

DS-510-WEB-21FATR: Introduction to Data Science

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Test Information

- QUESTION 1

Standard deviation for a population is denoted by:

☐ a. s

☐ b. S

☒ c. σ

☐ d. μ

☐ e. θ

2 points

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- QUESTION 2

Curved relationship between two variables can be analyzed with the help of correlation:

☐ True

☒ False

2 points

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- QUESTION 3

Which of the following commands is used to plot regression line on a plot/chart?

☐ a. trend()

☐ b. lmline()

☐ c. line()

☒ d. abline()

2 points

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- QUESTION 4

Which of the following is NOT an example of quantitative data?

☐ a. John is six feet tall.

☐ b. There are 10 city blocks in one mile

☒ c. The color of the sky

☐ d. 32 people attended the event

2 points

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- QUESTION 5

Correlation coefficient "r" is a number lying between 0 and 1.

☒ True

☐ False

2 points

Saved
- QUESTION 6

DBMS should provide the following features

☐ a. Data protection

☐ b. Authorized access

☐ c. Information Safety

☒ d. All of the above

2 points

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- QUESTION 7

Gender, nationality, and zip codes are types of quantitative data.

☐ True

☒ False

2 points

Saved
- QUESTION 8

Which of the following indicates the highest level of significance code?

☐ a. ***

☐ b. **

☒ c. *

☐ d.

2 points

Saved
- QUESTION 9

Which one of the following is NOT a SQL command category?

☐ a. Data Definition Language (DDL)

☐ b. Data Manipulation Language (DML)

☒ c. Tools Command Language (TCL)

☐ d. Data Control Language (DCL)

2 points

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- QUESTION 10

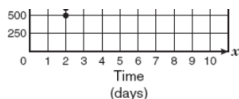
According to the graph below, the relationship between the carpenter's earnings and the amount of time he spent on jobs is:

A carpenter recorded the amount of money he earned for different jobs and the amount of time he spent on each job. The data are shown in the scatterplot below:

2 points

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- Carpenter's Earnings

Time (hours)	Earnings (dollars)
1	750
2	850
3	1050
4	1250
5	1850
6	2450



- ☒ a a positive correlation
- ☐ b a negative correlation
- ☐ c no correlation
- ☐ d multiple correlations

QUESTION 11

2 points [Saved](#)

What is a foreign key?

- ☐ a A foreign key is a primary key of a relation which is an attribute in another relation
- ☐ b A foreign key is a superkey of a relation which is an attribute in more than one other relations
- ☒ c A foreign key is an attribute of a relation that is a primary key of another relation
- ☐ d A foreign key is the primary key of a relation that does not occur anywhere else in the schema

QUESTION 12

2 points [Saved](#)

In a simple linear regression model (one independent variable), if we change the input variable by 1 unit. How much output variable will change?

- ☐ a By 1
- ☐ b No change
- ☐ c By intercept
- ☒ d By its slope

QUESTION 13

2 points [Saved](#)

In the linear regression equation $y = b_0 + b_1x$, (b_0 and b_1) refers to

- ☐ a (X-intercept, Slope)
- ☐ b (Slope, X-intercept)
- ☒ c (Y-intercept, Slope)
- ☐ d (Slope, Y-intercept)

QUESTION 14

2 points [Saved](#)

DBMS acts as an interface between what two components of a database system?

- ☐ a Data and Database
- ☐ b Database and User
- ☒ c Database and Front-end Application
- ☐ d Database and User

QUESTION 15

2 points [Saved](#)

In the simple linear regression equation, the term x represents:

- ☐ a Estimated or predicted response
- ☐ b Estimated intercept
- ☐ c Estimated slope
- ☒ d Explanatory variable

QUESTION 16

2 points [Saved](#)

Let's say 2 events satisfy the following equation: $P(A \text{ intersect } B) = P(A) \times P(B)$. We say that events A and B are _____.

