

## Exam Questions CBDA

Certification in Business Data Analytics (IIBA - CBDA)

<https://www.2passeasy.com/dumps/CBDA/>



### NEW QUESTION 1

- (Topic 1)

An analytics team is interested in reviewing the results of a public opinion poll that is going to be conducted at the end of the month. One of the factors the team is interested in, is ensuring the result set is statistically significant. Why would this factor be important to the team?

- A. To make sure the criteria for the target audience is met
- B. Guarantee that the objectives of the poll are met
- C. Improve the likelihood of receiving a response rate of 100%
- D. Ensure that results are not biased or random

**Answer:** D

#### Explanation:

Ensuring the result set is statistically significant is important to the team because it means that the difference or relationship observed in the data is unlikely to be due to chance or sampling error. Statistical significance helps the team to assess the validity and reliability of their findings, and to draw meaningful conclusions and recommendations from the data.

Statistical significance also helps the team to communicate their results with confidence and credibility to the stakeholders and decision makers<sup>12</sup> References: 1: An Easy Introduction to Statistical Significance (With Examples) - Scribbr 2: Statistical Significance in Experimentation and Data Analysis - All About Circuits

### NEW QUESTION 2

- (Topic 1)

A company wants to gauge the thoughts of their employees towards a new company product. On the 25th of March the interviewer makes a list of all employees who were at work on that day and then chooses a subset of those employees to interview. Which term describes the list of all employees present on March 25th?

- A. Population of interest
- B. Survey sample
- C. Sampling frame
- D. Sample weights

**Answer:** C

#### Explanation:

The sampling frame is the term that describes the list of all employees present on March 25th, because it is a technique that defines the set of elements from which a sample is drawn. The sampling frame should ideally match the population of interest, which is the group of elements that the researcher wants to study or make inferences about. In this case, the population of interest is the employees of the company, and the sampling frame is the subset of employees who were at work on a specific day. The survey sample is the technique that selects a portion of the sampling frame to participate in the survey. The sample weights are the technique that assigns different values or importance to each element in the sample, based on their representation in the population. References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 2: Source Data
- Understanding the Guide to Business Data Analytics, page 14
- CERTIFICATION IN BUSINESS DATA ANALYTICS HANDBOOK - IIBA®, page 8, CBDA Exam Sample Questions and Self-Assessment, Question 14

### NEW QUESTION 3

- (Topic 1)

The analytics team has completed analyzing a dataset and unfortunately the data didn't deliver the kinds of insights that the team was hoping for. After much contemplation, they decide to:

- A. Summarize the results and indicate the outcome was inconclusive
- B. Inform management that analytics could not derive insightful results
- C. Wait a few weeks and rerun the analysis using refreshed data
- D. Restart the work with formation of a new research question

**Answer:** D

#### Explanation:

The analytics team should restart the work with formation of a new research question, because the existing one may not be well-defined, relevant, or feasible. A well-formed research question is the first step of the business data analytics cycle, and it guides the subsequent steps of sourcing, analyzing, interpreting, and reporting data. If the data analysis does not yield meaningful insights, the team should revisit the research question and refine it based on the business problem, stakeholder needs, data availability, and analytical methods. References:

- Understanding the Guide to Business Data Analytics, page 10-11
- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 1: Identify the Research Questions
- CERTIFICATION IN BUSINESS DATA ANALYTICS HANDBOOK - IIBA®, page 8, CBDA Exam Sample Questions and Self-Assessment, Question 5

### NEW QUESTION 4

- (Topic 1)

An analyst at a supermarket chain has been asked to extract data from multiple data sources to complete a study on customer spending habits. The analyst is going to query data from various databases. Which statement is true about database querying?

- A. Querying can be used to create predictive data models
- B. Irrespective of the querying language used, data results retrieved are always in a tabular format
- C. A querying language is independent of the type of database being used
- D. Querying is a structured way of searching, manipulating and managing data

**Answer:** D

#### Explanation:

Querying is a technique that allows analysts to access, filter, join, aggregate, and transform data from various databases using a specific syntax and logic<sup>1</sup>.

Querying can be used for different purposes, such as data exploration, data preparation, data analysis, and data visualization<sup>2</sup>. Querying is not limited to creating

predictive data models, nor does it always produce tabular results. Moreover, querying languages may vary depending on the type and structure of the database, such as relational, hierarchical, or document-based<sup>3</sup>. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 552: Data Analysis Using SQL and Excel, Gordon S. Linoff, 2016, p. 33: Database Systems: Design, Implementation, and Management, Carlos Coronel and Steven Morris, 2019, p. 17.

#### NEW QUESTION 5

- (Topic 1)

The definition of data elements is different across various data sources. The organization is looking to improve the usability of data across the organization. Which practice would help address this problem?

- A. Data governance
- B. Data quality
- C. Data architecture
- D. Data ethics

**Answer:** A

#### Explanation:

Data governance is the practice of establishing and enforcing policies, standards, roles, and responsibilities for the management and use of data across the organization. Data governance helps to address the problem of inconsistent data definitions across various data sources by ensuring that data is properly defined, documented, classified, and aligned with the business objectives and requirements<sup>12</sup>. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 292: Data Governance: How to Design, Deploy and Sustain an Effective Data Governance Program, John Ladley, 2012, p. 3.

#### NEW QUESTION 6

- (Topic 1)

A large telecommunications company wants to increase their Average Revenue Per User per month by 5%, by end of year, to increase revenue in a highly competitive market. From a SMART target perspective, what is missing?

- A. T - The increase should be seen sooner
- B. A - It is too easy of a target to attain
- C. R - Since competition is high, focus should be on increasing customer base and not on ARPU
- D. S - There is no mention of which product group/line the target pertains to

**Answer:** D

#### Explanation:

A SMART target is one that is specific, measurable, achievable, relevant, and time-bound<sup>1</sup>. The target of increasing the Average Revenue Per User (ARPU) per month by 5%, by end of year, to increase revenue in a highly competitive market is missing the specificity criterion, as it does not mention which product group or line the target applies to. The target should be more specific and clear about the scope and context of the desired outcome, such as which segment, region, or service the target relates to<sup>23</sup>. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 192: SMART Goals: How to Make Your Goals Achievable, MindTools, 2021, 13: How to Set SMART Marketing Goals, CoSchedule, 2021, 2.

#### NEW QUESTION 7

- (Topic 1)

Based on the results of a recently completed analytics initiative, the Human Resource department for a major department store implemented a change to its hiring practice to address the attrition rates of its sales associates. The new policy stated that candidates applying for sales positions must possess at least 3 years of relevant sales experience to be considered. After implementing the change, attrition rates are 10% higher and management is frustrated. Which of the following could result in this outcome?

