



# CompTIA

## Exam Questions DA0-001

CompTIA Data+ Certification Exam

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#### NEW QUESTION 1

A financial institution is reporting on sales performance to a company at the account level. Due to the sensitive nature of the government the does il with, some account information is not shown. Which of the following fields should be masked?

- A. Sales volume
- B. Start date
- C. Product name
- D. Customer name

**Answer: D**

#### Explanation:

Customer name is the field that should be masked, because it contains sensitive information that could identify the government accounts that the financial institution deals with. Masking is a technique that replaces or obscures sensitive data with dummy or random data, such as asterisks or hashes. Masking can help protect the privacy and security of the data, while still allowing for some analysis and reporting. Therefore, the correct answer is D. References: [Data Masking | Definition, Techniques & Examples - Talend], [Data masking - Wikipedia]

#### NEW QUESTION 2

You are working with a professional statistician to perform an analysis and would like to use a statistics package. Which one of the following would be the most appropriate?

- A. Rapid Miner.
- B. QLIK.
- C. Power BI.
- D. Minitab.

**Answer: D**

#### Explanation:

Minitab is statistical analysis software. It can be used for learning about statistics as well as statistical research. Statistical analysis computer applications have the advantage of being accurate, reliable, and generally faster than computing statistics and drawing graphs by hand.

#### NEW QUESTION 3

Jhon is working on an ELT process that sources data from six different source systems. Looking at the source data, he finds that data about the sample people exists in two of six systems. What does he have to make sure he checks for in his ELT process? Choose the best answer.

- A. Duplicate Data.
- B. Redundant Data.
- C. Invalid Data.
- D. Missing Data.

**Answer: C**

#### Explanation:

Duplicate Data.

While invalid, redundant, or missing data are all valid concerns, data about people exists in two of the six systems. As such, Jhon needs to account for duplicate data issues.

#### NEW QUESTION 4

A data analyst received a large amount of third-party data that needs to be joined with in- house data files. After the data is joined, the analyst notices three columns all contain dates. Which of the following should the analyst do to maintain data consistency?

- A. Append all date columns and parse the strings.
- B. Impute all three date columns and then merge.
- C. Merge all date columns and unify the format.
- D. Separate the columns into a table and merge.

**Answer: C**

#### Explanation:

When dealing with multiple date columns from different data sources, it??s crucial to ensure consistency and accuracy in the dataset. The best practice is to merge the date columns and standardize the date format across the entire dataset. This approach helps maintain data integrity, simplifies analysis, and avoids confusion that could arise from having multiple date formats. Unifying the date format is particularly important when the data will be used for time series analysis or when dates are key to joining with other datasets.

References:

- ? Best practices in data merging emphasize the importance of a single point of reference and the need to avoid data loss or damage to individual data structures<sup>1</sup>.
- ? Power BI guides suggest that merging columns should be done carefully to maintain data integrity and avoid errors and inconsistencies<sup>2</sup>.
- ? Oracle Blogs highlight the need for a consistent number of columns among data sources when combining data with unions<sup>3</sup>.
- ? Excel tutorials recommend organizing data before merging and using formulas for complex merges<sup>4</sup>.
- ? An Excel guide on merging date and time columns advises employing functions to ensure seamless handling of non-date values<sup>5</sup>.

#### NEW QUESTION 5

A recurring event is being stored in two databases that are housed in different geographical locations. A data analyst notices the event is being logged three hours earlier in one database than in the other database. Which of the following is the MOST likely cause of the issue?

- A. The data analyst is not querying the databases correctly.
- B. The databases are recording different events.
- C. The databases are recording the event in different time zones.
- D. The second database is logging incorrectly.

**Answer:** C

**Explanation:**

The most likely cause of the issue is that the databases are recording the event in different time zones. A time zone is a region that observes a uniform standard time for legal, commercial, and social purposes. Different time zones have different offsets from Coordinated Universal Time (UTC), which is the primary time standard by which the world regulates clocks and time. For example, UTC-5 is five hours behind UTC, while UTC+3 is three hours ahead of UTC. If an event is being stored in two databases that are housed in different geographical locations with different time zones, it may appear that the event is being logged at different times, depending on how the databases handle the time zone conversion. For example, if one database records the event in UTC-5 and another database records the event in UTC+3, then an event that occurs at 12:00 PM in UTC-5 will appear as 9:00 AM in UTC+3. The other options are not likely causes of the issue, as they are either unrelated or implausible. The data analyst is not querying the databases incorrectly, as this would not affect the time stamps of the events. The databases are not recording different events, as they are supposed to record the same recurring event. The second database is not logging incorrectly, as there is no evidence or reason to assume that. Reference: [Time zone - Wikipedia]

**NEW QUESTION 6**

A marketing analytics team received customer transaction data from two different sources. The data is complete and accurate; however, the field names appear to be inconsistent. Given the following tables:

Online transactions:

Customer_ID	Channel	Segment	Amount (\$)
001	Online	Existing	3,000
002	Online	Existing	4,000
003	Online	New	1,500

Store transactions:

Customer_ID	Source	Segment	Amount (\$)
001	In-store	New	1,000
004	In-store	Existing	4,000
005	In-store	New	3,500

Which of the following is considered best practice if the team wants to consolidate the files and conduct further analysis?

- A. Standardize the field names.
- B. Recode the data values.
- C. Overwrite the field names in one of the tables.
- D. Edit the field names in the data dictionary.

**Answer:** A

**Explanation:**

When consolidating data from different sources, it is crucial to standardize field names to ensure consistency across datasets. This process involves aligning the field names so that they are the same in both tables, which simplifies the merging of data and subsequent analysis. Standardizing field names helps in maintaining data integrity and avoids confusion that may arise from having different names for the same data point. Recode the data values (B) would not be necessary unless the data values themselves are inconsistent or in different formats. Overwriting the field names in one of the tables © could lead to loss of information or confusion. Editing the field names in the data dictionary (D) is helpful, but it does not address the immediate need to harmonize the field names in the actual datasets.

References:

? Best practices in data management.

? Principles of data integration and consolidation.

**NEW QUESTION 7**

Which of the following data manipulation techniques is an example of a logical function?

- A. WHERE
- B. AGGREGATE
- C. BOOLEAN
- D. IF

**Answer:** D

**Explanation:**

This is because an IF function is a type of logical function that returns a value based on a condition or a set of conditions. An IF function can be used to manipulate data by applying different actions or calculations depending on whether the condition is true or false. For example, an IF function in Excel that can achieve this is:

=IF (condition, value\_if\_true, value\_if\_false)

The other data manipulation techniques are not examples of logical functions. Here is why:

? WHERE is a type of clause that filters data based on a condition or a set of conditions. A WHERE clause can be used to manipulate data by selecting only the rows that satisfy the condition(s). For example, a WHERE clause in SQL that can achieve this is:

```
SELECT column_name FROM table_name WHERE condition;
```

? AGGREGATE is a type of function that performs a calculation on a group of values, such as sum, average, count, etc. An AGGREGATE function can be used to manipulate data by summarizing or aggregating the values in a column or a table. For example, an AGGREGATE function in SQL that can achieve this is:

```
SELECT AGGREGATE(column_name) FROM table_name;
```

? BOOLEAN is a type of data type that represents two possible values: true or false.

A BOOLEAN data type can be used to manipulate data by storing or returning logical values based on a condition or a set of conditions. For example, a BOOLEAN data type in Python that can achieve this is:

```
boolean_variable = condition
```

#### NEW QUESTION 8

Which of the following is the correct data type for text?

- A. Boolean
- B. String
- C. Integer
- D. Float

**Answer:** B

#### Explanation:

A string is a data type that represents a sequence of characters, such as text, symbols, numbers, or punctuation marks. Strings are enclosed in quotation marks, such as ??Hello??. ??123??. or ??!@#??. Strings can be manipulated, concatenated, sliced, indexed, formatted, and searched using various methods and functions. A string is different from other data types, such as boolean, integer, or float, which represent logical values (true or false), whole numbers, or decimal numbers respectively. Therefore, the correct answer is B. References: What is a String? | Definition and Examples, Python String Methods

#### NEW QUESTION 9

A data analyst for a media company needs to determine the most popular movie genre. Given the table below:

MovieID	Name	Genre	Actors	Rating
01	Ghost Writer	Comedy, Actions	Joshua Wellington, Susana Summons	6.5
02	Life of Suffering	Drama, Foreign, Historical	Shelly May, Rita Moralle, Ethan Warner, Sean Houser	7.2

Which of the following must be done to the Genre column before this task can be completed?

- A. Append
- B. Merge
- C. Concatenate
- D. Delimit

**Answer:** D

#### Explanation:

The action that must be done to the Genre column before this task can be completed is delimit. Delimit is a process of separating or splitting a string of text into multiple parts based on a delimiter, which is a character or a sequence of characters that marks the boundary between the parts. For example, a comma (,) or a semicolon (;) can be used as a delimiter. In this case, the Genre column contains multiple genres for each movie, separated by commas. To determine the most popular movie genre, the data analyst needs to delimit the Genre column by commas, so that each genre can be counted and compared separately. The other options are not relevant for this task, as they are related to combining or joining strings or tables, not separating them. Append is a process of adding or attaching one string or table to the end of another string or table. Merge is a process of combining or joining two or more tables into one table based on a common column or



key. Concatenate is a process of joining or linking two or more strings together into one string. Reference: [How to Split Text in Excel - Exceljet]

#### NEW QUESTION 10

When analyzing the values of two variables, you decide to convert both variables so they are on a scale of 0 to 1. What term describes this action?

- A. Filtering.
- B. Normalization.
- C. Transposition.
- D. Aggregation.

**Answer: B**

#### Explanation:

Normalization is the process of reorganizing data in a database so that it meets two basic requirements: There is no redundancy of data, all data is stored in only one place. Data dependencies are logical, all related data items are stored together. Put simply, data normalization ensures that your data looks, reads, and can be utilized the same way across all of the records in your customer database. This is done by standardizing the formats of specific fields and records within your customer database.

#### NEW QUESTION 10

Which of the following data types would a telephone number formatted as XXX-XXX-XXXX be considered?

- A. Numeric
- B. Date
- C. Float
- D. Text

**Answer: D**

#### Explanation:

A telephone number formatted as XXX-XXX-XXXX would be considered a text data type, as it is composed of alphanumeric characters and symbols. A numeric data type is composed of only numbers, such as integers or decimals. A date data type is composed of values that represent dates or times, such as YYYY-MM-DD or HH:MM:SS. A float data type is composed of numbers with fractional parts, such as 3.14 or 0.5. Reference: Guide to CompTIA Data+ and Practice Questions - Pass Your Cert

#### NEW QUESTION 14

Which of the following differentiates a flat text file from other data types?

- A. Data is separated by a delimiter.
- B. Data is stored in defined rows.
- C. Data is defined with key-value pairs.
- D. Data is housed in a markup language.

**Answer: A**

#### Explanation:

A flat text file is a type of data file that contains only plain text without any formatting or markup. Data in a flat text file is usually separated by a delimiter, which is a character that marks the boundary between different fields or values. For example, a comma-separated values (CSV) file is a flat text file that uses commas as delimiters. Other common delimiters are tabs, spaces, semicolons, and pipes. Therefore, the correct answer is A. References: Plain text - Wikipedia, Comparison of document markup languages - Wikipedia

#### NEW QUESTION 19

An analyst is working on a project for a director. During this process, the analyst pulled the data, created summarized tables and graphs with descriptions, created a report summary, and inserted all items into a report. After writing the report, which of the following would be the most appropriate next step?

- A. Complete an audit on the data pulled for the report.
- B. Complete a check for quality in the report.
- C. Complete a review of the data and a check for consistency
- D. Complete a trend analysis to be included in the report.

**Answer: B**

#### Explanation:

After writing the report, the most appropriate next step for the analyst is to complete a check for quality in the report. This involves reviewing the report for accuracy, clarity, completeness, consistency, and relevance. The analyst should ensure that the report addresses the director's business questions and objectives, that the data and analysis are correct and reliable, that the tables and graphs are well-designed and easy to understand, that the descriptions and summary are concise and informative, and that there are no errors or inconsistencies in the report. A quality check will help the analyst to improve the presentation and communication of the report, as well as to avoid any misunderstandings or misinterpretations by the director.

#### NEW QUESTION 21

Mario works with a group of R programmers tasked with copying data from an accounting system into a data warehouse. In what phase are the group's R skills most relevant?

- A. Extract.
- B. Load.
- C. Transform.
- D. Purge.

Answer: C

#### NEW QUESTION 26

A data analyst for a media company needs to determine the most popular movie genre. Given the table below:

MovieID	Name	Genre	Actors	Rating
01	Ghost Writer	Comedy, Actions	Joshua Wellington, Susana Summons	6.5
02	Life of Suffering	Drama, Foreign, Historical	Shelly May, Rita Moralle, Ethan Warner, Sean Houser	7.2

Which of the following must be done to the Genre column before this task can be completed?

