

CBDA Dumps

Certification in Business Data Analytics (IIBA - CBDA)

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NEW QUESTION 1

- (Topic 1)

Which attributes from the Order entity will need to be normalized to avoid redundancies?

- . OrderId
- . OrderDate
- . ItemId
- . ItemName
- . Quantity
- . ItemPrice

- A. OrderDate ItemPrice
- B. ItemName ItemPrice
- C. OrderDate ItemName
- D. Item Name Quantity

Answer: B

Explanation:

The attributes ItemName and ItemPrice need to be normalized to avoid redundancies because they depend on the attribute ItemId, which is not part of the primary key of the Order entity. This is a case of partial dependency, which violates the second normal form (2NF) of database normalization. To achieve 2NF, the Order entity should be split into two entities: Order and Item, where Item contains the attributes ItemId, ItemName, and ItemPrice, and Order contains the attributes OrderId, OrderDate, ItemId, and Quantity. This way, the ItemName and ItemPrice are stored only once for each ItemId, and the Order entity references them through a foreign key.

12 References: 1: Balancing Data Integrity and Performance: Normalization vs ?? 2: Normalization Process in DBMS - GeeksforGeeks

NEW QUESTION 2

- (Topic 1)

The analytics team is struggling with which recommendation to make. Their challenge is that they have five good options and this indecision is stopping them from moving forward. To help the team finalize their recommendation, the BA professional on the team recommends they complete:

- A. Root cause analysis
- B. Business rules analysis
- C. Data flow diagrams
- D. Acceptance and evaluation criteria

Answer: D

Explanation:

Acceptance and evaluation criteria are the techniques that the BA professional on the team should recommend they complete, because they are the standards or measures that are used to evaluate the suitability and value of each option. Acceptance and evaluation criteria can help the team compare the benefits, costs, risks, and impacts of each option, and determine which one best meets the needs and expectations of the stakeholders. Acceptance and evaluation criteria can also help the team communicate the rationale and evidence behind their recommendation, and ensure that the recommendation is aligned with the business goals and objectives. 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
- Acceptance and Evaluation Criteria | Business Analysis

NEW QUESTION 3

- (Topic 1)

A job satisfaction survey is being developed. Half of the employees will be asked the question "Do you enjoy working in your workplace?" The other half will be asked "Do you like the current work benefits?". The business analyst raises concern over the survey. What is concerning to the business analyst?

- A. Precision
- B. Reproducibility
- C. Reliability
- D. Validity

Answer: D

Explanation:

The business analyst is concerned about the validity of the survey. Validity is the extent to which a survey measures what it intends to measure. In this case, the survey is supposed to measure job satisfaction, but the two questions asked to different groups of employees are not equivalent or relevant to this construct. The question ??Do you enjoy working in your workplace??? is more directly related to job satisfaction than the question ??Do you like the current work benefits???. The latter question may capture only one aspect of job satisfaction, and may not reflect the overall level of contentment or happiness with the job. Therefore, the survey results may not be valid or accurate in measuring job satisfaction.

12 References: 1: Survey and questionnaires in business analysis - The Functional BA 2: Job Satisfaction Survey - Paul Spector

NEW QUESTION 4

- (Topic 1)

An analyst is looking at a particular dataset that includes the scores across all 8th grade students, across three schools. The analyst is trying to determine which type of statistics average to use to best represent the results. On looking through the dataset, the analyst has identified a few extreme outliers. As a result, the analyst was led to use the following type of average:

- A. Median
- B. Range
- C. Mean
- D. Mode

Answer: A

Explanation:

