

MTH302 Business Mathematics & Statistic upcoming
Quiz helping material from lecture 23 to 32...

Q.1)

For a data, if mean > median then its distribution is

- A. asymmetrical
- B. symmetrical
- C. left asymmetrical (correct answer)
- D. right asymmetrical

Explanation

Symmetrical Distribution

mean = median = mode

Positively Skewed Distribution(Tilted to left)mean > median > mode

Negatively Skewed Distribution mode < median < mean(Tilted to right)

Q.2) The variance of the 3, 3, 3, 3, 3 is

- A. Zero (correct answer)
- B. One
- C. Twice the standard deviation
- D. Half of the range

Q.3) The regression equation should only used

- A. When there is significant linear correlation (correct answer)
- B. When there is significant multi correlation
- C. When there is significant quadratic correlation
- D. When there is significant simple correlation

Q.4) As the regression line equation is $y = ax + b$, where b is

- A. The x-intercept
- B. The y-intercept (correct answer)
- C. The slope
- D. None of these

Explanation

Y = y-axis

a = slope

x = x-axis

b = y-intercept

Q.5) My estimated regression line is $Y = 17 + 4X$. The intercept is equal to:

Note: Solve these papers by yourself
This VU Group is not responsible for any solved content

A. 17 (correct answer)

B. 4

C. 21

D. 13

Explanation

Y represents the dependent variable

X represents the independent variable

a represents the Y-intercept

(i.e. the value of Y when X is equal to zero)

b represents the slope of the line

θ represents the angle θ , where θ (i.e. the value of the tan between the line and the horizontal axis)

Q.6) The point where a straight line cuts the x-axis is called

A. slope

B. starting point

C. y-intercept

D. x-intercept (correct answer)

Q.7) If strength of the association between X and Y is very weak, then $r = ?$

A. $r = -1$

B. $r = 0$ (correct answer)

C. $r = 1$

D. $r = 2$

Q.8) In a positively skewed distribution

A. The mean, median, and mode are all equal.

B. The mean is larger than the median (correct answer)

C. The median is larger than the mean.

D. The standard deviation must be larger than the mean or the median.

Explanation

Positively Skewed Distribution (Tilted to left) $\text{mean} > \text{median} > \text{mode}$

Negatively Skewed Distribution $\text{mode} < \text{median} < \text{mean}$ (Tilted to right)

1.

Find the mean of this data set: \$7.75, \$9.50, \$7.20, \$8.00

\$7.88

- \$8.11
- \$2.30
- \$7.10

2.

Find the median of this data set: 146, 92, 46, 35, 81, 72, 65, 63, 81, 19, 64, 96, 163

- 78.69
- 144
- 65

3.

Find the mode of this list: 47, 91, 63, 81, 82, 63, 37, 44, 63

- 63.4
- 82
- 63
- 54

4.

Find the range of this data set: 67, 89, 34, 67, 89, 23, 32, 45, 32, 67, 90

- 67
- 32
- 57.73
- 23

5.

Sales made last year by Martin's Appliance Store are listed below. The first number tells how many employees made the sales amount. Calculate the mean, median, and mode. Two sales employees earned in the range of \$130,001–150,000. Six sales employees earned in the range of \$110,001–130,000. Ten sales employees earned in the range of \$90,001–110,000. Five sales employees earned in the range of \$70,001–90,000. Three sales employees earned in the range of \$50,001–70,000.

- Mean: \$99,231.27; median: \$90,001–110,000; mode: \$90,001–110,000
- Mean: \$100,000.50; median: \$90,001–110,000; mode: \$90,001–110,000
- Mean: \$90,001–110,000; median: \$90,001–110,000; mode: \$99,231.27
- Mean: \$99,231.27; median: \$99,231.27; mode: \$90,001–110,000

6.

A frequency distribution can be used to summarize a large data set.

- True
- False

7.

Which type of graph is best to illustrate differences in data by using bars to represent the data?

- bar graph
- line graph
- circle graph
- pictorial graph

8.

Which type of graph is best used to present a progression in historical data?

- bar graph
- line graph
- circle graph
- pictorial graph

9.

Which type of graph is the most useful for illustrating how data are divided?

- bar graph
- line graph
- circle graph
- pictorial graph

10.

Find the range for Juanita's grades last semester: 77, 86, 93, 78, 95, 66, 87, and 90.