- A. Append
- B. Merge
- C. Concatenate
- D. Delimit

Answer: D

#### Explanation:

Delimiting is the process of splitting a column of data into multiple columns based on a separator or delimiter character. Delimiting can help separate data that is combined or concatenated in one column into distinct values or categories. For example, if a column contains text values that are separated by commas, such as ??Comedy, Suspense??, delimiting can split this column into two columns, one for ??Comedy?? and one for ??Suspense??. Delimiting is different from other options, such as appending, merging, or concatenating, which are methods of combining or joining data from multiple columns or sources. In this case, the data analyst needs to determine the most popular movie genre based on the Genre column in the table. However, this column contains multiple genres for each movie, separated by commas. Therefore, the data analyst must delimit this column before this task can be completed. Therefore, the correct answer is D. References: Split text into different columns with functions - Office Support, How to Split Text in Excel (Using Formulas & Split Function)

#### NEW QUESTION 29

An analyst develops an IT document and needs to describe the technical terms used in the document. Which of the following is where the analyst should include descriptions of the technical terms?

- A. Glossary
- B. System diagram
- C. User requirements
- D. Index

Answer: A

#### Explanation:

In technical documentation, a glossary is the designated section where definitions for technical terms are provided. It serves as a reference point for readers to understand specialized or uncommon words used within the document. Including descriptions of technical terms in a glossary ensures that readers have a consistent resource to refer to, which can improve comprehension and reduce misunderstandings<sup>12</sup>.

A system diagram (Option B) is a visual representation of the system??s components and their interactions, not a place for defining terms. User requirements (Option C) outline what end-users expect from the system, and an index (Option D) is an alphabetical list of topics covered in the document, usually with page numbers, but not definitions.

References:

- ? Creating effective technical documentation<sup>1</sup>.
- ? Best practices when writing technical descriptions<sup>3</sup>.

#### NEW QUESTION 34

Which of the following is a non-parametric test?

- A. One-sample t-test
- B. Two-way ANOVA
- C. Correlation coefficient
- D. Spearman's rank correlation

Answer: D

#### Explanation:

The correct answer is D. Spearman??s rank correlation.

Spearman??s rank correlation is a non-parametric test that measures the strength and direction of the relationship between two variables that are ranked (ordinal) or continuous. Spearman??s rank correlation does not assume that the data follows a normal distribution or that the variables are linearly related. Spearman??s

rank correlation is based on the ranks of the data rather than the actual values<sup>12</sup>

\* A. One-sample t-test is not correct, because it is a parametric test that compares the mean of a sample to a specified value. One-sample t-test assumes that the data follows a normal distribution and has a known population standard deviation<sup>34</sup>

\* B. Two-way ANOVA is not correct, because it is a parametric test that compares the means of two or more groups that are influenced by two independent factors. Two-way ANOVA assumes that the data follows a normal distribution, has homogeneous variances, and has independent observations.

\* C. Correlation coefficient is not correct, because it is a parametric test that measures the strength and direction of the linear relationship between two continuous variables. Correlation coefficient assumes that the data follows a bivariate normal distribution and has no outliers.

### NEW QUESTION 38

Which of the following best describes the law of large numbers?

A. As a sample size decreases, its standard deviation gets closer to the average of the whole population.

B. As a sample size grows, its mean gets closer to the average of the whole population

C. As a sample size decreases, its mean gets closer to the average of the whole population.

D. When a sample size double

E. the sample is indicative of the whole population.

**Answer: B**

### Explanation:

The best answer is B. As a sample size grows, its mean gets closer to the average of the whole population.

The law of large numbers, in probability and statistics, states that as a sample size grows, its mean gets closer to the average of the whole population. This is due to the sample being more representative of the population as it increases in size. The law of large numbers guarantees stable long-term results for the averages of some random events<sup>1</sup>

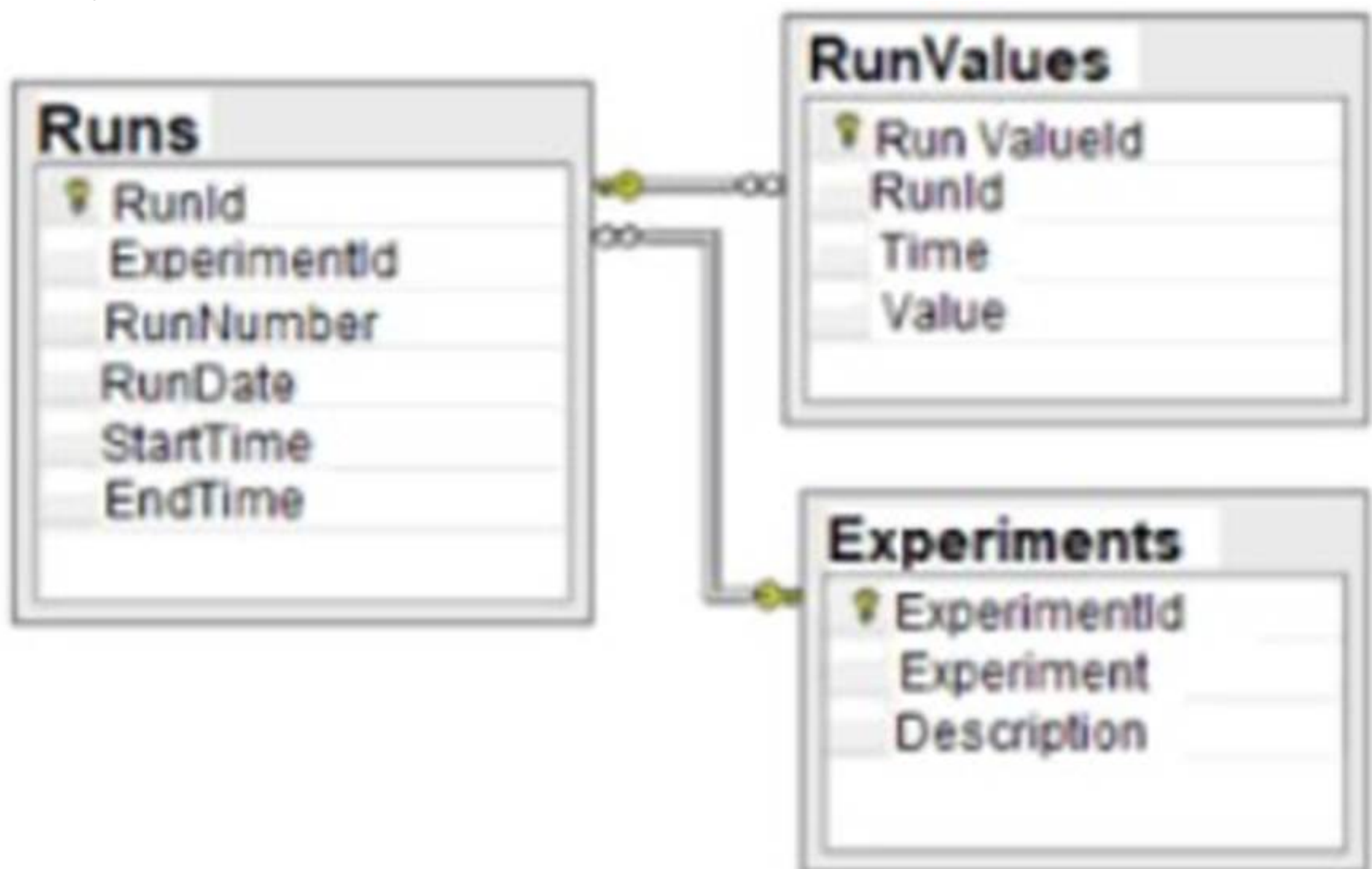
\* A. As a sample size decreases, its standard deviation gets closer to the average of the whole population is not correct, because it confuses the concepts of standard deviation and mean. Standard deviation is a measure of how much the values in a data set vary from the mean, not how close the mean is to the population average. Also, as a sample size decreases, its standard deviation tends to increase, not decrease, because the sample becomes less representative of the population.

\* C. As a sample size decreases, its mean gets closer to the average of the whole population is not correct, because it contradicts the law of large numbers. As a sample size decreases, its mean tends to deviate from the average of the whole population, because the sample becomes less representative of the population.

\* D. When a sample size doubles, the sample is indicative of the whole population is not correct, because it does not specify how close the sample mean is to the population average. Doubling the sample size does not necessarily make the sample indicative of the whole population, unless the sample size is large enough to begin with. The law of large numbers does not state a specific number or proportion of samples that are indicative of the whole population, but rather describes how the sample mean approaches the population average as the sample size increases indefinitely.

### NEW QUESTION 42

Given the diagram below:



Which of the following data schemas shown?

A. Key-value pairs

B. Online transactional processing

C. Data Lake

D. Relational database

**Answer: D**



**Explanation:**

A relational database is a type of database that organizes data into tables, where each table has a fixed number of columns and a variable number of rows. Each row in a table represents a record or an entity, and each column represents an attribute or a property of that entity. The tables are linked by common fields, called keys, which enable the database to establish relationships between the data. A relational database schema is a diagram that shows the structure and organization of the tables, columns, keys, and constraints in a relational database. The diagram given in the question is an example of a relational database schema, as it shows two tables: ??Runs?? and ??Experiments??, with their respective columns, data types, and primary keys. The ??Runs?? table also has a foreign key that references the ??ExperimentId?? column in the ??Experiments?? table, indicating a relationship between the two tables. Therefore, the correct answer is D.  
References: What is a database schema? | IBM, Database Schema - Javatpoint

**NEW QUESTION 46**

Which of the following should be accomplished NEXT after understanding a business requirement for a data analysis report?

- A. Rephrase the business requirement.
- B. Determine the data necessary for the analysis
- C. Build a mock dashboard/presentation layout.
- D. Perform exploratory data analysis.

**Answer: B**

**Explanation:**

The next step after understanding a business requirement for a data analysis report is to determine the data necessary for the analysis. This step involves identifying the data sources, variables, metrics, and dimensions that are relevant and sufficient to answer the business question or problem. This step also involves assessing the availability, quality, and accessibility of the data, and planning how to collect, clean, and prepare the data for analysis. The other options are not the next steps after understanding a business requirement, but rather subsequent steps in the data analysis process. Rephrasing the business requirement is a step that can help clarify and refine the business question or problem before determining the data necessary for the analysis. Building a mock dashboard/presentation layout is a step that can help design and visualize the report before performing the data analysis. Performing exploratory data analysis is a step that can help explore and summarize the data before drawing conclusions and recommendations from the data. Reference: Data Analysis Process - DataCamp

**NEW QUESTION 50**

Which of the following report types is most appropriate for a high-level, year-end report requested by a Chief Executive Officer?