- A. The results of analysis have been incorrectly interpreted
- B. Sales experience is not a relevant skill
- C. Analytics is not helpful given this situation
- D. The change proposed is not aligned to company strategy

**Answer:** D

#### Explanation:

The change proposed is not aligned to company strategy, because it may not address the root cause of the attrition problem, or it may conflict with other organizational goals or values. For example, the change may reduce the pool of qualified candidates, increase the hiring costs, or lower the diversity or customer satisfaction of the sales team. The change may also ignore other factors that influence the attrition rates, such as compensation, training, feedback, or recognition. Therefore, the change may not achieve the desired outcome of reducing attrition, and may even worsen it. References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 5: Use Results to Influence Business Decision Making
- Understanding the Guide to Business Data Analytics, page 9
- CERTIFICATION IN BUSINESS DATA ANALYTICS HANDBOOK - IIBA®, page 8, CBDA Exam Sample Questions and Self-Assessment, Question 13

#### NEW QUESTION 8

- (Topic 1)

A call center has requested to review their sales conversion data for the month. The analyst working on this request is trying to identify the chart that will effectively present the data, which includes: the number of leads, the number of calls made, the number of calls completed, the number of customers interested and the number of sales. What chart should the analyst use to show the values across each stage of the pipeline?

- A. Pie chart
- B. Funnel chart
- C. Bar chart
- D. Bullet chart

**Answer:** B

#### Explanation:

A funnel chart is a type of chart that shows the values of different stages of a process, such as a sales pipeline, where each stage represents a subset of the

previous one. A funnel chart is useful for showing the conversion rate, the drop-off rate, and the potential revenue or profit at each stage<sup>12</sup>. A funnel chart would be an effective way to present the data requested by the call center, as it would show the number of leads, calls, customers, and sales, as well as the percentage of change between each stage. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 662: Data Visualization: A Practical Introduction, Kieran Healy, 2018, p. 233.

#### NEW QUESTION 9

- (Topic 1)

An online retailer of men's athletic apparel is seeking to become the market leader in the industry. To deliver on this strategy, the analytics team continuously collects data on the prices of competitor products and uses this information to adjust the retailer's prices. What type of analytics is the retailer using to maintain their pricing structure?

- A. Descriptive
- B. Diagnostic
- C. Predictive
- D. Prescriptive

**Answer:** D

#### Explanation:

Prescriptive analytics is the type of analytics that the retailer is using to maintain their pricing structure, because it is a technique that uses data and models to recommend the best course of action for a given situation. Prescriptive analytics can help the retailer optimize their prices based on the data collected from the competitors, the market conditions, and the customer preferences, and thus achieve their strategic goal of becoming the market leader. References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 3: Analyze Data
- Understanding the Guide to Business Data Analytics, page 17
- CERTIFICATION IN BUSINESS DATA ANALYTICS HANDBOOK - IIBA®, page 8, CBDA Exam Sample Questions and Self-Assessment, Question 11

#### NEW QUESTION 10

- (Topic 1)

Collaborative games are used by a business analyst to identify the research questions to be explored within an analytics system.

Participants are asked to write down a research question on a sticky note, put the notes on the wall, and move them towards related research questions. What type of Collaborative game is being played?

- A. Affinity Map
- B. Fishbowl
- C. People polling
- D. Product Box

**Answer:** A

#### Explanation:

An affinity map is a collaborative game that helps participants to group similar ideas or features together. It is useful for identifying research questions that are related to each other and finding common themes or patterns. In this game, participants write down their research questions on sticky notes and place them on the wall. Then, they move the notes around to form clusters of related questions. The clusters can be labeled with a descriptive name or a question that summarizes the theme. An affinity map can help participants to prioritize the most important or relevant research questions and generate insights from the data.

<https://businessanalystmentor.com/collaborative-games-business-analysis/>

#### NEW QUESTION 10

- (Topic 1)

Senior executives in a large organization receive numerous sales reports of every sale through a corporate dashboard on a weekly basis. The executives are considering budget increases for various functions but would like to know if they are obtaining good returns for current budget allocations. They ask the analytics team to research and Answer: "How effective is our marketing spend?" This question is:

- A. Already answered in the sales data
- B. Difficult to analyze because its narrowly focused
- C. Sufficient to begin initial analysis
- D. Too broadly scoped to be effectively answered

**Answer:** D

#### Explanation:

The question ??How effective is our marketing spend??? is too broadly scoped to be effectively answered, because it is a vague and ambiguous question that does not specify the criteria, scope, or timeframe for measuring the effectiveness of the marketing spend. The question also does not define what constitutes marketing spend, or how it relates to the sales data or the budget allocations. The question needs to be refined and clarified to make it more focused, relevant, and feasible for the analytics team to answer. For example, the question could be rephrased as ??How does the marketing spend per channel affect the sales revenue and customer retention rate in the last quarter??? References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 1: Identify the Research Questions
- Understanding the Guide to Business Data Analytics, page 10-11
- CERTIFICATION IN BUSINESS DATA ANALYTICS HANDBOOK - IIBA®, page 8, CBDA Exam Sample Questions and Self-Assessment, Question 16

#### NEW QUESTION 11

- (Topic 1)

The outcome from an analytics initiative has resulted in key stakeholders wanting to move forward with a project to redesign the company's website. The business analyst has called a meeting to work on drafting a plan to assess the level of effort required to complete this work. Many of the invited participants redesigned the website before and were invited so they could provide estimates using their knowledge and experience from the past. The business analyst is using which method to estimate this work?

- A. Rolling wave
- B. PERT
- C. Parametric



D. Rough order of magnitude

**Answer:** D

**Explanation:**

The business analyst is using the rough order of magnitude method to estimate this work. This method is based on expert opinion or experience from past projects, and it provides a quick and approximate estimate of the cost, time, or effort required for a project or a task. This method is useful when there is limited information or data available, or when a high-level estimate is needed for planning or budgeting purposes. However, this method also has a high degree of uncertainty and variability, and it should be refined as more details become available<sup>12</sup> References: 1: Project Estimation Techniques Business Analysts Should Know About 2: Estimation techniques for business analysts – The Functional BA

**NEW QUESTION 15**

- (Topic 1)

A financial software company has growth and expansion as one of their top strategic priorities for the year. The senior executive team would like to assess their sales performance over the last 3 years to help set sales objectives. In discussion with the business analytics manager, for a comprehensive sales report, the sales lead recommends looking into the number of contracts signed over the past 3 years and the dollar value for the signed contracts. Which other question is important to consider when evaluating sales performance?

- A. What is the time to market the software?
- B. What is the total cost incurred per year?
- C. What is the number of customers retained over the past 3 years?
- D. What is the average time for conversion?

**Answer:** D

**Explanation:**

The average time for conversion is the average number of days it takes to convert a lead into a customer. This is an important question to consider when evaluating sales performance, because it indicates the efficiency and effectiveness of the sales process. A shorter time for conversion means that the sales team can close more deals in less time, and thus increase the revenue and profitability of the company. A longer time for conversion may indicate that there are bottlenecks, challenges, or inefficiencies in the sales process that need to be addressed. References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 5: Use Results to Influence Business Decision Making
- Understanding the Guide to Business Data Analytics, page 9
- Business Data Analytics (IIBA®-CBDA Exam preparation) | Udemy, Section 4: Interpret and Report Results, Lecture 19: Sales Performance Metrics

**NEW QUESTION 16**

- (Topic 1)

Interested in experimenting with analytics, a manufacturing company hires an analyst to see how the capability can be developed within its organization. The analyst is getting started and recognizes the need to show value from the onset of their work to gain upper management's trust and future funding. What action will accomplish these objectives?