- 32
- 31
- 30
- 29

11.

If the variance is 49, what is the standard deviation?

Note: Solve these papers by yourself
This VU Group is not responsible for any solved content

- 2,401
- 7
- 7.9
- 6.2

12.

If the housing budget is 25% of total expenses, how many degrees on a circle graph would this be?

- 45°
- 90°
- 180°
- 270°

13.

Find the average rate of return for six different stocks. Stock 1: 5%; stock 2: 7%; stock 3: 8%; stock 4: 4 1/2%; stock 5: 9%; and stock 6: 5%.

- 6.42%
- 6.416%
- 6.5%
- 6.67%

14.

Approximately 99% of all values will fall within _____ standard deviations in a normal distribution.

- 68%
- 95%

99%

100%

15.

_____ make visual the relationship between sets of data.

Charts

Graphs

Tables

Lines

16.

For how many months was the monthly sales \$40,000 or more?
Base your answer on the frequency distribution.

Frequency Distribution for Monthly Sales for 36 Months

Class Interval	Class Frequency
\$50,000–\$60,000	3
\$40,000–\$49,999	9
\$30,000–\$39,999	14
\$20,000–\$29,999	7
\$10,000–\$19,999	3
\$0–\$9,999	0

14

12

3

9

1.

The _____ is the difference between the smallest and the largest values in a set of data.

- mean
- median
- standard deviation
- range

2.

The _____ in a set of data is the sum of the values divided by the total number of values.

- range
- mean
- standard deviation

3.

The _____ is the middle value of a data set when it is arranged from smallest to largest.

- median
- mean
- standard deviation

4.

The _____ is the item of data that appears most frequently in a set of data.

- median
- mean
- mode

- standard deviation

5. A _____ graph uses separated horizontal or vertical bars to show relative quantities.

- line
 histogram
 circle
 bar

6. The _____ graph uses a single dot to represent each data item.

- histogram
 circle
 line
 bar

7. A _____ graph gives a visual picture of how some whole quantity is being divided.

- bar
 line
 circle
 histogram

8.

A _____ is a collection of values or measurements that have common characteristics.

- range
- data set
- standard deviation
- variance

9.

A _____ is a standardized and meaningful measure of a set of data that reveals a certain feature or characteristic of the data.

- statistic
- circle graph
- variance
- mean

10.

The categories for grouping the values in a data set are called _____.

- data set groups
- class intervals
- statistics
- standard deviation.

11.

A mark that is used to count data in class intervals is a _____.

- category

- group frequency distribution
- data set
- tally

12.

Mean, median, and mode are examples of measures of _____.

- variation
- central tendency
- statistics
- data sets

13.

Range and standard deviation are examples of measures of _____.

- variation
- central tendency
- statistics
- data sets

14.

The measurement that shows how data is spread above and below the mean is the _____.

- standard deviation
- variance
- range
- mode

15. The standard deviation squared is the _____.

- range
- mode
- variance
- deviatiant

1.

Use the following situation to answer questions 1 through 3:
Merritt's Bakery offers wedding cakes at the following prices:
\$99.00, \$129.00, \$149.00, \$169.00, \$199.00, and \$249.00.
Find the mean price for a wedding cake.

- \$165.67
- \$159.00
- There is no mean.

4.

Which measure of central tendency provides the most information for decision making?

- mean
- median
- mode
- All three statistics are needed for decision making.

5.

In a data set of 1, 2, 2, 4, 5, 6, 6, and 7, what is the mode?

- 2

- 6
- 2 and 6
- There is no mode.

6.

How many test takers score 85 or better on the driver's license test? Base your answer on the frequency distribution.

Frequency Distribution for 40 Scores on a Driver's License Examination

Class Interval	Class Frequency
100-85	18
84-60	13
59-45	7
44-30	1
Below 30	1

- 7
- 13
- 18
- 20

Note: Solve these papers by yourself

This VU Group is not responsible for any solved content

44-30	1
-------	---

- 18
- 13
- 7
- 9

8.

Tyco Toys has 25 people on Line A. Production values were: 19, 60, 51, 49, 37, 35, 45, 49, 57, 20, 39, 51, 52, 48, 56, 49, 44, 62, 70, 50, 54, 49, 56, 33, 52. Create a frequency distribution for the employees' production. How many employees produced 50 or more finished products?