- A. Dynamic
- B. Recurring
- C. Ad hoc
- D. Self-service

**Answer: B**

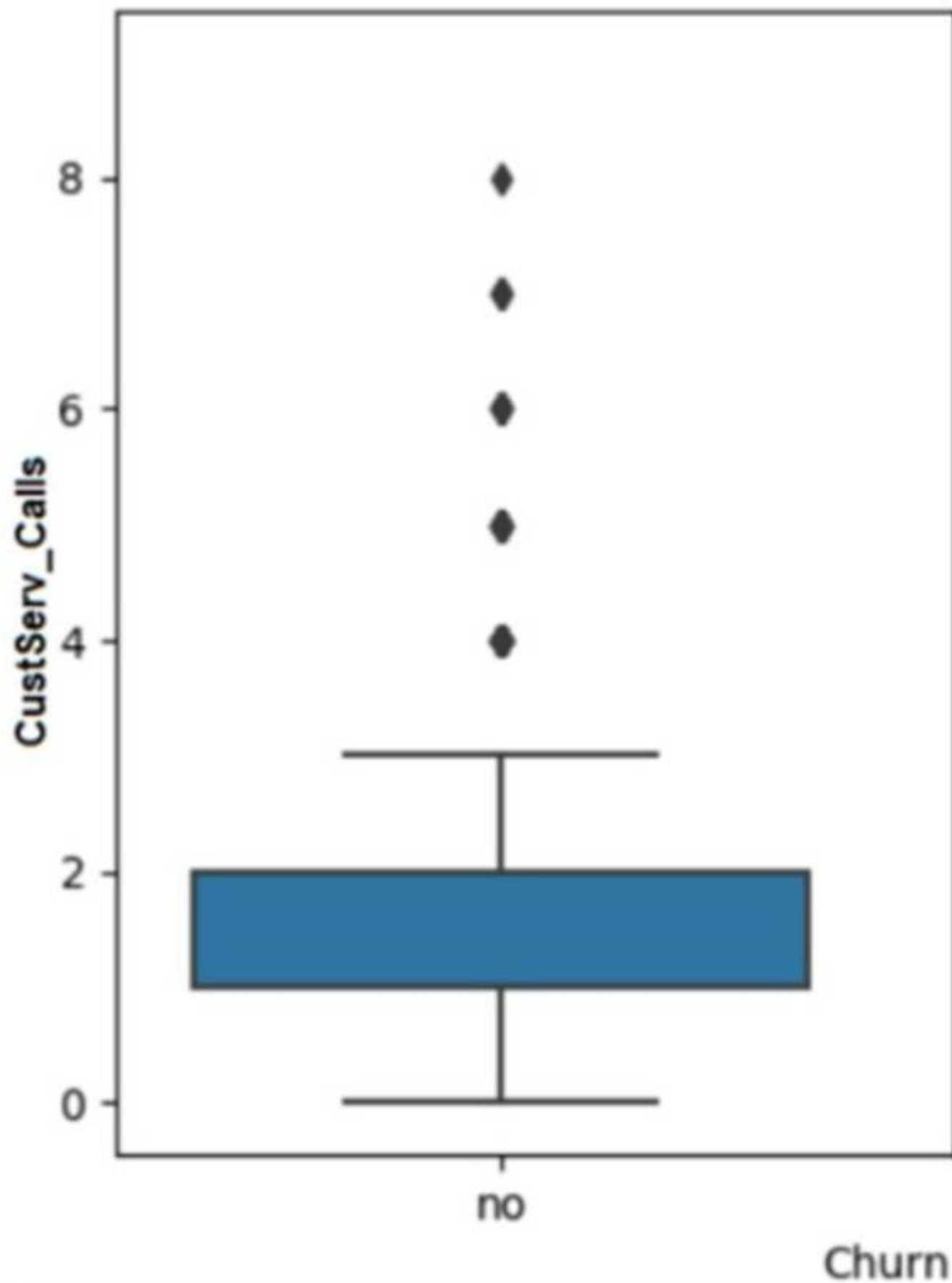
**Explanation:**

For a high-level, year-end report requested by a Chief Executive Officer (CEO), a recurring report type is most appropriate. Recurring reports are regular, scheduled reports that typically summarize information over a set period, such as a fiscal year. They provide a consistent format for executives to track performance over time, and their standardized nature makes them suitable for high-level analysis and decision-making. Since CEOs need to monitor performance and make strategic decisions, a recurring report that provides a comprehensive overview of the year's activities and outcomes would be valuable. This allows the CEO to evaluate the company's performance against its goals and objectives systematically.

Dynamic reports (A) are more interactive and typically used for in-depth analysis where users can drill down into the data. Ad hoc reports (C) are one-time, usually unscheduled reports tailored for specific questions, which may not be as comprehensive as a year-end report requires. Self-service reports (D) allow users to create their reports on demand, which may not be the formal, synthesized view a CEO would need for a year-end report.

**NEW QUESTION 53**

Given the image below:



The data should be cleaned because of the presence of:

- A. outlier
- B. non-parametric data.
- C. multicollinearity.
- D. invalid data.

**Answer:** A

**Explanation:**

The answer is A. Outlier.

Short Explanation: An outlier is a data point that differs significantly from the rest of the data in a dataset. An outlier can indicate an error, an anomaly, or a rare event in the data. An outlier can affect the statistical analysis and visualization of the data, such as skewing the mean, variance, or distribution of the data.

Therefore, data should be cleaned to identify and remove or correct any outliers.

The image below shows a box plot graph with a vertical axis labeled "Customer Calls" and a horizontal axis labeled "Churn". The box plot is blue in color and the median value is around 2. There are 7 outliers above the box plot, ranging from 4 to 8. image)

A box plot is a type of graph that can show the distribution of data values using five summary statistics: minimum, maximum, median, first quartile, and third quartile. The box represents the interquartile range (IQR), which is the difference between the first and third quartiles. The median is shown as a line inside the box. The whiskers extend from the box to the minimum and maximum values, excluding any outliers. Outliers are shown as dots or circles outside the whiskers. In this graph, we can see that most of the customer calls are between 0 and 4, with a median of 2. However, there are 7 outliers that have more than 4 customer calls, up to 8. These outliers may indicate some customers who have more issues or complaints than others, or some errors or anomalies in the data collection or recording process. These outliers can affect the analysis and interpretation of the customer calls and churn relationship, such as making it seem that more customer calls lead to less churn, which may not be true for the majority of the customers. Therefore, data should be cleaned to investigate and handle these outliers appropriately.

**NEW QUESTION 57**

Kelly wants to get feedback on the final draft of a strategic report that has taken her six months to develop.

What can she do to get prevent confusion as see seeks feedback before publishing the report?

Choose the best answer.

- A. Distribute the report to the appropriate stakeholders via email.
- B. Use a watermark to identify the report as a draft.
- C. Show the report to her immediate supervisor.
- D. Publish the report on an internally facing website.

**Answer:** B

**Explanation:**

The best answer is to use a watermark to identify the report as a draft. A watermark is a faint image or text that appears behind the content of a document, indicating its status or ownership. By using a watermark, Kelly can clearly communicate that the report is not final and still subject to changes or feedback. This can prevent confusion among the readers and avoid any misuse or misinterpretation of the report. The other options are not as effective as using a watermark, as they either do not indicate the status of the report or do not reach the appropriate stakeholders. Distributing the report via email or publishing it on an internally facing website may not make it clear that the report is a draft and may cause confusion or errors. Showing the report to her immediate supervisor may not get enough feedback from other relevant stakeholders who may have different perspectives or insights. Reference: How to Add a Watermark in Microsoft Word - Lifewire

**NEW QUESTION 59**

A research analyst collects ten data points from 1,000 specimens. The analyst will not need any additional data to complete the analysis and will not need to retrieve information by specifier. Which of the following is the best data structure for the analyst to use?

- A. NoSQL
- B. Flat file
- C. JSON
- D. Relational database

**Answer:** B

**Explanation:**

A flat file is a type of data structure that stores data in a plain text format, such as CSV, TSV, or TXT. A flat file consists of one or more records, each containing one or more fields, separated by a delimiter, such as a comma, tab, or space. A flat file does not have any hierarchical or relational structure, and does not support any complex queries or operations<sup>1</sup>.

A flat file may be the best data structure for the analyst to use in this scenario, because:

? The analyst collects ten data points from 1,000 specimens, which means the data is relatively small and simple, and can be easily stored and processed in a flat file.

? The analyst will not need any additional data to complete the analysis, which means the data is static and does not require any updates or modifications.

? The analyst will not need to retrieve information by specifier, which means the data does not require any indexing or searching by key or value.

**NEW QUESTION 64**

A client has requested an analysis of all pet care items purchased by current customers and their social media connections in the past 12 months. Which of the following data analysis techniques would be the best choice given these requirements?

- A. Trend analysis
- B. Performance analysis
- C. Link analysis
- D. Exploratory data analysis

**Answer:** C

**NEW QUESTION 67**

While reviewing survey data, a research analyst notices data is missing from all the responses to a single question. Which of the following methods would BEST address this issue?

- A. Replace missing data.
- B. Remove duplicate data.
- C. Replace redundant data.
- D. Remove invalid data.

**Answer:** A

**Explanation:**

This is because missing data is a type of data quality issue that occurs when data is absent or incomplete in a data set, which can affect the accuracy and reliability of the analysis or process. Missing data can be caused by various factors, such as human error, system error, or non-response. Missing data can be addressed by using various methods, such as replacing missing data, which means filling in or imputing the missing values with some reasonable estimates, such as mean, median, mode, or regression. The other methods are not used to address missing data. Here is why:

? Remove duplicate data is a type of method that eliminates or reduces duplicate data, which is a type of data quality issue that occurs when data is repeated or copied in a data set. Removing duplicate data does not address missing data, but rather affects the quantity and validity of the data.

? Replace redundant data is a type of method that eliminates or reduces redundant data, which is a type of data quality issue that occurs when data is unnecessary or irrelevant for the analysis or purpose. Replacing redundant data does not address missing data, but rather affects the efficiency and performance of the analysis or process.

? Remove invalid data is a type of method that eliminates or reduces invalid data, which is a type of data quality issue that occurs when data is incorrect or inaccurate in a data set. Removing invalid data does not address missing data, but rather affects the validity and reliability of the analysis or process.

**NEW QUESTION 69**

Which of the following can be used to translate data into another form so it can only be read by a user who has a key or a password?

- A. Data encryption.
- B. Data transmission.
- C. Data protection.

D. Data masking.

**Answer:** A

**Explanation:**

Data encryption can be used to translate data into another form so it can only be read by a user who has a key or a password. Data encryption is a process of transforming data using an algorithm or a cipher to make it unreadable to anyone except those who have the key or the password to decrypt it. Data encryption is a common method of protecting data from unauthorized access, modification, or theft. Reference: Guide to CompTIA Data+ and Practice Questions - Pass Your Cert

#### NEW QUESTION 73

A data analyst is helping a retail store categorize its customers into five different groups based on the following information:

- How recently the customers made purchases
  - How frequently the customers made purchases
  - How much the customers spent
- Given the following information:

Customer_ID	Channel	Order_Date	Quantity	Territory	Amount (\$)
1001	Online	2/11/2020	12	North	1,250
2001	Store	2/10/2020	31	East	5,000
4001	Online	2/09/2020	24	West	2,500
3001	Online	2/11/2020	51	South	6,000
1001	Store	3/10/2020	22	North	2,000
1001	Online	1/09/2020	87	North	8,400
1001	Store	2/09/2020	23	North	2,000

Which of the following would be most important for the analysis?

- A. CustomerJ
- B. Channel, Order\_Date
- C. CustomerJD, Territor
- D. Amount
- E. CustomerJD, Order\_Dat
- F. Amount
- G. CustomerJ
- H. Quantity, Amount

**Answer:** C

#### NEW QUESTION 74

A data analyst needs to perform a full outer join of a customer's orders using the tables below:



## Sales\_table

Cust_id	Order_id	Order_qty
Tc - 5858	Od - 9800	50
Tc - 5833	Od - 9801	68
Tc - 5890	Od - 9802	103

## Order\_table

Order_id	Order_qty
Od - 9803	102
Od - 9800	50
Od - 9802	103
Od - 9805	80
Od - 9804	70

Which of the following is the mean of the order quantity?

- A. 73.5
- B. 76.5
- C. 78.8
- D. 81.5

**Answer:** D

### Explanation:

The correct answer is D. OUTER JOIN, seven rows.

An OUTER JOIN is a type of SQL join that returns all the rows from both tables, regardless of whether there is a match or not. If there is no match, the missing side will have null values. An OUTER JOIN can be either a LEFT JOIN, a RIGHT JOIN, or a FULL JOIN, depending on which table's rows are preserved<sup>1</sup>

Using the example tables, a FULL OUTER JOIN query would look like this:

```
SELECT Cust_id, Order_id, Order_qty FROM Sales_table FULL OUTER JOIN Order_table ON Sales_table.Order_id = Order_table.Order_id;
```

The result of this query would be:

```
Cust_id | Order_id | Order_qty | 1 | 1 | 100 | 2 | 2 | 50 | 3 | 3 | 25 | 4 | 4 |
```

```
75 | NULL | 5 | 10 | NULL | 6 | 20 | NULL | 7 | 15
```

As you can see, the query returns seven rows, one for each order in either table. The orders that are not in the Sales\_table have null values for the Cust\_id column.

To find the mean of the order quantity, we need to sum up the order quantities and divide by the number of rows. In this case, the mean is  $(100 + 50 + 25 + 75 + 10 + 20 + 15) / 7 = 42.14$ . Rounding to one decimal place, we get 42.1 as the mean of the order quantity.

### NEW QUESTION 78

#### SIMULATION

The director of operations at a power company needs data to help identify where company resources should be allocated in order to monitor activity for outages and restoration of power in the entire state. Specifically, the director wants to see the following:

\* County outages

\* Status

\* Overall trend of outages INSTRUCTIONS:

Please, select each visualization to fit the appropriate space on the dashboard and choose an appropriate color scheme. Once you have selected all visualizations, please, select the appropriate titles and labels, if applicable. Titles and labels may be used more than once.

If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

1000000

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

This is a simulation question that requires you to create a dashboard with visualizations that meet the director's needs. Here are the steps to complete the task:

? Drag and drop the visualization that shows the county outages on the top left

space of the dashboard. This visualization is a map of the state with different colors indicating the number of outages in each county. You can choose any color scheme that suits your preference, but make sure that the colors are consistent and clear. For example, you can use a gradient of red to show the counties with more outages and green to show the counties with less outages.

? Drag and drop the visualization that shows the status of the outages on the top

right space of the dashboard. This visualization is a pie chart that shows the percentage of outages that are active, restored, or pending. You can choose any color scheme that suits your preference, but make sure that the colors are distinct and easy to identify. For example, you can use red for active, green for restored, and yellow for pending.

? Drag and drop the visualization that shows the overall trend of outages on the

bottom space of the dashboard. This visualization is a line graph that shows the number of outages over time. You can choose any color scheme that suits your preference, but make sure that the color is visible and contrasted with the background. For example, you can use blue for the line and white for the background.

? Select appropriate titles and labels for each visualization. Titles and labels may be

used more than once. For example, you can use "County Outages" as the title for the map, "Status" as the title for the pie chart, and "Trend" as the title for the line graph. You can also use "County", "Number of Outages", "Active", "Restored", "Pending", "Time", and "Number of Outages" as labels for the axes and legends of the visualizations.