- A. Solve the biggest problem the organization has first to quickly grab the support and attention of senior management
- B. Develop a question that can be answered quickly regardless of alignment to strategy, just to get started
- C. Develop a meaningful question that can be answered with data the company already has in its possession
- D. Perform a market analysis to understand how competitors are using analytics and then launch a similar initiative

**Answer:** C

**Explanation:**

The best action for the analyst to show value from the onset of their work is to develop a meaningful question that can be answered with data the company already has in its possession. This way, the analyst can demonstrate the potential of analytics to solve relevant business problems, without spending too much time or resources on data collection or market research. The question should also be aligned with the organization's strategy and goals, and provide actionable insights for decision making<sup>12</sup>. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 202: Data Science for Business, Foster Provost and Tom Fawcett, 2013, p. 14.

**NEW QUESTION 19**

- (Topic 1)

The team has completed their analysis on a vast amount of collected data and agree on their recommendations for action.

However, they are having difficulty in developing the appropriate messages to support their recommendations. The business analysis professional suggests which technique to assist the team?

- A. T-Testing
- B. Simulation
- C. Visioning
- D. Storyboarding

**Answer:** D

**Explanation:**

Storyboarding is a technique that helps the team to develop the appropriate messages to support their recommendations by creating a visual sequence of the main points, evidence, and actions. Storyboarding helps the team to organize their thoughts, identify gaps, and communicate their findings in a clear and compelling way<sup>12</sup> References: 1: Developing Key Messages for Effective Communication - MSKTC 2: 11 Ways Highly Successful Leaders Support Their Team - Redbooth

**NEW QUESTION 23**

- (Topic 1)

The analytics team scheduled a meeting with key stakeholders to present their recommendations. The team envisioned this as the final step of their work and fully expected complete acceptance of those recommendations, particularly given that very few questions were asked. They were surprised when they received word that the organization wasn't ready to move forward. What did they overlook?

- A. Stakeholders need to hear the same information multiple times

- B. Stakeholders never make quick decisions
- C. Communicating information requires a written report
- D. Communicating information is bi-directional and iterative

**Answer: D**

**Explanation:**

The analytics team overlooked the fact that communicating information is not a one-way or one-time process, but rather a bi-directional and iterative one. This means that the team should not only present their recommendations, but also solicit feedback, address concerns, clarify doubts, and confirm understanding from the stakeholders. By doing so, the team can ensure that the stakeholders are fully engaged, informed, and aligned with the recommendations, and that any potential barriers or risks are identified and mitigated before moving forward. References:

- Understanding the Guide to Business Data Analytics, page 9
- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 4: Interpret and Report Results
- CERTIFICATION IN BUSINESS DATA ANALYTICS HANDBOOK - IIBA®, page 5, Step 3– Schedule and Take The Exam

**NEW QUESTION 25**

- (Topic 1)

An analyst is using a Data Flow Diagram (DFD) to depict the flow of data across a data security company. Which of the following is true about DFDs?

- A. Can be categorized as Logical or Physical
- B. Can illustrate a sequence of activities
- C. Provide similar information as process flows
- D. Are used to model data attributes

**Answer: A**

**Explanation:**

A Data Flow Diagram (DFD) is a technique that shows the flow of data among processes, data stores, and external entities in a system. DFDs can be categorized as logical or physical, depending on the level of detail and abstraction. A logical DFD focuses on the business functions and data flows, without specifying the implementation details. A physical DFD shows the actual components and mechanisms that are involved in the data flow, such as hardware, software, files, and network connections. References:

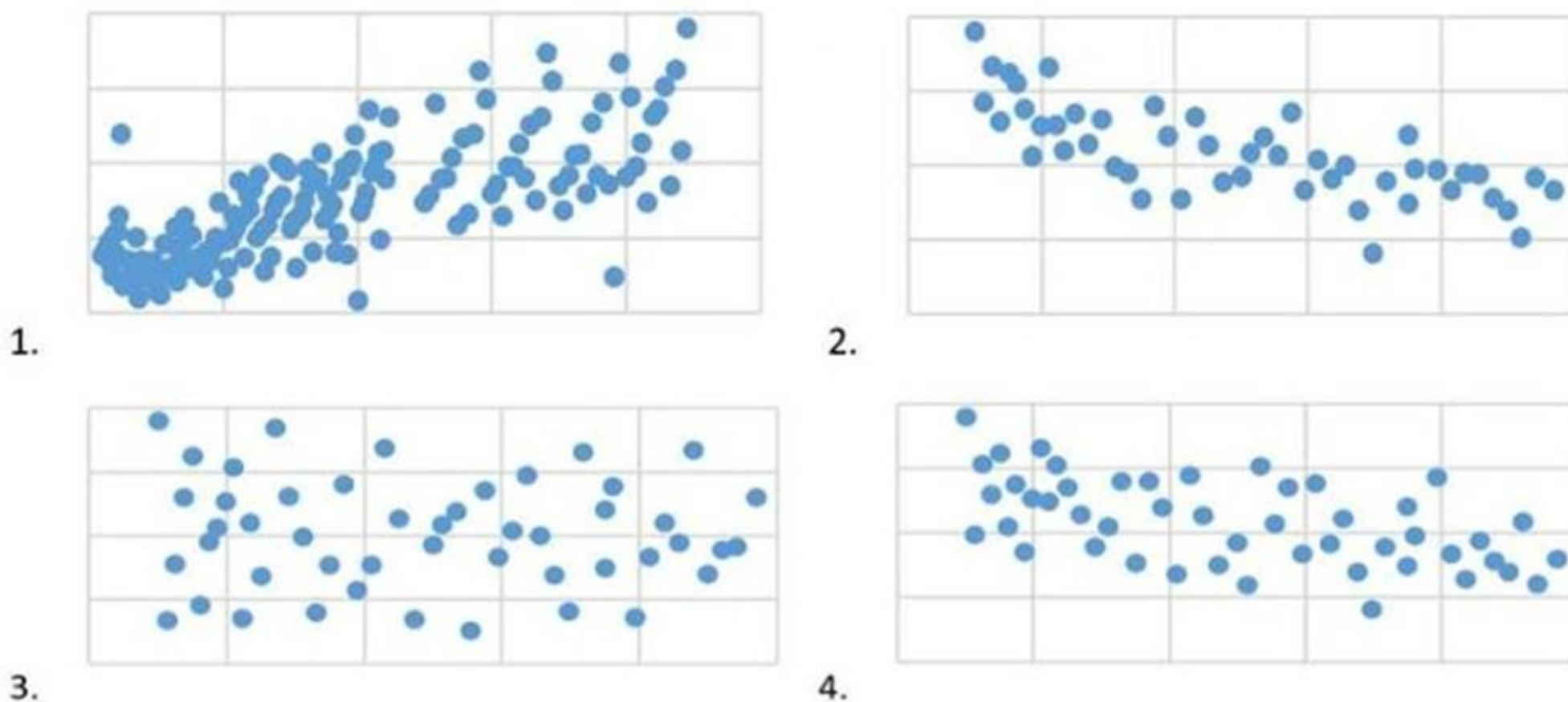
- 10.13 Data Flow Diagrams | IIBA® - International Institute of Business ??, menu, 10.13 Data Flow Diagrams
- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 2: Source Data
- Introduction to Business Data Analytics: Organizational View, page 16, Figure 6: Data Flow Diagram

