such a change on the mean will be:
a. Nothing, it will remain unchanged.
b. There is no way of knowing exactly how many points the mean will increase.
c. It will increase by 36 points.
d. It will increase by 12 points.
e. It will increase by 3 points.

Answer: E. It will increase by 3 points

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19. The following areweightsinkilogramsforsix children: 5, 9, 9, 8, 7 and 5. The median weight for these children is:
a. 8 kgs and 9 kgs
b. 7.5 kgs
c. 9 kgs only
d. 6.5 kgs

Answer: B. 7.5 kgs

20. One of the following is not true regarding the mode:
a. It is not practically used for continuous data
b. It can be used for all types of data
c. It is the observation that has the highest frequency
d. It is possible to have two or more modes for the same data
e. It is not affected by extreme values

Answer: B. It can be used for all types of data

21. In one city five white children and seven African American children are bitten by rats. The white children are aging 3, 6, 4, 5, and 3 years. The African American children are aging 4, 2, 5, 3, 2, 4, and 1 years. Based on this information, it can be determined that:
a. The range of ages for the African American children is twice for the white children
b. The range of ages for the African American children and the white ones cannot be compared
c. The range of ages for the African American children is greater than that of the white ones
d. The range of ages for the African American children is smaller than that of the white ones
e. The range of ages for the African American children equals that of the white ones

Answer: C. The range of ages for the African American children is greater than that of the white ones

22. In one city five white children and seven African American children are bitten by rats. The white children are aging 3, 6, 4, 5, and 3 years. The African American children are aging 4, 2, 5, 3, 2, 4, and 1 years. Based on this information, it can be determined that:
a. The mean of ages for the African American children is twice for the white children
b. The mean of ages for the African American children and the white ones cannot be compared

c. The mean of ages for the African American children is greater than that of the white ones
d. The mean of ages for the African American children is smaller than that of the white ones
e. The mean of ages for the African American children equals that of the white ones

Answer: D. The mean of ages for the African American children is smaller than that of the white ones

23. In one city five white children and seven African American children are bitten by rats. The white children are aging 3, 6, 4, 5, and 3 years. The African American children are aging 4, 2, 5, 3, 2, 4, and 1 years. Based on this information, it can be :determined that
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c. The median of ages for the African American children is greater than that of the white ones
d. The median of ages for the African American children is smaller than that of the white ones
e. The median of ages for the African American children equals that of the white ones

Answer: D. The median of ages for the African American children is smaller than that of the white ones

24. The mean is? Select one
a. The difference between the largest and the smallest value of observations
b. The values that occurs most frequently in a set of data
c. It is the sum of all observation divided by number of observations
d. It is the middle value in ordered array data

Answer: c. It is the sum of all observation divided by number of observations

25. The mode is:
a. The values the occur most often in a set of data
b. The difference between the largest and the smallest value of observations
c. The sum of all observation divided by number of observations
d. The middle value in an ordered array data
e. The middle value in a set of data

Answer: The values the occur most often in a set of data

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26. Regarding continuous variables, one of the following is wrong:
a. It is best represented by mode
b. BP is an example
c. Histogram is a suitable diagram for it
d. Its values do not have to be integers

Answer: A. It is best represented by mode

27. As per the following data set:
13, 27, 29, 5, 11, 5, 11, 2, 2, 11, 11, 2, 2
The best description will be:
a. Of no mode
b. Bimodal
c. Unimodal
d. Trimodal
e. Tetra- modal

Answer: B. Bimodal

28. In a sample of 520 pregnant women who gained weight during pregnancy, the mean was 2.5 Kgs, the median was 3.75 Kgs and mode was 2.1 Kgs. The curve for this data will be:
a. Skewed to the right
b. Skewed to the left
c. A uniform curve
d. A symmetrical curve
e. Cannot be determined with the given data

Answer: b. Skewed to the left (Dr. Waqar's answer)

29. To compare between two or more data with different units of measurements we better use:
a. SD
b. CV
c. CI
d. S

Answer: B. CV

30. For the following set of data: 1, 2 ,2 ,2 ,3 ,4, 6 ,6, 7. The mean, mode and median will be, respectively:
a. 3.67, 2 and 3
b. 3.67, 3 and 2
c. 4.67, 2 and 3.5
d. 4, 2 and 3.5

Answer: A. 3.67, 2 and 3

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31. . A distribution with a tail that goes to the right is called :
a. Positively skewed
b. Unimodal
c. Negatively skewed
d. None of the above

Answer: A. Positively skewed

32. Sales of a company over the past ten years is best represented by:
a. line graph
b. bar chart
c. histogram
d. pie chart

Answer: A. line graph

33. The advantage of arithmetic mean?
A) It is less affected by outliers compared to other measures.
B) It is calculated using only the median values.
C) It is the most commonly used measure and utilizes all data points in the dataset.
D) It is the only measure of central tendency that can be used with non-numeric data.

Answer: C) It is the most commonly used measure and utilizes all data points in the dataset.

34. You are preparing a report to present to the public health council on the declining rate of tuberculosis in year state in both men and women over the last 10 years, which type of graphs would best illustrate the data?
A. Bar chart
B. Pie chart
C. Line graph
D. Frequency polygon

Answer: C. Line graph