**NEW QUESTION 80**

A report is scheduled to run and be distributed at the end of business each day. On Mondays, one of the recipients opens the previous week's reports and combines them to calculate the weekly totals and projections for the coming week. This is a tedious process, and the recipient asks an analyst for help. Which of the following should the analyst recommend?

- A. Add calculation fields to the daily report so the totals are built in.
- B. Create a new report with weekly totals set to run at the end of business on Friday.
- C. Provide a daily summary to the report with totals to save the user the effort of manual calculations.
- D. Reduce the frequency of the report to once a week and change the date range.

**Answer:** B

**Explanation:**

Creating a new report that automatically calculates weekly totals would streamline the process for the recipient. By setting this report to run at the end of business on Friday, it would provide the recipient with the necessary information for the entire week in one consolidated document. This eliminates the need for manual calculations and combines the previous week's data into one report, making it more efficient and less time-consuming.

References:

? Best practices in business analytics suggest automating repetitive tasks and consolidating reports where possible to improve efficiency and reduce the potential for human error.

**NEW QUESTION 81**

Which of the following are reasons to conduct data cleansing? (Select two).

- A. To perform web scraping
- B. To track KPIs
- C. To improve accuracy
- D. To review data sets
- E. To increase the sample size
- F. To calculate trends

**Answer:** CF

**Explanation:**

Two reasons to conduct data cleansing are:

? To improve accuracy: Data cleansing helps to ensure that the data is correct, consistent, and reliable. This can improve the quality and validity of the analysis, as well as the decision-making and outcomes based on the data<sup>12</sup>

? To calculate trends: Data cleansing helps to remove or resolve any errors, outliers, or missing values that could distort or skew the data. This can help to identify and measure the patterns, changes, or relationships in the data over time<sup>13</sup>

**NEW QUESTION 84**

Given the information in the following tables:

### Online transactions:

Customer ID	Channel	Segment	Amount (\$)
001	Online	Existing	3,000
002	Online	Existing	4,000
003	Online	New	1,500

### In-store transactions:

Customer ID	Channel	Segment	Amount (\$)
001	In-store	New	1,000
004	In-store	Existing	4,000
005	In-store	New	3,500

Which of the following describes merging these tables to create a master file that includes all transactions for both online and in-store sales?

- A. Data audit
- B. Data completeness
- C. Data validation
- D. Data consolidation

**Answer:** D

**Explanation:**

Merging tables to create a master file that includes all transactions for both online and in-store sales is best described as data consolidation. This process involves combining data from various sources into a single, unified dataset. Data consolidation is essential for providing a comprehensive view of all transactions, which can be used for analysis, reporting, and decision-making purposes.

References: The answer is based on standard data management practices and the definition of data consolidation. No specific external documents were referenced for this response.

**NEW QUESTION 89**

Which of the following is a relational database?

- A. SQL
- B. Excel
- C. JSON
- D. NoSQL

**Answer:** A

**NEW QUESTION 91**

Standardized tests are given to students in the middle of each month, and the results are ready by the end of the month. The superintendent needs a quick view of test performance. Which of the following would be the best recommendation to meet the superintendent's requirements?

- A. A dashboard with a continuous data stream and saved searches
- B. A report of test scores by classroom, emailed to the superintendent at the end of the month
- C. A report of test scores with pie charts showing student performance
- D. A dashboard with a scheduled delivery, the ability to filter scores by school, and bar charts for comparison

**Answer:** D

**Explanation:**

A dashboard with a scheduled delivery is an efficient way to provide a quick view of test performance. It allows for timely updates, which is crucial given that the superintendent needs the information promptly at the end of each month. The ability to filter scores by school enables the superintendent to easily segment and analyze the data as needed. Bar charts are effective for comparison and can visually communicate the performance across different schools or other categories, making it easier to identify trends and outliers at a glance.

References:

? Best practices in data visualization recommend using dashboards for real-time data monitoring and quick access to key metrics<sup>1</sup>.

? Guidelines for presenting performance data suggest that visual tools like bar charts are helpful in comparing and analyzing data effectively<sup>1</sup>.

? Educational performance data analysis often involves comparing scores across different schools or classrooms, which is facilitated by a well-designed dashboard<sup>2</sup>.

**NEW QUESTION 96**

Given the following report:



## Quarterly Customer Service Report

**Table 1. Frequency of Ticket Statuses**

Status	Count
Reported	11
In-Progress	323
Closed	554

**Table 2. Occurrence of Target Phrases**

Target Phrases	Count
Have a great day!	1200
It is my pleasure to assist you.	70
Can you please hold?	7352

Most tickets are being addressed soon after being reported. Asking customers to hold is the most commonly used target phrase.

Which of the following components need to be added to ensure the report is point-in-time and static? (Choose two.)

- A. A control group for the phrases
- B. A summary of the KPIs
- C. Filter buttons for the status
- D. The date when the report was last accessed
- E. The time period the report covers
- F. The date on which the report was run

**Answer: E**

**Explanation:**

The date on which the report was run. This is because the time period the report covers and the date on which the report was run are two components that need to be added to ensure the report is point-in-time and static, which means that the report shows the data as it was at a specific moment or interval in time, and does not change or update with new data. By adding the time period the report covers and the date on which the report was run, the analyst can indicate when and for how long the data was collected and analyzed, as well as avoid any confusion or ambiguity about the currency or validity of the data. The other components do not need to be added to ensure the report is point-in-time and static. Here is why:

A control group for the phrases is a type of group that serves as a baseline or a reference for comparison with another group that is exposed to some treatment or

intervention, such as a target phrase in this case. A control group for the phrases does not need to be added to ensure the report is point-in-time and static, because it does not affect the time frame or the stability of the data. However, a control group for the phrases could be useful for evaluating the effectiveness or impact of the target phrases on customer satisfaction or retention.

A summary of the KPIs is a type of document that provides an overview or a highlight of the key performance indicators (KPIs), which are measurable values that indicate how well an organization or a process is achieving its goals or objectives. A summary of the KPIs does not need to be added to ensure the report is point-in-time and static, because it does not affect the time frame or the stability of the data. However, a summary of the KPIs could be useful for communicating or presenting the main findings or insights from the report.

Filter buttons for the status are a type of feature or function that allows users to select or deselect certain values or categories in a column or a table, such as ticket statuses in this case. Filter buttons for the status do not need to be added to ensure the report is point-in-time and static, because they do not affect the time frame or the stability of the data. However, filter buttons for the status could be useful for exploring or analyzing different aspects or segments of the data.

#### NEW QUESTION 101

Which of the following is an example of structured data?

- A. A credit card number
- B. An email
- C. A photo
- D. Social media correspondence

**Answer:** A

#### Explanation:

A credit card number is an example of structured data, which is a type of data that conforms to a data model, has a well-defined structure, follows a consistent order, and can be easily accessed and used by a person or a computer program. A credit card number consists of 16 digits that are divided into four groups of four digits each, separated by spaces or hyphens. The first six digits indicate the issuer identification number, the next nine digits indicate the account number, and the last digit is a check digit that validates the number. A credit card number can be stored and processed in a structured format, such as a database or a spreadsheet1.

#### NEW QUESTION 105

An analyst has received the requirements for an internal user dashboard. The analyst confirms the data sources and then creates a wireframe. Which of the following is the NEXT step the analyst should take in the dashboard creation process?

- A. Optimize the dashboard.
- B. Create subscriptions.
- C. Get stakeholder approval.
- D. Deploy to production.

**Answer:** C

#### Explanation:

Getting stakeholder approval is the next step the analyst should take in the dashboard creation process, after confirming the data sources and creating a wireframe. Stakeholder approval means getting feedback and validation from the intended users or clients of the dashboard, to ensure that it meets their expectations and requirements. This step helps to avoid rework and ensure customer satisfaction. References: CompTIA Data+ Certification Exam Objectives, page 14

#### NEW QUESTION 107

An analyst runs a report on a daily basis, and the number of datapoints must be validated before the data can be analyzed. The number of datapoints increases each day by approximately 20% of the total number from the day before. On a given day, the number of datapoints was 8,798. Which of the following should be the total number of datapoints on the next day?

- A. 7,038
- B. 9,600
- C. 10,600
- D. 10,800

**Answer:** C

#### Explanation:

This is because the number of datapoints increases each day by approximately 20% of the total number from the day before. Therefore, to find the number of datapoints on the next day, we can use the formula:

$$\text{Next day} = \text{Current day} * (1 + 20\%)$$

Plugging in the given values, we get:

$$\text{Next day} = 8,798 * (1 + 0.2)$$

$$\text{Next day} = 8,798 * 1.2$$

$$\text{Next day} = 10,557.6$$

Since we are dealing with whole numbers, we can round up the result to the nearest integer, which is 10,600.

**NEW QUESTION 109**

Given the below:

		Conclusion from statistical analysis	
		Accept the null hypothesis	Reject the null hypothesis
The true state of nature	Null hypothesis is true	1	3
	Null hypothesis is false	2	4

Which of the following numbers represents a Type I error?

- A. 1
- B. 2
- C. 3
- D. 4

**Answer:** C

**NEW QUESTION 112**

The total values in this month's revenue report are twice as much as last month's. Which of the following most likely occurred during the ETL process?

- A. The data cleansing processes failed to execute.
- B. The database connectivity failed.
- C. The report included the previous month's data.
- D. The data normalization processes failed.

**Answer:** C

**NEW QUESTION 113**

A data analyst has been asked to create a sales report that calculates the rolling 12-month average for sales. If the report will be published on November 1, 2020, which of the following months should the report cover?

- A. October 1, 2019 to October 31, 2020
- B. October 31, 2020 to November 1, 2021
- C. November 1, 2019 to October 31, 2020
- D. October 31, 2019 to October 31, 2020

**Answer:** A

**Explanation:**

The report should cover the months from October 1, 2019 to October 31, 2020. A rolling 12-month average is a type of moving average that calculates the average of the last 12 months of data for each month. It is useful for smoothing out seasonal fluctuations and identifying long-term trends in the data. To calculate the rolling 12-month average for sales for November 1, 2020, the analyst needs to use the sales data from the previous 12 months, starting from November 1, 2019 and ending on October 31, 2020. The other options are either too short or too long to cover the required period.

**NEW QUESTION 118**

An analyst must obtain the average daily sales for the following week:

Date	SalesTotal
2/10/2020	\$36,986
2/11/2020	\$37,981
2/12/2020	\$40,551
2/13/2020	\$42,442
2/14/2020	\$56,216
2/15/2020	\$81,117
2/16/2020	\$63,815

Which of the following must the analyst perform to obtain this value?

- A. Data normalization
- B. Data append
- C. Data aggregation
- D. Data blending

**Answer:** C

**Explanation:**

Data aggregation is the process of compiling data from multiple sources and summarizing it into a single dataset. Data aggregation can be used to calculate statistics, such as averages, sums, counts, or percentages. In this case, the analyst must obtain the average daily sales for the following week, which is a statistic that can be calculated by aggregating the sales data from each day and dividing by the number of days. Data aggregation can be done using various tools and methods, such as spreadsheets, databases, or programming languages.

**NEW QUESTION 121**

A data analyst is working with a team to create a dashboard for a client who requires on- demand access. Which of the following is the best delivery method to support the clients?? requirement?

- A. Email
- B. Scheduled
- C. Subscription
- D. Static

**Answer:** C

**Explanation:**

The best delivery method to support the client??s requirement is C. Subscription.

Short Explanation: A subscription is a delivery method that allows the client to access the dashboard on-demand, whenever they need it. A subscription can be set up by the data analyst or the client themselves, and it can be configured to send an email notification when the dashboard is updated or refreshed. A subscription also allows the client to view the dashboard online or download it as a file format of their choice<sup>12</sup>

\* A. Email is not the best delivery method because it does not allow the client to access the dashboard on-demand. Email deliveries are sent at a fixed time or frequency, and they may not reflect the latest data or changes in the dashboard. Email deliveries also have limitations on the file size and format of the dashboard attachments<sup>1</sup>

\* B. Scheduled is not the best delivery method because it does not allow the client to access the dashboard on-demand. Scheduled deliveries are similar to email deliveries, except that they are triggered by a specific event or condition, such as a data update or a threshold value. Scheduled deliveries also have the same limitations as email deliveries on the file size and format of the dashboard attachments<sup>1</sup>

\* D. Static is not the best delivery method because it does not allow the client to access the dashboard on-demand. Static deliveries are one-time deliveries that are manually generated by the data analyst or the client. Static deliveries do not update or refresh automatically, and they may become outdated or irrelevant over time. Static deliveries also have limitations on the file size and format of the dashboard files<sup>3</sup>

**NEW QUESTION 125**

A company wants to know how its customers interact with an e-commerce website based on clicks over items. Which of the following is the primary requirement for this report?