**NEW QUESTION 29**

- (Topic 2)

DIAGRAM TAKEN

A data scientist is analyzing a dataset to determine if there is a strong relationship between two variables. A measure of covariance is done. Which of the following graphs indicate Zero Covariance between variables?



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

**Answer: C**

**Explanation:**

In the context of Business Data Analytics (IIBA®- CBDA), zero covariance between two variables indicates that there is no linear relationship between those variables. When the covariance is zero, it means the variables are independent of each other. In the provided options, graph 4 shows a random scatter of data points without any apparent trend or pattern, indicating zero covariance.

References: The explanation is in alignment with the concepts and principles outlined in IIBA®'s resources on Business Data Analytics, particularly focusing on statistical analysis and data interpretation.

**NEW QUESTION 34**

- (Topic 2)

The finance manager has reported that customers are taking much longer to remit payments this year than last. They would like help in finding a solution to address the situation. One suggestion was to offer a 10% discount to entice customers to pay their invoices in full within the first 30 days. Before offering the discount, the finance manager would like the analytics team to do some research to determine if there is value in addressing the accounts receivable problem. Which of the following is a valid question to ask in this situation?

- A. Have discounts been offered before?
- B. Are sales decreasing when accounts receivables are increasing?
- C. How does credit score impact the customer's ability to pay?
- D. Should the discount offered be set at 10% or 15%?

**Answer:** A

**Explanation:**

According to the Guide to Business Data Analytics, one of the steps in conducting business data analytics is to identify the research questions that will guide the analysis and help answer the business problem or opportunity. The research questions should be relevant, specific, measurable, achievable, and testable. In this situation, the business problem is the delay in customer payments and the potential solution is to offer a discount. A valid question to ask in this situation is whether discounts have been offered before, and if so, what was the effect on customer behavior and profitability. This question is relevant because it can help assess the feasibility and effectiveness of the proposed solution. It is also specific, measurable, achievable, and testable, as it can be answered by collecting and analyzing historical data on customer payments and discounts.

References: Guide to Business Data Analytics, page 47-48; CBDA Exam Blueprint, page 7; [Introduction to Business Data Analytics: A Practitioner View], page 15.

**NEW QUESTION 38**

- (Topic 2)

The results for a certification exam were revealed in percentage and percentile. How would you infer the results for an attendee at: 75%, 90th percentile?

- A. While the attendee's exam score was 90/100. the attendee did better than 75% of the attendees
- B. While the attendee's exam score was 90/100. the attendee did better than 25% of the attendees
- C. While the attendee's exam score was 75/100. the attendee did better than 10% of the attendees
- D. While the attendee's exam score was 75/100. the attendee did better than 90% of the attendees

**Answer:** D

**Explanation:**

A percentage is a way of expressing a number as a fraction of 100, while a percentile is a way of expressing a number as a rank or position in a distribution of values. A percentage tells us how much of something there is, while a percentile tells us how well something performed compared to others. To infer the results for an attendee at 75%, 90th percentile, we need to understand what these two numbers mean.

? 75% means that the attendee scored 75 out of 100 possible points on the exam.

This is the absolute score of the attendee, which does not depend on how others performed.

? 90th percentile means that the attendee scored higher than 90% of all the attendees who took the exam. This is the relative score of the attendee, which depends on how others performed. For example, if there were 1000 attendees, the 90th percentile would mean that the attendee scored higher than 900 attendees, and lower than 100 attendees.

Therefore, the correct inference is that while the attendee's exam score was 75/100, the attendee did better than 90% of the attendees. This means that the attendee's score was above average, and that the exam was relatively difficult or had a low pass

rate. References:

? Difference Between Percentage and Percentile | Major Differences - BYJU'S, BYJU'S, accessed on January 20, 2024.

? Difference Between Percentage and Percentile (with Examples and Comparison Chart) - Key Differences, Key Differences, accessed on January 20, 2024.

? Certification in Business Data Analytics (IIBA ® - CBDA), IIBA, accessed on January 20, 2024.

**NEW QUESTION 43**

- (Topic 2)

A financial institution is interested in leveraging analytics to address a recent surge in credit card fraud. The company has decided to invest in streaming analytics to obtain instant access to real-time data to stop fraudulent behavior before it occurs. Which practice will help the financial institution integrate the data as it is collected?

- A. Data quality
- B. Data management
- C. Data security
- D. Data architecture

**Answer:** D

**Explanation:**

Data architecture is the practice of designing and implementing the structures, models, standards, and processes that enable data integration, storage, and consumption. Data architecture is essential for streaming analytics, as it defines how data is collected, processed, and delivered in real time from multiple sources. Data architecture helps the financial institution integrate the data as it is collected by ensuring data compatibility, consistency, and quality across the streaming pipeline. Data architecture also supports data security, scalability, and performance for streaming analytics. References:

? Certification in Business Data Analytics (IIBA ® - CBDA), IIBA, accessed on January 20, 2024.

? Business Data Analytics Certification - CBDA Competencies | IIBA®, IIBA, accessed on January 20, 2024.

? Guide to Business Data Analytics, IIBA, 2020, p. 17-18.

? What is Streaming Analytics? | Google Cloud, Google Cloud, accessed on January 20, 2024.

? What is Data Integration? | IBM, IBM, accessed on January 20, 2024.

**NEW QUESTION 46**

- (Topic 2)

A small business has recently launched their website and wants to understand how the website is being used. In particular, there is interest in identifying which areas of each page receive the most attention. The analyst has decided to communicate this information by displaying the top pages overlaid with colours denoting the volume of clicks. What type of visualization technique is being used here?