- ☐ a Disjoint
- ☐ b Dependent
- ☒ c Independent
- ☐ d Mutually Exclusive

QUESTION 17

2 points [Saved](#)

In the linear regression equation $\hat{y} = b_0 + b_1x$ (b_0 and b_1) refers to

- ☐ a (X-intercept, Slope)
- ☐ b (Slope, X-intercept)
- ☒ c (Y-intercept, Slope)
- ☐ d (Slope, Y-intercept)

QUESTION 18

2 points [Saved](#)

Which of the following is considered a DBMS?

- ☐ a Access
- ☐ b Oracle
- ☐ c Foxpro
- ☒ d All of the above

QUESTION 19

2 points [Saved](#)

_____ refers to a group of techniques for fitting and studying the straight-line relationship between two variables.

- ☒ a Linear regression
- ☐ b Logistic regression
- ☐ c Gradient Descent
- ☐ d Greedy algorithms

QUESTION 20

2 points [Saved](#)

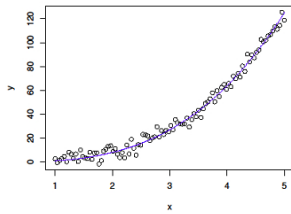
Although it may seem overly simplistic, _____ is extremely useful both conceptually and practically

- ☒ a Linear regression
- ☐ b Logistic regression
- ☐ c Gradient Descent
- ☐ d Greedy algorithms

QUESTION 21

2 points [Saved](#)

Identify the graph type:



- ☐ a Linear
- ☒ b Non-linear
- ☐ c Absolute
- ☐ d Quadratic

QUESTION 22

2 points ☒ Saved

A tire manufacturer wants to determine the inner diameter of a certain grade of tire. Ideally, the diameter would be 570 mm. The data are as follows: 572, 572, 573, 568, 569, 575, 565, 570. The sample variance is:

- ☒ a 10
- ☐ b 11
- ☐ c 10.5
- ☐ d 11.5

QUESTION 23

2 points ☒ Saved

An individual value that falls inside the overall pattern of the relationship is called outlier.

- ☒ True
- ☐ False

QUESTION 24

2 points ☒ Saved

Big Data is the new age technology that has made ground-breaking insights available in real-time.

- ☒ True
- ☐ False

QUESTION 25

2 points ☒ Saved

Which statement is true regarding residuals in regression analysis?

- ☐ a Mean of residuals is always less than zero.
- ☒ b Mean of residuals is always zero.
- ☐ c Mean of residuals is always greater than zero.
- ☐ d None of the above

QUESTION 26

2 points ☒ Saved

The SQL WHERE clause:

- ☐ a Limits the column data that are returned
- ☒ b Limits the row data are returned
- ☐ c Both A and B are correct
- ☐ d Neither A nor B are correct

QUESTION 27

2 points ☒ Saved

Which of the following is NOT one of the primary colors of Drew Conway's Venn Diagram

- ☐ a Substantive Expertise
- ☒ b Traditional Research
- ☐ c Math and Statistics Knowledge
- ☐ d Hacking Skills

QUESTION 28

2 points ☒ Saved

Which of the following is NOT a part of Data Science?

- ☐ a Visualization
- ☐ b Integration
- ☐ c Statistics
- ☒ d Machine Learning

QUESTION 29

2 points ☒ Saved

How many coefficients do you need to estimate in a simple linear regression model (one independent variable)?

- ☐ a 1
- ☒ b 2
- ☐ c 3
- ☐ d 4

QUESTION 30

2 points ☒ Saved

_____ is an incredibly powerful tool for analyzing data

- ☒ a Linear regression
- ☐ b Logistic regression
- ☐ c Gradient Descent
- ☐ d Greedy algorithms

QUESTION 31

2 points ☒ Saved

The wildcard in a WHERE clause is useful when?

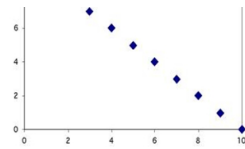
- ☐ a An exact match is necessary in a SELECT statement
- ☒ b An exact match is not possible in a SELECT statement
- ☐ c An exact match is necessary in a CREATE statement
- ☐ d An exact match is not possible in a CREATE statement

QUESTION 32

2 points ☒ Saved

The following scatter plot shows positive association:





- ☐ True
- ☒ False

QUESTION 33

2 points [Saved](#)

Which amongst the following is most robust?