- A. Data content
- B. Frequency
- C. Filtering
- D. Views

**Answer:** B



**NEW QUESTION 126**

Each month an analyst needs to execute a data pull for the two prior months. Which of the following is the most efficient function for the analyst to use?

- A. Logical
- B. Date
- C. Aggregate
- D. System

**Answer: B**

**Explanation:**

The most efficient function for an analyst to execute a data pull for the two prior months would be the Date function. This function allows for the manipulation and formatting of date values within a database. Using Date functions, an analyst can dynamically calculate the start and end dates for the previous two months, ensuring that the data pull is accurate and automated without manual intervention.

For example, SQL functions like DATEADD and DATEDIFF can be used to determine the exact range of dates needed for the data pull. These functions can calculate the first and

last day of the previous months relative to the current date, which is essential for monthly reporting and analysis.

References:

? Discussions on Stack Overflow suggest using SQL date functions

like DATEADD and DATEDIFF to dynamically extract data for previous months, which supports the use of Date functions<sup>12</sup>.

? The use of Date functions is also recommended for ensuring that the data pull is not only efficient but also accurate, as it avoids potential errors associated with manual date entry<sup>3</sup>.

**NEW QUESTION 128**

A data analyst has been asked to organize the table below in the following ways: By sales from high to low -

By state in alphabetic order -

First_name	Last_name	Address	City	State	Sales
Ed	Edens	2851 N. Southport	Chicago	IL	\$125,689
Pat	Mudd	710 Bridle Ridge Road	Eagan	MN	\$101,259
Katie	Hofstad	2851 S. Windwood Lane	Rosemount	NY	\$105,779
Edward	Frank	281 S. Northport	Chicago	IL	\$456,231
Rachel	Newman	305 Big Timber Trail	Wheaton	CO	\$99,876
Kaylyn	Korth	332 Richfield Drive	Lakeview	MN	\$166,874

Which of the following functions will allow the data analyst to organize the table in this manner?

- A. Conditional formatting
- B. Grouping
- C. Filtering
- D. Sorting

**Answer: D**

**Explanation:**

Sorting is the function that will allow the data analyst to organize the table in the desired manner. Sorting means arranging the data in a specific order, such as ascending or descending, based on one or more criteria. Sorting can be applied to any column in the table, such as sales or state. References: CompTIA Data+ Certification Exam Objectives, page 11

**NEW QUESTION 132**

A company??s marketing department wants to do a promotional campaign next month. A data analyst on the team has been asked to perform customer segmentation, looking at how recently a customer bought the product, at what frequency, and at what value. Which of the following types of analysis would this practice be considered?

- A. Prescriptive
- B. Trend
- C. Gap
- D. Custer

**Answer: D**

**Explanation:**

Customer segmentation is a type of cluster analysis, which is a method of grouping data points based on their similarities or differences. Cluster analysis can help identify patterns and trends in the data, as well as target specific groups of customers for marketing purposes. One common technique for customer segmentation is RFM analysis, which stands for recency, frequency, and monetary value. This technique assigns a score to each customer based on how recently they bought the product, how often they buy the product, and how much they spend on the product. These scores can then be used to create clusters of customers with different characteristics and preferences. Therefore, the correct answer is D. References: Cluster Analysis - Statistics Solutions, RFM Analysis: The Ultimate Guide for Customer Segmentation

**NEW QUESTION 134**

A data analyst has been asked to merge the tables below, first performing an INNER JOIN and then a LEFT JOIN:

Customer_ID	Segment	Region
001	New	BC
002	Existing	ON
003	New	MB
004	New	ON
005	Existing	AT
006	Existing	MB
007	New	QC
008	New	QC
009	Existing	BC

Customer Table -  
In-store Transactions –

Order_ID	Customer_ID	Date	Amount	Quantity
006A	006	04/01/2020	\$200	59
007B	007	03/01/2020	\$500	54
008C	008	02/01/2020	\$600	15
009D	009	05/01/2020	\$800	18
001E	001	07/01/2020	\$300	50
003F	003	08/01/2020	\$200	55

Which of the following describes the number of rows of data that can be expected after performing both joins in the order stated, considering the customer table as the main table?

- A. INNER: 6 rows; LEFT: 9 rows
- B. INNER: 9 rows; LEFT: 6 rows
- C. INNER: 9 rows; LEFT: 15 rows
- D. INNER: 15 rows; LEFT: 9 rows

**Answer: C**

**Explanation:**

An INNER JOIN returns only the rows that match the join condition in both tables. A LEFT JOIN returns all the rows from the left table, and the matched rows from the right table, or NULL if there is no match. In this case, the customer table is the left table and the in-store transactions table is the right table. The join condition is based on the customer\_id column, which is common in both tables.

To perform an INNER JOIN, we can use the following SQL query:

```
SELECT * FROM customer INNER JOIN in_store_transactions ON customer.customer_id
= in_store_transactions.customer_id;
```

This query will return 9 rows of data, as shown below:

```
customer_id | name | lastname | gender | marital_status | transaction_id | amount | date 1 | MARC | TESCO | M | Y | 1 | 1000 | 2020-01-01 1 | MARC | TESCO | M |
Y | 2 | 5000 | 2020-01-02 2 | ANNA | MARTIN | F | N | 3 | 2000 | 2020-01-03 2 | ANNA | MARTIN | F | N |
```

4 | 3000 | 2020-01-04 3 | EMMA | JOHNSON | F | Y | 5 | 4000 | 2020-01-05 4 | DARIO | PENTAL | M | N | 6 | 5000 | 2020-01-06 5 | ELENA | SIMSON | F | N | 7 | 6000 | 2020-01-07 6 | TIM | ROBITH | M | N | 8 | 7000 | 2020-01-08 7 | MILA | MORRIS | F | N | 9 | 8000 | 2020-01-09

To perform a LEFT JOIN, we can use the following SQL query:

```
SELECT * FROM customer LEFT JOIN in_store_transactions ON customer.customer_id = in_store_transactions.customer_id;
```

This query will return 15 rows of data, as shown below: customer\_id|name|lastname|gender|marital\_status|transaction\_id|amount|date

```
1|MARC|TESCO|M|Y|1|1000|2020-01-01 1|MARC|TESCO|M|Y|2|5000|2020-01-02
2|ANNA|MARTIN|F|N|3|2000|2020-01-03 2|ANNA|MARTIN|F|N|4|3000|2020-01-04
3|EMMA|JOHNSON|F|Y|5|4000|2020-01-05 4|DARIO|PENTAL|M|N|6|5000|2020-01-06
5|ELENA|SIMSON|F|N|7|6000|2020-01-07 6|TIM|ROBITH|M|N|8|7000|2020-01-08
7|MILA|MORRIS|F|N|9|8000|2020-01-09
8|JENNY|DWARTH|F|Y|NULL|NULL|NULL
```

As you can see, the customers who do not have any transactions (customer\_id = 8) are still included in the result, but with NULL values for the transaction\_id, amount, and date columns.

Therefore, the correct answer is C: INNER: 9 rows; LEFT: 15 rows. Reference: SQL Joins - W3Schools

#### NEW QUESTION 136

A user imports a data file into the accounts payable system each day. On a regular basis, the field input is not what the system is expecting, so it results in an error for the row and a broken import process. To resolve the issue, the user opens the file, finds the error in the row, and manually corrects it before attempting the import again. The import sometimes breaks on subsequent attempts, though. Which of the following changes should be made to this process to reduce the number of errors?

- A. Delete all incorrect inputs and upload the corrected file.
- B. Have the user manually review the file for data completeness before loading it
- C. Create a data field to data type validator to run the file through prior to import.
- D. Spot-check the file prior to import to catch and correct field errors.

**Answer: C**

#### Explanation:

A data field to data type validator is a tool or a process that checks if the data in each field of a file matches the expected data type, such as text, number, date, etc. A data field to data type validator can help to identify and correct any errors or inconsistencies in the data before importing it into the accounts payable system. This would reduce the number of errors and broken imports, as well as save time and effort for the user.

#### NEW QUESTION 140

An organization would like to add a secondary email field to its customer database in order to enrich the customer profiles. Which of the following data manipulation techniques should the analyst use to add this information?

- A. Blend
- B. Merge
- C. Append
- D. Aggregate

**Answer: C**

#### NEW QUESTION 145

A data analyst is asked to create a sales report for the second-quarter 2020 board meeting, which will include a review of the business's performance through the second quarter. The board meeting will be held on July 15, 2020, after the numbers are finalized. Which of the following report types should the data analyst create?

- A. Static
- B. Real-time
- C. Self-service
- D. Dynamic

**Answer: A**

#### Explanation:

A dynamic report is a type of report that shows data that changes or updates automatically based on certain criteria or parameters. A dynamic report can allow users to interact with the data, filter it, drill down into it, or visualize it in different ways. A dynamic report is suitable for situations where the data changes frequently or where real-time or near-real-time data is needed for decision making or analysis. In this case, the data analyst is asked to create a sales report for the second-quarter 2020 board meeting, which will include a review of the business's performance through the second quarter. The board meeting will be held on July 15, 2020, after the numbers are finalized. This means that the data analyst does not need to show real-time or dynamic data, but rather a fixed and accurate view of the sales data for the second quarter. Therefore, a static report would be the best way to meet this stakeholder requirement. Therefore, the correct answer is A.

References: [What are Dynamic Reports? | Sisense], Static vs Dynamic Reports - What's The Difference? | datapine

#### NEW QUESTION 147

Given the following grocery store orders:



Order_ID	Order_total
85495	\$132.49
28597	\$108.99
57490	\$96.19
35806	\$74.49
18014	\$178.59
39725	\$41.99
20935	\$136.99
25402	\$31.29
85023	\$24.49
27933	\$76.99

If a query is made to the table with the following logic: Order\_Total > 132 OR (Order Total >= 25 AND Order\_Total < 74)  
Which of the following is the number of orders that will be returned by the query?

- A. Four
- B. Five
- C. Six
- D. Seven

**Answer:** C

**Explanation:**

Based on the query logic provided: Order\_Total > 132 OR (Order Total >= 25 AND Order\_Total < 74), we can manually determine which order totals fit this criteria. By examining the image, these are the Order\_Total values that match:  
? 132.49 (greater than 132)  
? 108.99 (greater than or equal to 25 and less than 74)  
? 96.19 (greater than or equal to 25 and less than 74)  
? 74.49 (greater than or equal to 25 and less than 74)  
? 41.99 (greater than or equal to 25 and less than 74)  
? 31.29 (greater than or equal to 25 and less than 74) Thus, six orders satisfy the given conditions.

**NEW QUESTION 148**

Which of the following would a data analyst look for first if 100% participation is needed on survey results?

- A. Missing data
- B. Invalid data
- C. Redundant data
- D. Duplicate data

**Answer:** A

**Explanation:**

Missing data is a type of data quality issue that occurs when some values in a data set are not recorded or available. Missing data can affect the validity and reliability of survey results, especially if the missing values are not random or ignorable. Missing data can also reduce the sample size and the statistical power of the analysis<sup>12</sup>  
If 100% participation is needed on survey results, a data analyst would look for missing data first, because missing data would indicate that some participants did not complete or submit the survey, or that some responses were not recorded or transmitted correctly. A data analyst would need to identify the causes and patterns of missing data, and apply appropriate methods to handle or prevent missing data, such as imputation, deletion, weighting, or follow-up<sup>12</sup>

**NEW QUESTION 150**

Which of the following are reasons to create and maintain a data dictionary? (Choose two.)

- A. To improve data acquisition
- B. To remember specifics about data fields



- C. To specify user groups for databases
- D. To provide continuity through personnel turnover
- E. To confine breaches of PHI data
- F. To reduce processing power requirements

**Answer:** BD

**Explanation:**

A data dictionary is a collection of metadata that describes the data elements in a database or dataset. It can help improve data acquisition by providing information about the data sources, formats, quality, and usage. It can also help remember specifics about data fields, such as their names, definitions, types, sizes, and relationships. Therefore, options B and D are correct.

Option A is incorrect because it is not a reason to create and maintain a data dictionary, but a benefit of doing so.

Option C is incorrect because specifying user groups for databases is not a function of a data dictionary, but a function of a database management system or a security policy.

Option E is incorrect because confining breaches of PHI data is not a function of a data dictionary, but a function of a data protection or encryption system.

Option F is incorrect because reducing processing power requirements is not a function of a data dictionary, but a function of a data compression or optimization system.

**NEW QUESTION 155**

Given the following data table:

CandidateID	Status	Date	HireDate
01	Hired	05-23-87	05-23-87
02	Hired	11-30-96	11-30-96
03	Hired	13-05-99	13-05-99

Which of the following are appropriate reasons to undertake data cleansing? (Select two).

- A. Non-parametric data
- B. Missing data
- C. Duplicate data
- D. Invalid data
- E. Redundant data
- F. Normalized data

**Answer:** BD

**Explanation:**

Data cleansing is a critical process in data analytics to ensure the accuracy and quality of data. The reasons to undertake data cleansing include:

? Missing Data (B): Missing data can lead to incomplete analysis and biased results. It is essential to identify and address gaps in the dataset to maintain the integrity of the analysis<sup>1</sup>.