- 10
- 11
- 12
- 13

1.

A circle graph shows how much of a school's annual budget is spent for utilities. The total annual budget is \$2,150,000. If \$250,000 is spent for utilities, how many degrees would this be on a circle graph?

- 4.19 degrees
- 41.9 degrees
- 318.1 degrees

2.

What kind of graph uses either vertical or horizontal bars?

- histogram
- line graph
- bar graph
- circle graph

3.

When does a line graph actually look like a curve rather than angles formed by lines?

- if it has a sufficient number of points
- always
- never
- when the data represented are large numbers

4.

What kind of graph uses a single point rather than a bar to represent height?

- circle graph
- histogram
- line graph
- bar graph

1.

Find the range for the following data set: 5, 7, 0, 9, 8, and 6.

- 0
- 8
- 9
- 10

2.

What is the first step in finding a standard deviation?

- Find the mean
- Find the median
- Find the mode
- Find the deviation

3.

The square root of the variance is the _____.

- standard variance
- squared deviation
- range
- standard deviation

4.

What is the standard deviation for a variance of 64?

- 8
- 7.5
- 7
- 6.5

5.

A normal distribution is also called a _____.

- line graph
- bell curve
- pie chart
- standard deviation

Q.4)

The RSQ of any data is

- A. Square root of correlation coefficient.
- B. Square of correlation coefficient. (your answer)**
- C. Correlation coefficient.
- D. Slope of the data.

Q.6)

When there is no linear correlation between two variables, what will the value of r be?

- A. 1
- B. -1
- C. 0 (your answer)**
- D. a very small negative number

Q.7)

The mode of the words in the word CORRELATION is

- A. L
- B. R
- C. O
- D. Both R and O**

Q.9)

Which of the following indicates a strong positive correlation.

- A. $r=0$
- B. $r=-0.793$
- C. $r=0.913$ (your answer)**
- D. $r=0.45$

Q.10)

Which of the following is not a type of graph?

- A. Line graph
- B. Frequency distributions
- C. Histogram
- D. Median (correct answer)**

Question No: 1 (Marks: 1) - Please choose one

The c2 distribution is -----

- Positively skewed
- Negatively skewed**
- Symmetrical
- None of these

Question No: 2 (Marks: 1) - Please choose one

In the regression line $Y = a + bX$., a represents

- Intercept of the line**
- Slope of the line
- Slope of the curve
- None of the above

Question No: 4 (Marks: 1) - Please choose one

Which distribution is most commonly used for the continuous data?

- Normal Distribution**
- Binomial Distribution
- Poisson Distribution
- Negative Binomial Distribution

Question No: 6 (Marks: 1) - Please choose one

The standard deviation of any sampling distribution is called

- sampling error
- type -I error
- standard error**
- non sampling error

Question No: 7 (Marks: 1) - Please choose one

For graphing univariate data we use

- Pie charts, Bar charts .
- Pareto diagrams.
- Side by side chart .
- Both (1) & (2)**

Question No: 14 (Marks: 1) - Please choose one

The RSQ of any data is

- Square root of correlation coefficient.
- Square of correlation coefficient.**

Note: Solve these papers by yourself

This VU Group is not responsible for any solved content

- Correlation coefficient.
- Slope of the data.

Question No: 17 (Marks: 1) - Please choose one

If the estimating equation is $Y = a - b X$, which of the following is true

- The y intercept is b
- Slope of line is positive
- There is inverse relationship**
- There is direct relationship

Question No: 2 (Marks: 1) - Please choose one

An arrangement of data by successive time periods is called a

- Exponential Smoothing
- Time Series
- Combination
- Permutation

Question No: 3 (Marks: 1) - Please choose one

The graph of time series is called

- Straight line
- Smooth Curve
- Parabola
- Histogram

Question No: 4 (Marks: 1) - Please choose one

When a straight is fitted to time series data, it is called

- Linear equation
- Linear regression
- Linear trend
- Non-Linear equation

Question No: 5 (Marks: 1) - Please choose one

What variation does moving average method eliminate?

- Seasonal
- Cyclical
- Irregular

Secular trend

Question No: 9 (Marks: 1) - Please choose one

Frequency of occurrence is used in finding the

weighted mean

median

mode

variance

Question No: 10 (Marks: 1) - Please choose one

If the equation of regression line is $y = 5$, then what result will you take out from it?