- A. Surface chart
- B. Heatmap
- C. Treemap
- D. Scatter chart

**Answer:** B

**Explanation:**

According to the Guide to Business Data Analytics, a heatmap is a type of visualization technique that uses colours to represent the values of a variable across a two-dimensional space. A heatmap can help reveal patterns, trends, and outliers in the data, as well as show the relative importance or intensity of different areas. In this situation, the analyst has decided to communicate the information about the website usage by displaying the top pages overlaid with colours denoting the volume of clicks. This is a heatmap, as it uses colours to show the distribution and magnitude of clicks across the web pages. References: Guide to Business Data Analytics, page 61; CBDA Exam Blueprint, page 7; Heat Maps | Trendz Analytics

**NEW QUESTION 47**

- (Topic 2)

An analytics team completed their research to determine why customers are abandoning items in their online shopping cart. The team suggests improvements to the website to address the problem. The Director of Sales proclaims that the current website is fine and indicates that the problem materialized when the company increased its shipping rates. The solution proposed by the team seems misaligned. What has gone wrong?

- A. This scenario cannot be addressed with analytics
- B. The team has not agreed on the root cause of the problem
- C. The team did not agree on the business problem
- D. An insufficient amount of planning was performed

**Answer:** C

**Explanation:**

Agreeing on the business problem is the first and most critical step in any analytics project, as it defines the scope, purpose, and objectives of the analysis, and aligns the expectations and interests of the stakeholders<sup>1</sup>. Agreeing on the business problem involves identifying the problem statement, the problem owner, the problem context, the problem impact, and the problem criteria<sup>2</sup>. If the team did not agree on the business problem, the solution proposed by the team may seem misaligned with the actual needs, preferences, or assumptions of the decision makers, and may not address the root cause or the main drivers of the problem. In this scenario, the team and the Director of Sales may have different views on what the business problem is, why it is important, and how it should be solved.

The other options are not correct explanations of what has gone wrong. This scenario can be addressed with analytics, as it involves using data to understand customer behavior, identify factors influencing cart abandonment, and recommend improvements to the website or the pricing strategy. The team may or may not have agreed on the root cause of the problem, but that is not the main issue, as the root cause analysis is a part of the data analysis step, not the problem definition step. The team may or may not have performed an insufficient amount of planning, but that is not the main issue, as the planning process is a subsequent step after the problem definition step, and it depends on the clarity and agreement of the business problem.

References: <sup>1</sup>: Guide to Business Data Analytics, IIBA, 2020, p. 252: Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 11. : Guide to Business Data Analytics, IIBA, 2020, p. 25. : Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 11.

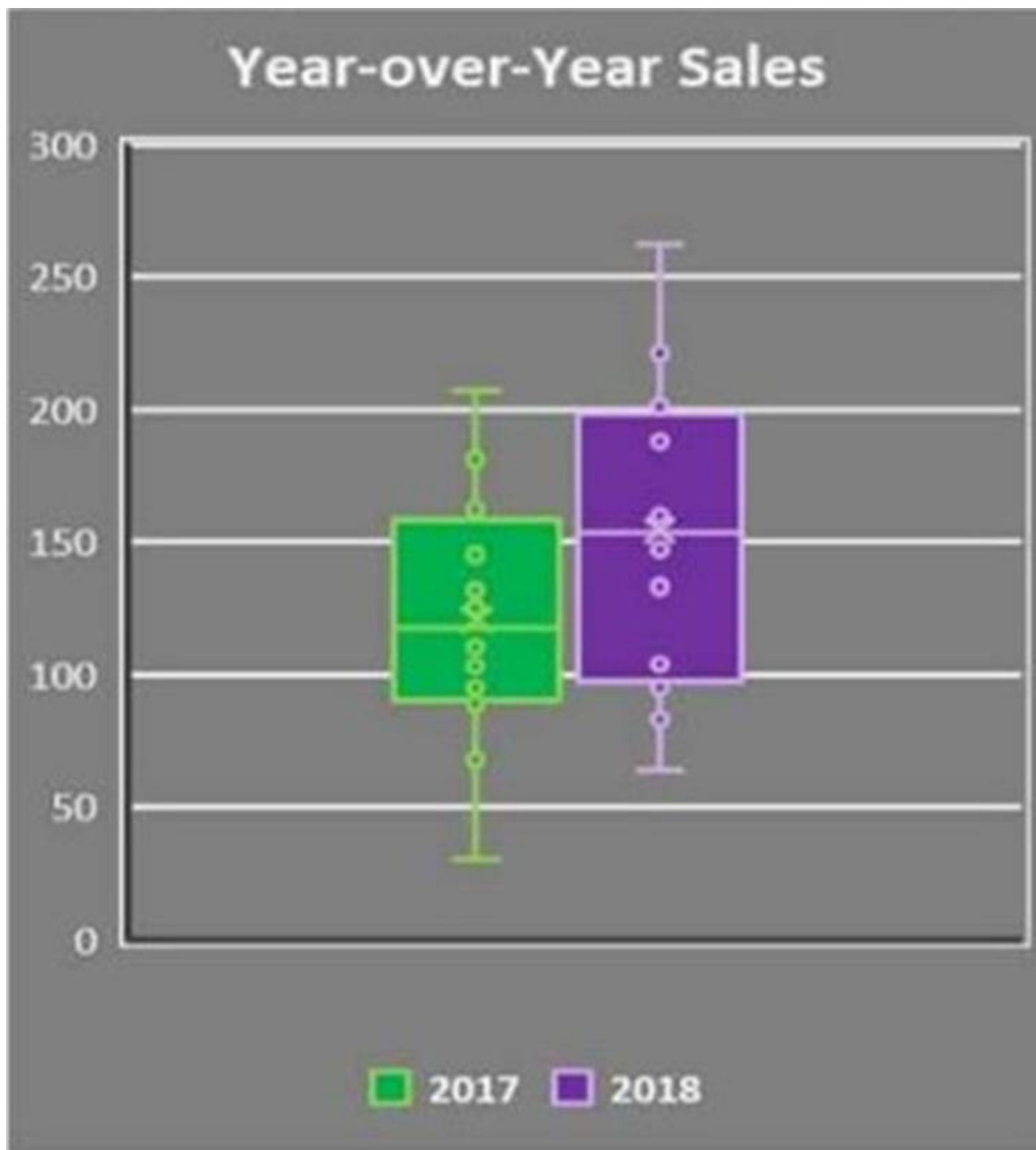
**NEW QUESTION 52**

- (Topic 2)

DIAGRAM

The following boxplot is produced from a dataset. From this boxplot which of the following conclusions can be drawn?





Year-over-Year Sales  
 300  
 200

- A. The medians and the inter-quartile range is the same in each group
- B. The medians and the inter-quartile ranges are different in each group
- C. The medians are the same but the inter-quartile ranges are not
- D. The inter-quartile ranges are the same but the medians are not

**Answer: B**

**Explanation:**

According to the Guide to Business Data Analytics, a boxplot is used to provide a visual summary of one or more groups of data values through their quartiles. In this case, the boxplot shows two different years, 2017 and 2018, with distinct medians and interquartile ranges. The median is represented by the line inside the box, while the interquartile range is represented by the height of the box itself. Outliers are marked with circles above and below the box. From the boxplot, we can see that the median sales for 2018 are higher than the median sales for 2017, and the interquartile range for 2018 is narrower than the interquartile range for 2017. This means that the sales for 2018 are more concentrated around the median and have less variability than the sales for 2017. Therefore, the correct answer is B.  
 References: Guide to Business Data Analytics, page 58-59; CBDA Exam Blueprint, page 7; [Introduction to Business Data Analytics: A Practitioner View], page 17.  
 ![Year-over-Year Sales]

**NEW QUESTION 57**

- (Topic 2)

Analytics is being used to estimate the number of machine breakdowns a company will experience next year. The business analyst provides an optimistic estimate of 10 breakdowns, a pessimistic estimate of 100 breakdowns, and a most likely value of 50 breakdowns. What type of estimation is being used?