? Invalid Data (D): Invalid data includes entries that are out of range, improperly formatted, or illogical (e.g., a negative age). Such data can corrupt analysis and lead to incorrect conclusions<sup>1</sup>.

Other options, such as non-parametric data (A), are not inherently errors but refer to a type of data that doesn't assume a normal distribution. Duplicate data (C) and redundant data (E) could also be reasons for data cleansing, but they are not listed as options to select from in the provided image details. Normalized data (F) refers to data that has been processed to fit into a certain range or format and is typically not a reason for data cleansing. References:

? Understanding the importance of data quality and the impacts of missing and invalid data on research outcomes<sup>1</sup>.

? Best practices in data cleansing<sup>2</sup>.

Data cleansing is required for various reasons, two of which are missing data (B) and invalid data (D). From the table provided, we can infer the necessity of cleansing in the context of ensuring data integrity and consistency. Missing data refers to the absence of data where it is expected, which can hinder analysis due to incomplete information. Invalid data refers to data that is incorrect, out of range, or in an inappropriate format, which can lead to inaccuracies in any analysis or report. Both these issues can significantly affect the outcomes of any data-related operations and thus need to be rectified through the data cleansing process.

**NEW QUESTION 158**

An analyst in a consumer bank department wants to showcase the concentration of accounts opened in the United States by ZIP Code to describe the effectiveness of the bank's marketing campaigns. Which of the following would be the best way to visualize the data?

- A. A stacked chart
- B. A tree map
- C. A waterfall chart
- D. A geographic map

**Answer:** D

**NEW QUESTION 161**

The ACME Corporation hired an analyst to detect data quality issues in their Excel documents. Which of the following are the most common issues? (Select TWO)

- A. Apostrophe.
- B. Commas.
- C. Symbols.

- D. Duplicates.
- E. Misspellings.

**Answer:** DE

**Explanation:**

- \* 1. Duplicates
- \* 2. Misspellings

The most common data quality issues are difficult to resolve in Excel because of their rigidity. It forces analysts to do a ton of manual work, which results in a high probability of an error being introduced to the data set. Those common issues include:

- Blanks
- Nulls
- Outliers
- Duplicates
- Extra spaces
- Misspellings
- Abbreviations and domain-specific variations
- Formula error codes

When introduced, these errors can skew or even invalidate the resulting analysis. A smart tool would minimize the possibility of error by automating the manual work. In Excel, you might look for data quality issues in one of two ways. First, you might use auto filters on specific columns to scan for anomalies and blanks or you might use a pivot table to find gaps and discrepancies.

In either case, you're scanning for the anomalies yourself. Suffice it to say that's not a very efficient process. It also means accuracy is only as good as the analyst's eye, so the probability of error varies throughout the day.

**NEW QUESTION 166**

Which of the following is an object associated with a table that sorts and stores table row data in a key-value pair?

- A. Foreign key
- B. Function
- C. Stored procedure
- D. Clustered index

**Answer:** D

**NEW QUESTION 170**

Which of the following is the first step an analyst should perform upon receiving a business request for analysis?

- A. Determine the data needs and sources for analysis.
- B. Initiate the analysis for exploratory data analysis.
- C. Review the business questions to understand the scope.
- D. Finalize the methodology to solve the problem.

**Answer:** C

**Explanation:**

Answer C. Review the business questions to understand the scope.

The first step an analyst should perform upon receiving a business request for analysis is to review the business questions to understand the scope of the problem, the objectives, and the expected outcomes. This will help the analyst to define the analytical approach, identify the data needs and sources, and plan the analysis process. Reviewing the business questions will also help the analyst to communicate with the stakeholders and clarify any assumptions or ambiguities<sup>1</sup>.

Option A is incorrect, as determining the data needs and sources for analysis is not the first step, but rather a subsequent step that depends on the business questions and the analytical approach.

Option B is incorrect, as initiating the analysis for exploratory data analysis is not the first step, but rather a part of the analysis process that involves examining and summarizing the data, identifying patterns and outliers, and testing hypotheses.

Option D is incorrect, as finalizing the methodology to solve the problem is not the first step, but rather a later step that involves selecting and applying the appropriate analytical techniques, tools, and models to answer the business questions.

**NEW QUESTION 171**

Which of the following statements would be used to append two tables that have the same number of columns?

- A. UNION ALL
- B. MERGE
- C. GROUP BY
- D. JOIN

**Answer:** A

**Explanation:**

The correct answer is A. UNION ALL.

UNION ALL is a SQL statement that appends two tables that have the same number of columns and compatible data types. UNION ALL preserves all the rows from both tables, including any duplicates<sup>12</sup>

\* B. MERGE is not correct, because MERGE is a SQL statement that combines the data of two tables based on a common column. MERGE can perform insert, update, or delete operations on the target table depending on the matching or non-matching rows from the source table<sup>34</sup>

\* C. GROUP BY is not correct, because GROUP BY is a SQL clause that groups the rows of a table based on one or more columns. GROUP BY is often used with aggregate functions, such as SUM, AVG, COUNT, etc., to calculate summary statistics for each group<sup>56</sup>

\* D. JOIN is not correct, because JOIN is a SQL clause that combines the data of two tables based on a common column or condition. JOIN can produce different results depending on the type of join, such as INNER JOIN, LEFT JOIN, RIGHT JOIN, etc.

**NEW QUESTION 176**

Which of the following should be accomplished NEXT after understanding a business requirement for a data analysis report?

- A. Rephrase the business requirement.
- B. Determine the data necessary for the analysis.
- C. Build a mock dashboard/presentation layout.
- D. Perform exploratory data analysis.

**Answer:** B

**Explanation:**

Exploratory data analysis (EDA) is a process of examining and summarizing a dataset using various techniques, such as descriptive statistics, visualizations, correlations, outliers detection, and hypothesis testing. EDA can help reveal the main characteristics, patterns, trends, and insights from the data, as well as identify any problems or issues with the data quality or structure. EDA is usually performed after understanding a business requirement for a data analysis report and before building a mock dashboard/presentation layout. Therefore, the correct answer is B. References: [What is Exploratory Data Analysis? | Definition and Examples], [Exploratory Data Analysis in Python]

**NEW QUESTION 179**

A reporting analyst is creating a dashboard that shows the year-over-year performance for a sales organization. Which of the following is the best visual for the analyst use to illustrate the organization's performance?

- A. Pie chart
- B. Scatter plot
- C. Heat map
- D. Line chart

**Answer:** D

**NEW QUESTION 184**

You are working with a dataset and want to change the names of categories that you used for different types of books. What term best describes this action?

- A. Recording.
- B. Summarizing
- C. Aggregating.
- D. Filtering.

**Answer:** A

**Explanation:**

The term that best describes the action of changing the names of categories that you used for different types of books is recoding. Recoding is a process of transforming or modifying the values of a variable or a category to make them more meaningful, consistent, or accurate. For example, you can recode the names of book genres from ??Fiction??, ??Non-Fiction??, ??Biography??, etc. to ??FIC??, ??NF??, ??BIO??, etc. to make them shorter and easier to use. Reference: Recoding Data - SPSS Tutorials - LibGuides at Kent State University

**NEW QUESTION 189**

Which of the following best describes an exploratory analysis?

- A. Involves the use of descriptive statistics to understand observations
- B. Involves analysis of exploring data sets for performance tracking
- C. Involves the testing of specific hypotheses
- D. Involves the use of arithmetic algebra to determine the distribution

**Answer:** A

**Explanation:**

Answer A. Involves the use of descriptive statistics to understand observations. Exploratory data analysis (EDA) is a method of analyzing and investigating data sets to summarize their main characteristics, often using statistical graphics and other data visualization methods. EDA involves the use of descriptive statistics, such as mean, median, mode, standard deviation, frequency, or percentage, to understand the distribution, central tendency, variability, and relationship of the data. EDA helps to see what the data can reveal beyond the formal modeling or hypothesis testing, and provides a better understanding of data set variables and the interactions between them<sup>1</sup>.

**NEW QUESTION 194**

Given the following report:

# Quarterly Customer Service Report

**Table 1. Frequency of Ticket Statuses**

Status	Count
Reported	11
In-Progress	323
Closed	554

**Table 2. Occurrence of Target Phrases**

Target Phrases	Count
Have a great day!	1200
It is my pleasure to assist you.	70
Can you please hold?	7352

Most tickets are being addressed soon after being reported. Asking customers to hold is the most commonly used target phrase.

Which of the following components need to be added to ensure the report is point-in-time and static? (Select two).

- A. A control group for the phrases
- B. A summary of the KPIs
- C. Filter buttons for the status
- D. The date when the report was last accessed
- E. The time period the report covers
- F. The date on which the report was run

**Answer:** DF

**Explanation:**

To ensure that a report is point-in-time and static, it should include the date when the report was last accessed and the date on which the report was run. These components confirm the specific time frame the data represents, making the report a fixed reference that does not change with subsequent data updates or



accesses. This is crucial for accurate historical analysis and for maintaining the integrity of the data as it was at the time of the report's creation.

References:

? Best practices in business reporting.

? Importance of time-stamping in data analysis.

? Guidelines for creating static reports in data analytics.

#### NEW QUESTION 198

A sales manager wants quarterly sales reports broken down by unit and week. Which of the following data output lists includes the most necessary information?

- A. Order number
- B. salesperson
- C. date shipped, recipient address, and price
- D. Item name, salesperson
- E. recipient address, shipping cost
- F. and date shipped
- G. Item number, item name, salesperson
- H. date sold
- I. and price
- J. Item name
- K. salesperson
- L. price
- M. shipping cost
- N. and date shipped

**Answer:** C

#### Explanation:

To create a quarterly sales report broken down by unit and week, the most necessary information is the item number, item name, salesperson, date sold, and price. These data elements can help the sales manager to track the sales volume, revenue, and performance of each unit and each week within a quarter. The item number and item name can identify the products or services sold by each unit. The salesperson can indicate the individual or team responsible for each sale. The date sold can show when each sale occurred and how it relates to the weekly and quarterly goals. The price can show how much revenue each sale generated and how it contributes to the unit and quarterly totals.

#### NEW QUESTION 200

An e-commerce company recently tested a new website layout. The website was tested by a test group of customers, and an old website was presented to a control group. The table below shows the percentage of users in each group who made purchases on the websites:

Conversion	Control group	Test group	p-value
United States	7.8%	8.9%	0.003
Germany	6.3%	7.0%	0.13
United Kingdom	5.3%	9.6%	0.08
France	6.5%	6.7%	0.045
Canada	4.4%	5.1%	0.002

Which of the following conclusions is accurate at a 95% confidence interval?

- A. In Germany, the increase in conversion from the new layout was not significant.
- B. In France, the increase in conversion from the new layout was not significant.
- C. In general, users who visit the new website are more likely to make a purchase.
- D. The new layout has the lowest conversion rates in the United Kingdom.

**Answer:** C

#### Explanation:

The conclusion that is accurate at a 95% confidence interval is that in general, users who visit the new website are more likely to make a purchase. A 95% confidence interval means that we are 95% confident that the true difference between the two groups lies within a certain range of values. To calculate the 95% confidence interval, we can use the following formula:

$$CI = (p_1 - p_2) \pm 1.96 * \sqrt{p * (1 - p) * (1/n_1 + 1/n_2)}$$

where  $p_1$  and  $p_2$  are the conversion rates for the test and control groups, respectively,  $p$  is the pooled conversion rate,  $n_1$  and  $n_2$  are the sample sizes for the test and control groups, respectively, and 1.96 is the z-score for a 95% confidence level.

Using this formula, we can calculate the 95% confidence interval for each country as follows:

Country |  $p_1$  |  $p_2$  |  $n_1$  |  $n_2$  |  $p$  | CI  
United States | 0.12 | 0.11 | 2000 | 2000 | 0.115 | (-0.006, 0.026)  
Germany | 0.06 | 0.04 | 1000 | 1000 | 0.05 | (-0.002, 0.042)  
United Kingdom | 0.09 | 0.07 | 1500 | 1500 | 0.08 | (-0.003, 0.053)  
France | 0.08 | 0.08 | 1200 | 1200 | 0.08 | (-0.024, 0.024)  
Canada | 0.05 | 0.03 | 800 | 800 | 0.04 | (-0.005, 0.045)

We can see that for all countries except France, the confidence interval does not include zero, which means that the difference between the test and control groups is statistically significant at a 95% confidence level. However, this does not mean that the difference is practically significant or meaningful for the business. To measure the practical significance, we can use another metric called lift, which is the percentage increase or decrease in conversion rate from the control group

to the test group.

$Lift = (p1 - p2) / p2$

Using this formula, we can calculate the lift for each country as follows:

Country | Lift United States | 9.09% Germany | 50% United Kingdom |28.57% France|0% Canada|66.67%

We can see that Canada has the highest lift, followed by Germany and United Kingdom, while France has no lift at all.