The line passes through origin.

The line passes through (5, 0)

The line is parallel to y-axis.

The line is parallel to x-axis

Question No: 11 (Marks: 1) - Please choose one

Which of the following graphs is a visual presentation using horizontal or vertical bars to

make comparisons or to show relationships on items of similar makeup?

bar graph

pie graph

pictograph

line graph

Question No: 13 (Marks: 1) - Please choose one

Which of the following describe the middle part of a group of numbers?

Measures of central tendency

measures of variability

measures of shape

measures of association

Question No: 21 (Marks: 1) - Please choose one

If the value of r is zero then the graph of the data points shows

Note: Solve these papers by yourself

This VU Group is not responsible for any solved content

- evenly skewness
- positively scattered
- no associations
- negative associations

Question No: 22 (Marks: 1) - Please choose one

The minimum number of points required to calculate the intercept of a straight line is/are

- one
- two
- three
- one or three

Question No: 34 (Marks: 1) - Please choose one

The standard deviation is

- a measure of variability.
- the square root of the variance.
- twice the standard error.
- half the range.

Question No: 35 (Marks: 1) - Please choose one

Coefficient of variation shows dispersion of the

- standard deviation about mean.
- standard deviation about mode.
- variance about mean.
- variance about mode

Question No: 38 (Marks: 1) - Please choose one

A regression equation was computed to be $Y = 35 + 6X$, the value of 35 indicates that

- An increase in one unit of X will result in an decrease of 35 in Y
- The coefficient of correlation is 35
- The coefficient of determination is 35
- The regression line crosses the Y-axis at 35

Question No: 40 (Marks: 1) - Please choose one

Note: Solve these papers by yourself

This VU Group is not responsible for any solved content

Time series data is analyzed by the moving average.

- True
- False

Question No: 13 (Marks: 1) - Please choose one

Which of the following terms is a measure of the central tendency?

- Standard Deviation
- Variance
- Average
- None of these (Correct)**

Question No: 17 (Marks: 1) - Please choose one

In a positively skewed distribution

- The mean, median, and mode are all equal.
- The mean is larger than the median (Correct)**
- The median is larger than the mean.
- The standard deviation must be larger than the mean or the median.

Question No: 18 (Marks: 1) - Please choose one

For what purpose is the method of least squares used on time-series data?

- It is used for eliminating irregular movements
- It is used for obtaining the trend equation.
- It is used for deseasonalizing the data.
- It is used for exponentially smoothing a series.

Question No: 20 (Marks: 1) - Please choose one

Which one of the following statements is not true?

- Correlation shows a degree of association between two variables.
- You can make any predictions with results of correlation.
- Correlation helps proceed further with regression analysis.
- You can make Predictions on the base of regression equations.

Question No: 11 (Marks: 1) - Please choose one

Men tend to marry women who are slightly younger than themselves.

Suppose that every man married a woman who was exactly .5 of a year

younger than themselves. Which of the following is CORRECT?

- The correlation is $-.5$.
- The correlation is $.5$.
- The correlation is 1 .
- The correlation is -1 .
- The correlation is 0

Question No: 12 (Marks: 1) - Please choose one

If high or low numbers have a significant effect on a list of numbers, the -----
may
be better than the mean.

- mode
- median
- range
- quartile

Question No: 14 (Marks: 1) - Please choose one

Which of the following is not a measure of central tendency

- Percentile
- quartile
- standard deviation
- mode

Question No: 15 (Marks: 1) - Please choose one

If the dependent variable increases with the independent variable then the
coefficient of
correlation is

- 0 to -1
- 0 to -0.5
- 0 to -2
- 0 to 1

Question No: 18 (Marks: 1) - Please choose one

The variance is

- Found by dividing by N by the mean.

- In the same units as the original data.
- Found by squaring the standard deviation
- Calculate by dividing the S.D. with mean

Question No: 19 (Marks: 1) - Please choose one

If many data points are close to the mean, then the standard deviation is -----

- 0
- Small
- Large
- Middle value

Question No: 20 (Marks: 1) - Please choose one

In a linear regression of y on x, $y = a + bx$,

- the variance of x is constant for all values of y
- a fitted straight line goes through (0, 0)
- Both variables have the same variance
- x is the explanatory variable

www.vuaskari.com