- A. Parametric Estimation
- B. PERT
- C. Top-down
- D. Delphi

**Answer:** B

**Explanation:**

According to the Guide to Business Data Analytics, PERT (Program Evaluation and Review Technique) is a type of estimation that uses three values: optimistic, pessimistic, and most likely. The PERT estimate is calculated as the weighted average of these three values, with more weight given to the most likely value. PERT can be used to estimate the duration, cost, or other variables of a project or activity, taking into account the uncertainty and variability of the data. PERT can help provide a realistic and reliable estimate based on the available information.

References: Guide to Business Data Analytics, page 54-55; CBDA Exam Blueprint, page 7; [Introduction to Business Data Analytics: A Practitioner View], page 16.

**NEW QUESTION 59**

- (Topic 2)

An analyst at an Insurance company has been asked to share results and provide insights into any impacts to the business since a new government regulation took effect. The analyst is in the process of reviewing the analyzed data to identify any patterns. When interpreting results, what would be one of the questions the analyst will be asking?

- A. How will the recipients receive the results?
- B. Are the right data dimensions being used?
- C. What do the results mean in the context of the business?
- D. Is the data accurate based on the sources being used?

**Answer:** C

**Explanation:**

According to the IIBA's Guide to Business Data Analytics, one of the steps in the data analysis process is to interpret and report results, which involves explaining the meaning, significance, and implications of the results in the context of the business problem and the stakeholders' needs<sup>1</sup>. When interpreting results, one of the questions the analyst will be asking is what do the results mean in the context of the business, which means how the results relate to the business situation, objectives, and outcomes, and how they can be used to support decision making and action taking<sup>2</sup>. For example, the analyst may ask how the new government regulation affects the business performance, operations, or strategy, and what recommendations or changes are needed to comply with the regulation and achieve the business goals.

The other options are not correct questions for interpreting results. How will the recipients receive the results is a question for presenting results, not interpreting results. Presenting results is a subsequent step after interpreting results, and it involves choosing the best format, medium, and style to communicate the results to the audience<sup>3</sup>. Are the right data dimensions being used is a question for analyzing data, not interpreting results. Analyzing data is a prior step before interpreting results, and it involves applying the appropriate techniques, tools, and methods to manipulate, transform, and explore the data<sup>4</sup>. Is the data accurate based on the sources being used is a question for sourcing data, not interpreting

results. Sourcing data is a prior step before analyzing data, and it involves identifying, collecting, and validating the data from the relevant sources<sup>5</sup>.

References:1: Guide to Business Data Analytics, IIBA, 2020, p. 572: Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 253: Guide to Business Data Analytics, IIBA, 2020, p. 584: Guide to Business Data Analytics, IIBA, 2020, p. 555: Guide to Business Data Analytics, IIBA, 2020, p. 45. : Guide to Business Data Analytics, IIBA, 2020, p. 57. : Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 25. : Guide to Business Data Analytics, IIBA, 2020, p. 58. : Guide to Business Data Analytics, IIBA, 2020, p. 55. : Guide to Business Data Analytics, IIBA, 2020, p. 45.

**NEW QUESTION 63**

- (Topic 2)

A marketing department has established an analytics team. The analytics practice is stand- alone and analysts have limited insights into corporate strategy. Which is an expected result for analytics practices operating at the business unit level?

- A. Analytics work will be driven by the organization's business plan
- B. Insights derived from data analysis will be used to guide strategic decisions
- C. The analytics team may conduct analysis that is of minimal value to the organization
- D. The organization will use analytics as a means to obtain a competitive advantage

**Answer:** C

**Explanation:**

According to the IIBA® Guide to Business Data Analytics, analytics practices operating at the business unit level are characterized by a lack of alignment with the organization's strategic objectives, a limited scope of analysis, and a siloed approach to data and insights<sup>1</sup>. This can result in analytics work that is not relevant, timely, or impactful for the organization as a whole, and that may not address the most critical business problems or opportunities. Therefore, the analytics team may conduct analysis that is of minimal value to the organization, or even detrimental if it leads to suboptimal decisions or actions.

References:1: IIBA® Guide to Business Data Analytics, Chapter 2: Business Data Analytics in Context, page 14-15

**NEW QUESTION 65**

- (Topic 2)

A lab is conducting a study on protein interactions. They have used the data to create a graph visualization. In graph visualization, what would an edge represent?

- A. A single datapoint
- B. A link between two datapoints
- C. A collection of datapoints and links
- D. A dedicated algorithm that calculates the node positions

**Answer:** B

**Explanation:**

A graph visualization is a type of visualization that shows the relationships among data points by using nodes (or vertices) to represent the data points and edges (or links) to represent the connections between them<sup>1</sup>. A graph visualization can help reveal patterns, clusters, outliers, or hierarchies in the data<sup>2</sup>. In a graph visualization, an edge represents a link between two data points, indicating that they have some kind of association, interaction, similarity, or dependency<sup>3</sup>. For example, in a study on protein interactions, an edge could represent a physical or functional interaction between two proteins, such as binding, signaling, or regulation<sup>4</sup>.

A single data point, a collection of data points and links, and a dedicated algorithm that calculates the node positions are not correct definitions of an edge in a graph visualization. A single data point is represented by a node, not an edge, in a graph visualization. A collection of data points and links is the whole graph, not an edge, in a graph visualization.

A dedicated algorithm that calculates the node positions is a method of graph layout, not an edge, in a graph visualization. A graph layout is the way the nodes and

edges are arranged in a graph visualization, which can affect the readability, aesthetics, and interpretation of the graph.

References:1: Guide to Business Data Analytics, IIBA, 2020, p. 692: Data Visualization:

The Definitive Guide, Tableau, 3: Graph Visualization: The Definitive Guide, Tableau, 4: Protein Interaction Networks, Nature, . : Graph Visualization: The Definitive Guide, Tableau, . : Guide to Business Data Analytics, IIBA, 2020, p. 69. : Data Visualization: The Definitive Guide, Tableau, . : Graph Visualization: The Definitive Guide, Tableau, . : Protein Interaction Networks, Nature, . : Graph Visualization: The Definitive Guide, Tableau, .