- ☒ a. Structured
- ☐ b. Quasi-Structured
- ☐ c. Un-Structured
- ☐ d. Semi-Structured

QUESTION 34

2 points [Saved](#)

DBMS stands for _____

- ☐ a. Database Administrator System
- ☐ b. Database Basic Management System
- ☒ c. Database Management System
- ☐ d. None of the above

QUESTION 35

2 points [Saved](#)

_____ is an incredibly powerful tool for analyzing data

- ☒ a. Linear regression
- ☐ b. Logistic regression
- ☐ c. Gradient Descent
- ☐ d. Greedy algorithms

QUESTION 36

2 points [Saved](#)

In the simple linear regression equation, the term b_0 represents:

- ☐ a. Estimated or predicted response
- ☒ b. Estimated intercept
- ☐ c. Estimated slope
- ☐ d. Explanatory variable

QUESTION 37

2 points [Saved](#)

The Rectangles divided into two parts represents

- ☒ a. Entity set
- ☐ b. Relationship set
- ☐ c. Attributes of a relationship set
- ☐ d. Primary key

QUESTION 38

2 points [Saved](#)

_____ is a collection of inter-related data and set of programs to access them.

- ☐ a. Data Structure
- ☐ b. Database
- ☐ c. Programming Language
- ☒ d. Database Management System

QUESTION 39

2 points [Saved](#)

One of the inherent risks of big data analytics is Data misinterpretation

- ☒ True
- ☐ False

QUESTION 40

2 points [Saved](#)

What is the difference between interval/ratio and ordinal variables?

- ☒ a. The distance between categories is equal across the range of interval/ratio data.
- ☐ b. Ordinal data can be rank ordered, but interval/ratio data cannot.
- ☐ c. Interval/ratio variables contain only two categories.
- ☐ d. Ordinal variables have a fixed zero point, whereas interval/ratio variables do not.

QUESTION 41

2 points [Saved](#)

Probability can be between which two numbers:

- ☐ a. 0 to 100
- ☒ b. 0 to 1
- ☐ c. -1 to 1
- ☐ d. 0 to 10

QUESTION 42

2 points [Saved](#)

Approximately what is the correlation coefficient of the scatter plot below:



- ☐ a. +1
- ☐ b. +0.5
- ☒ c. -0.9
- ☐ d. +0.2

QUESTION 43

2 points [Saved](#)

A scatterplot shows the relationship between two quantitative variables measured on the same individuals.

- ☒ True
☐ False

QUESTION 44

2 points 

The simple linear regression equation is given as: $\hat{y} = b_0 + b_1x$

In the simple linear regression equation, the symbol y represents:

- ☒ a. Average or predicted response
☐ b. Estimated intercept
☐ c. Estimated slope
☐ d. Explanatory variable

QUESTION 45

2 points 

A tire manufacturer wants to determine the inner diameter of a certain grade of tire. Ideally, the diameter would be 570 mm. The data are as follows: 572, 572, 573, 568, 569, 575, 565, 570.

The sample median is:

- ☐ a. 570
☒ b. 571
☐ c. 570.5
☐ d. 571.5

QUESTION 46

2 points 

Database is a collection of

- ☒ a. Data
☐ b. Modules
☐ c. Programs
☐ d. None of the above

QUESTION 47

2 points 

In a five-number summary, which of the following is not used for data summarization?

- ☐ a. the minimum value
☐ b. the maximum value
☐ c. the median
☐ d. the first quartile
☒ e. the mean

QUESTION 48

2 points 

If you roll a 6 faced unbiased die, what is the probability of rolling a 2?

- ☐ a. 1
☒ b. 1/6
☐ c. 2/3
☐ d. 3/6

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Save All Answers

Save and Submit