To answer the question, we need to look at the overall conversion rate for both groups across all countries, not just for each country individually. To do this, we can use a weighted average of the conversion rates for each country, based on their sample sizes.  $Weighted\ average = (p1 * n1 + p2 * n2) / (n1 + n2)$

Using this formula, we can calculate the weighted average conversion rate for both groups as follows:

Group|Weighted average Test|0.084 Control|0.072

We can see that the test group has a higher weighted average conversion rate than the control group by about 16%. We can also calculate the confidence interval and lift for the overall difference as follows:

$CI = (p1 - p2) \pm 1.96 * \sqrt{p * (1 - p) * (1/n1 + 1/n2)} = (0.084 - 0.072) \pm$

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#### NEW QUESTION 201

A military commander would like to see the health scorecards of the troops daily and filter them based on gender and rank. Considering this data is PHI, which of the following would be the best way for the commander to view the information?

- A. An emailed report
- B. A password-protected dashboard
- C. A daily printout of a report
- D. A cloud-hosted spreadsheet

**Answer: B**

#### Explanation:

A password-protected dashboard is a type of web-based application that can display the health scorecards of the troops in a secure and interactive way. A password-protected dashboard can provide the following benefits for the commander:

- ? It can protect the PHI data from unauthorized access or disclosure by requiring a valid username and password to log in. This can ensure that only the commander and other authorized personnel can view the information<sup>12</sup>
- ? It can allow the commander to filter the data based on gender and rank by using drop-down menus, sliders, checkboxes, or other controls. This can enable the commander to customize the view and focus on the relevant data<sup>13</sup>
- ? It can update the data daily by connecting to a data source that refreshes automatically or on demand. This can ensure that the commander always sees the latest and most accurate information<sup>14</sup>
- ? It can present the data in a visual and intuitive way by using charts, graphs, tables, or other elements. This can help the commander to understand and analyze the data more easily and effectively<sup>1</sup>

#### NEW QUESTION 203

A company notifies its employees that emails will be automatically moved to a cloud-based server in 180 days. Which of the following describes this concept?

- A. Data deletion
- B. Data processing
- C. Data retention
- D. Data constraints

**Answer: C**

#### NEW QUESTION 205

A data analyst needs to present the results of an online marketing campaign to the marketing manager. The manager wants to see the most important KPIs and measure the return on marketing investment. Which of the following should the data analyst use to BEST communicate this information to the manager?

- A. A real-time monitor that allows the manager to view performance the day the campaign was launched
- B. A self-service dashboard that allows the manager to look at the company's annual budget performance
- C. A spreadsheet of the raw data from all marketing campaigns and channels
- D. A summary with statistics, conclusions, and recommendations from the data analyst

**Answer: D**

#### Explanation:

A summary with statistics, conclusions, and recommendations from the data analyst is the best way to communicate the results of an online marketing campaign to the marketing manager. A summary can provide a concise and clear overview of the most important KPIs and measure the return on marketing investment, as well as highlight the main findings and insights from the data analysis. A summary can also include actionable suggestions and best practices for improving the campaign performance and achieving the marketing objectives. A summary is different from other options, such as a real-time monitor, a self-service dashboard, or a spreadsheet of raw data, which may not provide enough context, interpretation, or guidance for the manager. Therefore, the correct answer is D. References: How to Write a Data Analysis Report: 6 Essential Tips, How to Write a Marketing Report (with Pictures) - wikiHow

#### NEW QUESTION 209

Which of the following database schemas features normalized dimension tables?

- A. Flat
- B. Snowflake
- C. Hierarchical
- D. Star

**Answer: B**

#### Explanation:

The correct answer is B. Snowflake.

A snowflake schema is a type of database schema that features normalized dimension tables. A database schema is a way of organizing and structuring the data

in a database. A dimension table is a table that contains descriptive attributes or characteristics of the data, such as product name, category, color, etc. A normalized table is a table that follows the rules of normalization, which is a process of reducing data redundancy and improving data integrity by organizing the data into smaller and simpler tables<sup>12</sup>

A snowflake schema is a variation of the star schema, which is another type of database

schema that features denormalized dimension tables. A denormalized table is a table that does not follow the rules of normalization, and may contain redundant or duplicated data. A star schema consists of a central fact table that contains quantitative measures or facts, such as sales amount, order quantity, etc., and several dimension tables that are directly connected to the fact table. A snowflake schema differs from a star schema in that the dimension tables are further split into sub-dimension tables, creating a snowflake-like shape<sup>13</sup>

A snowflake schema has some advantages and disadvantages over a star schema. Some advantages are:

? It reduces the storage space required for the dimension tables, as it eliminates the redundant data.

? It improves the data quality and consistency, as it avoids the update anomalies that may occur in denormalized tables.

? It allows more detailed analysis and queries, as it provides more levels of dimensions.

Some disadvantages are:

? It increases the complexity and number of joins required to retrieve the data from multiple tables, which may affect the query performance and speed.

? It reduces the readability and simplicity of the schema, as it has more tables and relationships to understand.

? It may require more maintenance and administration, as it has more tables to manage and update<sup>13</sup>

#### NEW QUESTION 211

A data analyst has been asked to create an ad-hoc sales report for the Chief Executive Officer (CEO).

Which of the following should be included in the report?

- A. The sales representatives' home addresses.
- B. Line-item SKU numbers.
- C. YTD total sales.
- D. The customers' first and last names.

**Answer: C**

#### Explanation:

The report for the CEO should include YTD total sales, as this will provide a high-level overview of the sales performance of the company and show how it is meeting its annual goals. The other options are not appropriate for the CEO, as they are either too detailed or irrelevant for the report. The sales representatives' home addresses, line-item SKU numbers, and customers' first and last names are not related to the sales performance and might compromise the privacy and security of the data.

Reference: CompTIA Data+ (DA0-001) Practice Certification Exams | Udemy

#### NEW QUESTION 214

A data analyst needs to apply quality control concepts to a data set for accuracy. Which of the following is the best way to do this?

- A. Standardization
- B. Parameterization
- C. Encryption
- D. Cross-validation

**Answer: D**

#### NEW QUESTION 219

An analyst is designing a dashboard that will provide a story of the sales and sales customer ratio. The following data is available:

Site	Customers	New customers	Percentage of new customers	Sales volume	Average sales per customer
A1	2236	277	12%	\$3,415,372.00	\$1,527.45
A2	885	300	34%	\$1,405,437.00	\$1,588.06
A3	333	200	60%	\$952,723.00	\$2,861.03
B1	483	167	35%	\$4,871,380.00	\$10,085.67
B2	2969	235	8%	\$780,381.00	\$262.84
B3	2357	153	6%	\$4,917,436.00	\$2,086.31
C1	1524	180	12%	\$1,135,204.00	\$744.88
C2	878	150	17%	\$614,964.00	\$700.41
C2	1925	142	7%	\$4,035,100.00	\$2,096.16

Which of the following charts should the analyst consider including in the dashboard?

- A. A column chart with site and sales
- B. A line chart with site and sales
- C. A pie chart with site and sales
- D. A scatter chart with site and sales

**Answer: A**



**Explanation:**

For a dashboard that aims to tell a story about sales and the sales customer ratio, a column chart is an effective choice. Column charts are particularly useful for showing data changes over a period of time or for illustrating comparisons among items. In this case, a column chart can clearly display the sales figures for each site, allowing for easy comparison across different sites. Additionally, it can be used to represent the sales customer ratio by showing the proportion of sales per customer, which can provide insights into customer behavior and sales effectiveness.

? Line charts are best suited for displaying data trends over time, rather than for comparing individual categories.

? Pie charts could show the proportion of sales for each site, but they are not as effective as column charts for comparing multiple categories.

? Scatter charts are used to show the relationship between two variables, which is not the focus in this scenario.

References:

? Effective Use of Column Charts1

? Choosing the Right Chart for Your Data2

? Sales Dashboards: Examples & Templates3

**NEW QUESTION 220**

An analyst is updating a customer contacts database with information obtained from a survey of new customers. Which of the following data manipulation techniques should the analyst use?

- A. Join
- B. Append
- C. Transform
- D. Blend

**Answer:** B

**NEW QUESTION 221**

Which of the following is an example of a discrete variable?

- A. The temperature of a hot tub
- B. The height of a horse
- C. The time to complete a task
- D. The number of people in an office

**Answer:** D

**Explanation:**

A discrete variable is a variable that can only take on a finite number of values, such as integers or categories. The number of people in an office is an example of a discrete variable, as it can only be a whole number. The temperature of a hot tub, the height of a horse, and the time to complete a task are examples of continuous variables, as they can take on any value within a range. Reference: CompTIA Data+ (DA0-001) Practice Certification Exams | Udemy

**NEW QUESTION 226**

Which of the following data sampling methods involves dividing a population into subgroups by similar characteristics?

- A. Systematic
- B. Simple random
- C. Convenience
- D. Stratified

**Answer:** D

**Explanation:**

Stratified sampling is a data sampling method that involves dividing a population into subgroups by similar characteristics, such as age, gender, income, etc. Then, a simple random sample is drawn from each subgroup. This method ensures that each subgroup is adequately represented in the sample and reduces the sampling error. References: CompTIA Data+ Certification Exam Objectives, page 11.

**NEW QUESTION 231**

Which of the following would be the best way to identify multicollinear attributes in a data set?

- A. Correlation coefficient
- B. Chi-squared test
- C. Two-sample f-test
- D. Two-way ANOVA

**Answer:** A

**Explanation:**

Multicollinearity in a dataset refers to the situation where two or more predictor variables are highly correlated, meaning that one can be linearly predicted from the others with a substantial degree of accuracy. In such cases, the correlation coefficient is a key statistical measure used to identify the presence of multicollinearity. It quantifies the degree to which two variables are linearly related.

The Variance Inflation Factor (VIF) is another commonly used metric that is derived from the correlation coefficient. It assesses how much the variance of an estimated regression coefficient increases if your predictors are correlated. If no factors are correlated, the VIFs will all be equal to 1.

While the other options listed—Chi-squared test, Two-sample f-test, and Two-way ANOVA—are valuable statistical tools, they serve different purposes and are not typically used to detect multicollinearity. The Chi-squared test is used for testing relationships between categorical variables, the Two-sample f-test compares variances across groups, and Two-way ANOVA is used to understand the interaction between two independent categorical variables on a continuous dependent variable.

References:

? Multicollinearity in Regression Analysis: Problems, Detection, and Solutions1.

? What is multicollinearity and how to remove it?2.

? Detect and Treat Multicollinearity in Regression with Python3.



#### NEW QUESTION 236

An analyst notices changes in sales ratios when analyzing a quarterly report. Which of the following is the analyst conducting?

- A. A gap analysis
- B. A link analysis
- C. A trend analysis
- D. A statistical analysis

**Answer:** C

#### Explanation:

When an analyst observes changes in sales ratios over a period, such as in a quarterly report, they are conducting a trend analysis. Trend analysis is a statistical method used to examine and evaluate the movement of data points over time to identify patterns or trends. This type of analysis is particularly useful for forecasting future events based on historical data. It differs from gap analysis, which assesses the difference between actual performance and potential or desired performance; link analysis, which is used to find associations among data; and statistical analysis, which is a broad term for all types of data analysis methods, including trend analysis.

References:

- ? Investopedia article on Ratio Analysis<sup>1</sup>.
- ? SpringerLink chapter on Financial Ratios Analysis<sup>2</sup>.
- ? ExamTopics page mentioning sales ratios in the context of analysis<sup>3</sup>.
- ? Investopedia definition of Ratio Analysis<sup>4</sup>.
- ? LiveWell article on Financial Ratio Analysis<sup>5</sup>.

#### NEW QUESTION 237

Which of the following is the correct extension for a tab-delimited spreadsheet file?

- A. .tap
- B. .tar
- C. .tsv
- D. .az

**Answer:** C

#### Explanation:

A tab-delimited spreadsheet file is a type of flat text file that uses tabs as delimiters to separate data values in a table. The file extension for a tab-delimited spreadsheet file is usually .tsv, which stands for tab-separated values. Therefore, the correct answer is C. References: [Tab-separated values - Wikipedia], [What is a TSV File?

| How to Open, Edit & Convert TSV Files]

#### NEW QUESTION 241

Which of the following is the best technique for transferring data from one database to another with some data manipulation?

- A. Application programming interfaces
- B. Delta load
- C. Extract, transform, load
- D. Export/import

**Answer:** C

#### NEW QUESTION 246

A data set for sales per month includes the following data:

Month	Sales (%)
Jan	55
Feb	'60'
March	36
April	70

Which of the following cleaning and profiling methods should be applied to the data set?

- A. Data outliers
- B. Invalid data
- C. Duplicate data
- D. Data type validation

**Answer:** B

#### NEW QUESTION 248

A data analyst has been asked to create a daily manufacturing report for the floor manager. Which of the following metrics should be included in the report?