#### NEW QUESTION 70

- (Topic 2)

A movie production company wants to use analytics to decide which customers would choose to watch or not watch a particular movie after seeing a promotional teaser. The business analysis professional suggests they could make that prediction by identifying characteristics of the new movie and determining if the customer has watched other movies with similar characteristics. This is an example of using the following technique:

- A. Logistic regression
- B. Ouster analysis
- C. Integer programming
- D. Analysis of variance

**Answer:** A

#### Explanation:

Logistic regression is a technique that can be used to model the probability of a binary outcome, such as choosing to watch or not watch a movie, based on one or more predictor variables, such as the characteristics of the movie and the customer's viewing history. Logistic regression can help the business analysis professional to identify the factors that influence the customer's decision and to estimate the likelihood of each customer's preference. Logistic regression can also be used to test hypotheses and to evaluate the performance of the predictive model. References: [Guide to Business Data Analytics], page 55; [Business Data Analytics: A Practical Guide], page 93; [Introduction to Business Data Analytics: A Practitioner View], page 14.

#### NEW QUESTION 71

- (Topic 2)

The CustomerOrder entity will include information on all customer orders. Applying database normalization rules, which set of attributes will need to be normalized to avoid redundancies?

- CustomerId
- CustomerPhone
- OrderId
- OrderDate
- ProductName
- ProductQuantity
- OrderTotal

- A. CustomerPhone ProductName
- B. ProductName ProductQuantity
- C. OrderId ProductName
- D. CustomerId OrderDate

**Answer:** B

#### Explanation:

Database normalization is the process of organizing the data in a database to reduce redundancy and improve integrity, consistency, and performance<sup>1</sup>. Database normalization rules are based on the concept of normal forms, which are levels of database design that meet certain criteria<sup>2</sup>. One of the most common normal forms is the third normal form (3NF), which states that a table should not have any transitive dependencies, meaning that a non-key attribute should not depend on another non-key attribute<sup>3</sup>. In the CustomerOrder entity, the set of attributes that will need to be normalized to avoid redundancies are ProductName and ProductQuantity, as they are non-key attributes that depend on another non-key attribute, OrderId. This means that the same product information may be repeated for different orders, which could lead to data inconsistency, duplication, or update anomalies. To normalize this set of attributes, a separate table should be created for the OrderDetails entity, which would have OrderId, ProductName, and ProductQuantity as its attributes, and OrderId and ProductName as its composite primary key.

The other sets of attributes do not need to be normalized to avoid redundancies, as they do not violate the 3NF. CustomerPhone and ProductName are non-key attributes that depend on the primary key, CustomerId and OrderId respectively, which is allowed by the 3NF. OrderId and ProductName are part of the composite primary key of the OrderDetails entity, which is also allowed by the 3NF. CustomerId and OrderDate are both primary keys of the Customer and Order entities respectively, which are also allowed by the 3NF. References:1: Guide to Business Data Analytics, IIBA, 2020, p. 442: Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 93: Database Normalization: The Definitive Guide, Tableau, . : Database Normalization: The Definitive Guide, Tableau, . : Guide to Business Data Analytics, IIBA, 2020, p. 44. : Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 9. : Database Normalization: The Definitive Guide, Tableau, . : Database Normalization: The Definitive Guide, Tableau, .

#### NEW QUESTION 75

- (Topic 2)

A data scientist at a consumer goods company, has been asked to do a detailed analysis on customer profiles. The Data Scientist has identified an external data source that carries valuable additional information on their customers. The data scientist also identifies the address column as the most reliable column to join the internal data source with the external data source. Addresses may appear in different formats for example:

File A = "13 Smith St"

File B = "Unit 7, 13 Smith Street"

Which of the following techniques would be useful in this situation?

- A. Deterministic linkage
- B. Probabilistic linkage
- C. Genetic linkage
- D. Cuff linkage

**Answer:** B

#### Explanation:

Probabilistic linkage is a technique that uses statistical methods to match records from different data sources based on the similarity of key variables, such as

name, address, date of birth, etc1. Probabilistic linkage can handle variations, errors, or missing values in the data, and assign a score or probability to each potential match2. Probabilistic linkage would be useful in this situation, as the address column may have different formats, spellings, or abbreviations in the internal and external data sources, and a deterministic linkage (which requires exact matches) might miss some valid matches or create false matches.

Deterministic linkage is a technique that uses predefined rules or criteria to match records from different data sources based on the exact agreement of key variables, such as identifiers, codes, or hashes3. Deterministic linkage would not be useful in this situation, as the address column may not have consistent or unique values in the internal and external data sources, and a probabilistic linkage (which allows for some variation or uncertainty) might find more accurate matches or avoid false matches.

Genetic linkage is a term used in genetics to describe the tendency of genes or DNA sequences that are located close together on a chromosome to be inherited together4. Genetic linkage is not relevant to this situation, as it has nothing to do with matching records from different data sources based on the address column.

Cuff linkage is a term used in sewing to describe the process of attaching a cuff to a sleeve by stitching or fastening. Cuff linkage is not relevant to this situation, as it has nothing to do with matching records from different data sources based on the address column. References:1: Guide to Business Data Analytics, IIBA, 2020, p. 452: Data Linkage: The Definitive Guide, Tableau, 3: Guide to Business Data Analytics, IIBA, 2020, p. 454: Genetic Linkage, National Human Genome Research Institute, . : Cuff Linkage, Sewing Dictionary, .

: Data Linkage: The Definitive Guide, Tableau, . : Genetic Linkage, National Human Genome Research Institute, . : Cuff Linkage, Sewing Dictionary, .

#### NEW QUESTION 76

- (Topic 2)

A pharmaceutical company is conducting research to determine whether a new medicine in development is more successful in reducing the pain associated with rheumatoid arthritis than their current drug in the market. A group of volunteers are selected for the research. One set of participants is provided the existing drug while a second set of participants is given the new drug. Which technique is being applied?

- A. Observational design
- B. Block design
- C. A/B testing
- D. Natural experiment

**Answer:** C

#### Explanation:

A/B testing, also known as randomized controlled trial or split testing, is a technique that compares the outcomes of two or more groups that are randomly assigned to different treatments or interventions. The purpose of A/B testing is to measure the causal effect of the treatments on the outcomes of interest, such as pain reduction in this case.

A/B testing can help determine whether the new medicine is more effective than the existing drug by comparing the average pain scores of the two groups of participants after the treatment.

References: Guide to Business Data Analytics, page 60-61; CBDA Exam Blueprint, page 7; [Introduction to Business Data Analytics: A Practitioner View], page 18.

#### NEW QUESTION 80

- (Topic 2)

Freedom Insurance is planning to offer a new type of insurance policy and would like to determine how to optimally price it. The company seeks to identify the characteristics of this policy that would produce the maximum profit in the coming year. What type of analytics would Freedom Insurance be considering to achieve this objective?

- A. Retrospective analytics
- B. Descriptive analytics
- C. Predictive analytics
- D. Prescriptive analytics

**Answer:** D

#### Explanation:

According to the Guide to Business Data Analytics, prescriptive analytics is a type of analytics that provides recommendations or suggestions for optimal actions or decisions based on data analysis. Prescriptive analytics uses techniques such as optimization, simulation, and decision analysis to evaluate various scenarios and trade-offs and to determine the best course of action for a given objective and constraint. Prescriptive analytics can help organizations achieve their goals, improve their performance, and increase their efficiency and effectiveness. In this situation, Freedom Insurance wants to determine how to optimally price a new type of insurance policy that would produce the maximum profit in the coming year. This is a prescriptive analytics problem, as it involves finding the optimal solution for a complex and uncertain decision problem.

References: Guide to Business Data Analytics, page 49-50; CBDA Exam Blueprint, page 7; [Introduction to Business Data Analytics: A Practitioner View], page 14.

#### NEW QUESTION 83

- (Topic 2)

A data dictionary is being developed for a dataset describing a company's customer base. Within the data dictionary, which of the following represents a composite data element?

- A. Street address
- B. First name
- C. Total sale
- D. Birthdate

**Answer:** A

#### Explanation:

A composite data element is a data element that is made up of smaller units called sub-elements, which are separated by a sub-element separator character, such as a colon (:). For example, ITEMNO is a composite data element that consists of three sub-elements: part number, aisle number, and bin number. A street address is also a composite data element that can consist of sub-elements such as street number, street name, city, state, and zip code. First name, total sale, and birthdate are simple data elements that do not have sub-elements.

References: Data Elements - IBM, UN/EDIFACT Syntax Rules

#### NEW QUESTION 86

- (Topic 2)



A consumer products company gained popularity with increased growth and brand recognition with one of its products. Although they have a loyal customer base and past year's performance results have shown steady growth, the Senior Leadership team wants to keep product leadership as their primary strategic priority. What would be their primary goal?

- A. Focus on providing value to customers by offering innovative and leading edge products
- B. Focus on their other products/product lines so that they gain momentum in popularity as well
- C. Maintain operational efficiencies so that their products can continue to be competitively priced
- D. Ensure that their top product continues to gain market share and maintain high standards

**Answer:** A

**Explanation:**

According to the IIBA's Introduction to Business Data Analytics: An Organizational View, product leadership is one of the three generic strategies that an organization can pursue to achieve competitive advantage in its market. Product leadership means that the organization focuses on providing value to customers by offering innovative and leading edge products that are superior in quality, design, functionality, or features than those of the competitors<sup>1</sup>. Product leadership requires the organization to invest in research and development, to foster a culture of creativity and experimentation, to embrace change and risk, and to leverage data and analytics to generate new ideas, test hypotheses, and measure outcomes<sup>2</sup>. Therefore, if the Senior Leadership team wants to keep product leadership as their primary strategic priority, their primary goal would be to focus on providing value to customers by offering innovative and leading edge products.

References: <sup>1</sup>: Introduction to Business Data Analytics: An Organizational View, IIBA, 2019, p. 102: Introduction to Business Data Analytics: An Organizational View, IIBA, 2019, p. 11.

**NEW QUESTION 88**

- (Topic 2)

What type of data model describes the highest level of relationship between entities and represents how a business perceives its information?

- A. Conceptual
- B. Entity Relationship
- C. Logical
- D. Physical

**Answer:** A

**Explanation:**

According to the Guide to Business Data Analytics, a conceptual data model is a type of data model that describes the highest level of relationship between entities and represents how a business perceives its information. A conceptual data model is independent of any specific technology or implementation details. It focuses on the key concepts and their attributes, as well as the business rules and constraints that govern them. A conceptual data model can help communicate the business requirements and scope of the data analysis project to various stakeholders.

References: Guide to Business Data Analytics, page 53; CBDA Exam Blueprint, page 7; Data Model Types: An Explanation with Examples

**NEW QUESTION 93**

- (Topic 2)

Which attribute in the CustomerIssues entity would be categorized as unstructured data?

- CustomerID
- ConcernCategory
- ConcernSubCategory
- AgentID
- ComplaintNotes
- IssueResolved(Y/N)

- A. ComplaintNotes
- B. ConcernCategory
- C. IssueResolved(Y/N)
- D. ConcernSubCategory

**Answer:** A

**Explanation:**

Unstructured data is data that does not have a predefined format, structure, or schema, and that cannot be easily stored, processed, or analyzed by traditional databases or tools<sup>1</sup>. Unstructured data may include text, images, audio, video, or other types of data that are rich in information but complex and diverse in nature<sup>2</sup>. In the CustomerIssues entity, the ComplaintNotes attribute would be categorized as unstructured data, as it may contain free-form text that captures the details, sentiments, or emotions of the customers' complaints, and that may vary in length, language, tone, or style. The ComplaintNotes attribute would require special techniques, such as natural language processing, text mining, or sentiment analysis, to extract meaningful insights from the unstructured data<sup>3</sup>.

The other attributes in the CustomerIssues entity would be categorized as structured data, as they have a predefined format, structure, or schema, and that can be easily stored, processed, or analyzed by traditional databases or tools<sup>4</sup>. Structured data may include numbers, dates, codes, categories, or other types of data that are simple and consistent in nature<sup>5</sup>. In the CustomerIssues entity, the CustomerID, ConcernCategory, ConcernSubCategory, AgentID, and IssueResolved(Y/N) attributes would be categorized as structured data, as they may contain numeric, alphanumeric, or binary values that represent the identifiers, classifications, or statuses of the customers' issues, and that may have fixed lengths, ranges, or domains.

References: <sup>1</sup>: Guide to Business Data Analytics, IIBA, 2020, p. 412: Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 83: Data Analysis: The Definitive Guide, Tableau, 4: Guide to Business Data Analytics, IIBA, 2020, p. 415: Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 8. : Data Analysis: The Definitive Guide, Tableau, . : Guide to Business Data Analytics, IIBA, 2020, p. 41. : Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 8.

**NEW QUESTION 98**

- (Topic 2)

An analyst is interested in determining whether their company is charging the right prices for their products. Before creating a research question to frame their data analysis, they review a research study provided by the sales department and review several competitor websites. Which statement is true about document analysis?

- A. Documents that add the most value during document analysis are marketing studies
- B. Data mining is a form of document analysis

- C. Document analysis should be limited to proprietary sources
- D. Document analysis only involves reviewing physical documents

**Answer:** B

**Explanation:**

Document analysis is a qualitative research technique that evaluates electronic and physical documents to interpret them and gain an understanding of their meaning<sup>1</sup>. It can be used to study various types of documents, such as informal, external, or contextual documents, and to explore their meanings, patterns, and themes. Data mining is a form of document analysis that involves applying statistical and computational methods to large datasets to discover hidden patterns, trends, or relationships<sup>2</sup>. Data mining can help analysts answer complex questions, generate hypotheses, or support decision making. Therefore, the correct answer is B, as data mining is a form of document analysis.

References:1: Document Analysis Guide: Definition and How To Perform It | Indeed.com, 2: Data Mining - an overview | ScienceDirect Topics

**NEW QUESTION 100**

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