- A. Tons of steel produced per hour
- B. Annual sales budget
- C. End-of-day stock price
- D. Daily corporate employee count

**Answer:** A

#### NEW QUESTION 253

During data profiling, an analyst decides to recode the status column in the following data set:

EMP ID	Date	Activity	Status
000352	1/2/2022	Course001	yes
000331	1/5/2022	Course001	completed
000347	1/10/2022	Course001	done
000364	1/12/2022	Course001	Y

Which of the following data concerns explains why the analyst wants to take this action?

- A. Redundancy
- B. Duplication
- C. Invalidity
- D. Inconsistency

**Answer:** D

#### Explanation:

The ??Status?? column in the dataset shows different terms such as ??yes??, ??completed??, ??done??, and ??Y?? that likely represent the same outcome - that a task has been completed. This variation in terms leads to inconsistency within the data. Data profiling aims to ensure that data is consistent, among other quality metrics, to facilitate accurate analysis and reporting. By recoding the ??Status?? column, the analyst seeks to address this inconsistency, ensuring that all entries indicating completion are represented uniformly. This enhances the data quality and usability for subsequent data analysis tasks.

References:  
The action of recoding is taken to standardize the data entries and eliminate inconsistencies, which is crucial for maintaining data integrity and ensuring reliable data analysis.

#### NEW QUESTION 257

Which of the following BEST describes standard deviation?

- A. A measure that is used to establish a relationship between two variables
- B. A measure of how data is distributed
- C. A measure of the amount of dispersion of a set of values
- D. A measure that is used to find the significant difference between variables

**Answer:** C

#### Explanation:

A measure of the amount of dispersion of a set of values. This is because standard deviation is a type of statistical measure that quantifies how much the values in a data set vary or deviate from the mean or the average of the data set. Standard deviation can be used to describe the spread or the distribution of the data, as well as to identify any outliers or extreme values in the data. For example, a low standard deviation indicates that the values are close to the mean, while a high standard deviation indicates that the values are far from the mean. The other options are not correct descriptions of standard deviation. Here is why:

? A measure that is used to establish a relationship between two variables is not a correct description of standard deviation, but rather a description of correlation or regression, which are types of statistical measures that quantify how two variables are related or associated with each other. Correlation or regression can be used to test or model the dependence or the influence of one variable on another variable, as well as to predict or estimate the value of one variable based on the value of another variable.

? A measure of how data is distributed is not a correct description of standard deviation, but rather a description of frequency or probability, which are types of statistical measures that quantify how often or how likely a value or an event occurs in a data set. Frequency or probability can be used to describe the occurrence or the chance of the data, as well as to compare or contrast different categories or groups of the data.

? A measure that is used to find the significant difference between variables is not a correct description of standard deviation, but rather a description of hypothesis testing or inferential statistics, which are types of statistical methods that use sample data to make generalizations or conclusions about a population or a parameter. Hypothesis testing or inferential statistics can be used to test or verify a claim or an assumption about the data, as well as to measure the confidence or the error of the estimation.

#### NEW QUESTION 258

A customer survey reveals 90% positive feedback. Which of the following statistical methods would be best to utilize to determine the reliability of a data set and predict how a larger sample of customers over the same time period might respond?

- A. Calculate a high variance on survey responses.
- B. Calculate the maximum range of the survey responses.
- C. Calculate a low standard deviation on survey responses.
- D. Remove any data more than 4 standard deviation from the mean.

**Answer:** C

#### Explanation:

A low standard deviation in survey responses indicates that the data points tend to be close to the mean, suggesting a high level of consistency among the responses. This consistency is crucial for determining the reliability of the data set and predicting future outcomes. If the standard deviation is low, it means that the positive feedback is not only high but also consistent, making it a reliable indicator of customer satisfaction and a good predictor of how a larger sample might respond.

References: The concept of using standard deviation to assess data reliability is a standard practice in statistics and data analysis123.

#### NEW QUESTION 259

Which of the following would be used to store unstructured data from different sources?

- A. A data lake
- B. A database management system
- C. A database
- D. A data warehouse

**Answer:** A

#### Explanation:

This is because a data lake is a type of storage system that stores unstructured data from different sources, such as text, images, audio, video, etc. A data lake can be used to store unstructured data from different sources by using a schema-on-read approach, which means that it does not impose any structure or format on the data when it is stored, but rather applies it when it is read or accessed. A data lake can also be used to store unstructured data from different sources by using a distributed file system, such as Hadoop, which means that it can store large volumes and varieties of data across multiple servers or nodes. The other storage systems are not used to store unstructured data from different sources. Here is why:

? A database management system is a type of software application that manages and controls databases, which are collections of structured or semi-structured data

that are organized into tables, rows, and columns. A database management system is not used to store unstructured data from different sources, but rather to store structured or semi-structured data from specific sources by using a schema-on-write approach, which means that it imposes a structure or format on the data when it is stored, and requires it to follow certain rules and constraints, such as primary keys, foreign keys, or referential integrity.

? A database is a type of storage system that stores structured or semi-structured

data that are organized into tables, rows, and columns. A database is not used to store unstructured data from different sources, but rather to store structured or semi-structured data from specific sources by using a relational model, which means that it establishes and maintains relationships between different tables based on common columns or keys. A database can also be used to store structured or semi-structured data from specific sources by using a query language, such as SQL, which means that it can access and manipulate the data using statements or commands.

? A data warehouse is a type of storage system that stores structured or semi-structured data that are integrated and aggregated from different sources or systems, such as databases, cloud services, or web applications. A data warehouse is not used to store unstructured data from different sources, but rather to store structured or semi-structured data from various sources by using an ETL process, which means that it extracts, transforms, and loads the data into a common format, structure, or schema. A data warehouse can also be used to store structured or semi-structured data from various sources by using an OLAP model, which means that it supports online analytical processing of the data using multidimensional cubes or queries.

#### NEW QUESTION 261

What subset of Structured Query Language (SQL) is used to add, remove, modify, or retrieve the information stored within a relational database?

- A. DDL.
- B. DSL.
- C. DQL.
- D. DML.

**Answer:** D

#### Explanation:

Correct answer D. DML.

The Data Manipulation Language (DML) is used to work with the data stored in a database.

DML includes the SELECT, INSERT, UPDATE, and DELETE commands.

The Data Definition Language (DDL) contains the commands used to create and structure a relational database. It includes the CREATE, ALTER, and DROP commands.

DDL and DML are the only two sublanguages of SQL.

#### NEW QUESTION 264

A data analyst is asked on the morning of April 9, 2020, to create a sales report that identifies sales year to date. The daily sales data is current through the end of the day. Which of the following date ranges should be on the report?

- A. January 1, 2020 to April 1, 2020
- B. January 1, 2020 to April 7, 2020
- C. January 1, 2020 to April 8, 2020
- D. January 1, 2020 to April 9, 2020

**Answer:** D

#### Explanation:

This is because sales year to date refers to the sales that have occurred from the beginning of the current year until the current date. By creating a sales report that identifies sales year to date, the analyst can measure and compare the sales performance and progress of the current year. Since the analyst is asked to create the sales report on the morning of April 9, 2020, and the daily sales data is current through the end of the day, the date range that should be on the report is January 1, 2020 to April 9, 2020. The other date ranges are not correct for identifying sales year to date. Here is why:

? January 1, 2020 to April 1, 2020 would not include the sales that occurred in the first eight days of April, which would underestimate the sales year to date.

? January 1, 2020 to April 7, 2020 would not include the sales that occurred in the last two days of April, which would also underestimate the sales year to date.

? January 1, 2020 to April 8, 2020 would not include the sales that occurred on April 9, which would also underestimate the sales year to date.

#### NEW QUESTION 266

A business unit made the following modification to the values in a table:

Previous value	New value
56.0	56.0456

Which of the following data quality dimensions was applied in this scenario?

- A. Integrity
- B. Consistency
- C. Completeness
- D. Accuracy

**Answer:** D

#### NEW QUESTION 267

An analyst needs to provide a chart to identify the composition between the categories of the survey response data set:

Favorite color	Responses
Red	15
Blue	35
Green	25
Yellow	25
Total	100

Which of the following charts would be BEST to use?

- A. Histogram
- B. Pie
- C. Line
- D. Scatter pot
- E. Waterfall

**Answer:** B

#### Explanation:

The best chart to use to identify the composition between the categories of the survey response data set is a pie chart. A pie chart is a circular chart that shows the relative proportions of different categories in a whole. A pie chart is divided into slices that represent the percentage or frequency of each category. A pie chart is suitable for displaying categorical data that has a few categories and does not have any hierarchical or temporal relationship. In this case, a pie chart can show the composition of the favorite colors among the survey respondents, as well as the percentage of each color. The other options are not as good as a pie chart for this purpose, as they are more suitable for displaying numerical data that has some kind of distribution, trend, correlation, or comparison. A histogram is a bar chart that shows the frequency distribution of a single numerical variable. A line chart is a chart that shows the change of one or more numerical variables over time or another continuous variable. A scatter plot is a chart that shows the relationship between two numerical variables by plotting them as points on a Cartesian plane. A waterfall chart is a chart that shows how an initial value is increased or decreased by a series of intermediate values, resulting in a final value. Reference: [Choosing the Right Chart Type - DataCamp]

#### NEW QUESTION 268

A data analyst is creating a report that will provide information about various regions, products, and time periods. Which of the following formats would be the most efficient way to deliver this report?

- A. A workbook with multiple tabs for each region
- B. A daily email with snapshots of regional summaries
- C. A static report with a different page for every filtered view
- D. A dashboard with filters at the top that the user can toggle

**Answer:** D

#### Explanation:

The best format to deliver this report is D. A dashboard with filters at the top that the user can toggle.

A dashboard is a visual display of the most important information needed to achieve one or more objectives, consolidated and arranged on a single screen so the information can be monitored at a glance<sup>1</sup> A dashboard with filters at the top that the user can toggle would allow the user to easily and quickly access the information they need about various regions, products, and time periods, without having to navigate through multiple tabs, pages, or emails. A dashboard with filters would also enable the user to compare and contrast different views of the data and see how they change over time. A dashboard with filters would also be more interactive and engaging than a static or email report<sup>2</sup>

A workbook with multiple tabs for each region would not be an efficient way to deliver this report, because it would require the user to switch between different tabs to see the information they need. This would make it harder to compare and contrast different regions, products, and time periods, and also increase the risk of errors or confusion. A workbook with multiple tabs would also be less visually appealing and more cluttered than a dashboard<sup>3</sup>

A daily email with snapshots of regional summaries would not be an efficient way to deliver this report, because it would limit the user's ability to explore the data in depth and customize their view. A daily email would also be dependent on the frequency and timing of the email delivery, which might not match the user's



needs or preferences. A daily email

would also be more likely to be ignored or deleted than a dashboard that is always accessible.

A static report with a different page for every filtered view would not be an efficient way to deliver this report, because it would create a very long and cumbersome report that would be difficult to read and understand. A static report would also not allow the user to change or update the filters as they wish, or see how the data changes over time. A static report would also be less interactive and engaging than a dashboard.

#### NEW QUESTION 271

An analyst has been asked to validate data quality. Which of the following are the BEST reasons to validate data for quality control purposes? (Choose two.)

- A. Retention
- B. Integrity
- C. Transmission
- D. Consistency
- E. Encryption
- F. Deletion

**Answer:** B

#### Explanation:

Integrity and D. Consistency. This is because integrity and consistency are two of the best reasons to validate data for quality control purposes, which means to check and ensure that the data is accurate, complete, reliable, and usable for the intended analysis or purpose. By validating data for integrity and consistency, the analyst can prevent or correct any errors or issues in the data that could affect the validity or reliability of the analysis or the results. Here is what integrity and consistency mean in terms of data quality:

? Integrity refers to the completeness and validity of the data, which means that the data has no missing, incomplete, or invalid values that could compromise its meaning or usefulness. For example, validating data for integrity could involve checking for null values, outliers, or incorrect data types in the data set.

? Consistency refers to the uniformity and standardization of the data, which means

that the data follows a common format, structure, or rule across different sources or systems. For example, validating data for consistency could involve checking for spelling, punctuation, or capitalization errors in the data set.

The other reasons are not the best reasons to validate data for quality control purposes. Here is why:

? Retention refers to the storage and preservation of the data, which means that the data is kept and maintained in a secure and accessible way for future use or reference. Retention does not need to be validated for quality control purposes, because it does not affect the accuracy or reliability of the data itself.

? Transmission refers to the transfer and exchange of the data, which means that

the data is moved or shared between different sources or systems in a fast and efficient way. Transmission does not need to be validated for quality control purposes, because it does not affect the completeness or validity of the data itself.

? Encryption refers to the protection and security of the data, which means that the

data is encoded or scrambled in a way that prevents unauthorized access or use. Encryption does not need to be validated for quality control purposes, because it does not affect the uniformity or standardization of the data itself.

? Deletion refers to the removal and disposal of the data, which means that the data

is erased or destroyed in a way that prevents recovery or retrieval. Deletion does not need to be validated for quality control purposes, because it does not affect the meaning or usefulness of the data itself.

#### NEW QUESTION 272

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