The median is the type of statistics average that the analyst should use to best represent the results, because it is a measure of central tendency that divides the data set into two equal halves. The median is the middle value of the data set when it is arranged in ascending or descending order. The median is not affected by extreme outliers, unlike the mean, which is the arithmetic average of the data set. The median can give a more accurate representation of the typical score of the 8th grade students across the three schools. Options B, C, and D are not types of statistics average, but types of statistics measures that describe other aspects of the data set. The range is a measure of dispersion that shows the difference between the highest and the lowest values of the data set. The mean is a measure of central tendency that shows the sum of the values of the data set divided by the number of values. The mode is a measure of central tendency that shows the most frequent value of the data set. References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 3: Analyze Data
- Understanding the Guide to Business Data Analytics, page 17
- Business Data Analytics (IIBA®-CBDA Exam preparation) | Udemy, Section 3: Analyze Data, Lecture 13: Descriptive Statistics

NEW QUESTION 5

- (Topic 1)

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

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

Answer: C

Explanation:

A layout is a way of arranging the nodes and links of a graph visualization to convey meaningful information about the data. A layout is determined by a dedicated algorithm that calculates the node positions based on certain criteria, such as minimizing edge crossings, maximizing node spacing, or emphasizing clusters¹². A layout can also be influenced by user interaction, such as zooming, panning, or dragging³. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 642: Graph Drawing: Algorithms for the Visualization of Graphs, Giuseppe Di Battista et al., 1999, p. 33: Interactive Data Visualization: Foundations, Techniques, and Applications, Matthew O. Ward et al., 2015, p. 227.

NEW QUESTION 6

- (Topic 1)

While creating a dataset for analysis, the analyst reviews the data collected and finds a large percentage of records are missing values. Which activity would the analyst perform in order to use this dataset?

- A. Clustering
- B. Scale validation
- C. Weighting
- D. Factor analysis

Answer: C

Explanation:

Weighting is a technique that assigns different values or weights to different records or variables in a dataset, based on their importance or relevance. Weighting can be used to handle missing values by giving them a lower weight or imputing them with a weighted average of other values. Weighting can also help to adjust for sampling bias or non-response bias in the data collection process. References:

- Understanding the Guide to Business Data Analytics, page 16
- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 3: Analyze Data
- CERTIFICATION IN BUSINESS DATA ANALYTICS HANDBOOK - IIBA®, page 8, CBDA Exam Sample Questions and Self-Assessment, Question 4

NEW QUESTION 7

- (Topic 1)

To gain traction on online sales, a retailer initiated a marketing campaign using banner ads. The company has requested their analytics team to evaluate the performance of the campaign. During the presentation, the analyst confirmed that the campaign did bring in a large number of net new customers to the website and met the target sales conversion rate. They also noted that there was a high number of repeat visitors not completing a sale. What decision would help the retailer improve sales conversion rates for repeat visitors?

- A. Increase investment in banner ads
- B. Incentivize customers to subscribe to promotional notifications
- C. Add additional new products to attract customers
- D. Ensure the sales checkout process is streamlined

Answer: D

Explanation:

According to the Business Data Analytics: A Decision-Making Paradigm¹, one of the key steps in the analytics process is to communicate insights and recommendations to stakeholders. The analyst should present the findings in a clear and concise manner, and provide actionable suggestions to improve the business outcomes. In this case, the analyst has identified that repeat visitors are not completing a sale, which indicates a possible issue with the sales checkout process. Therefore, the analyst should recommend the retailer to streamline the sales checkout process, which could reduce friction, increase customer satisfaction, and boost sales conversion rates for repeat visitors. References: Business Data Analytics: A Decision-Making Paradigm

NEW QUESTION 8

- (Topic 1)

An insurance company has seen an upward trend in winter-related accidents over the past three years. The company has just completed an analytics study to better understand the primary reasons for these accidents and assess how many of the drivers were using winter tires. This analysis will help the company decide how to move forward with drivers not taking precautionary measures during winter. What type of analysis will help in determining the primary reasons and percentage of those drivers with winter tires?

- A. Prescriptive

- B. Descriptive and Predictive
- C. Descriptive
- D. Descriptive and Diagnostic

Answer: D

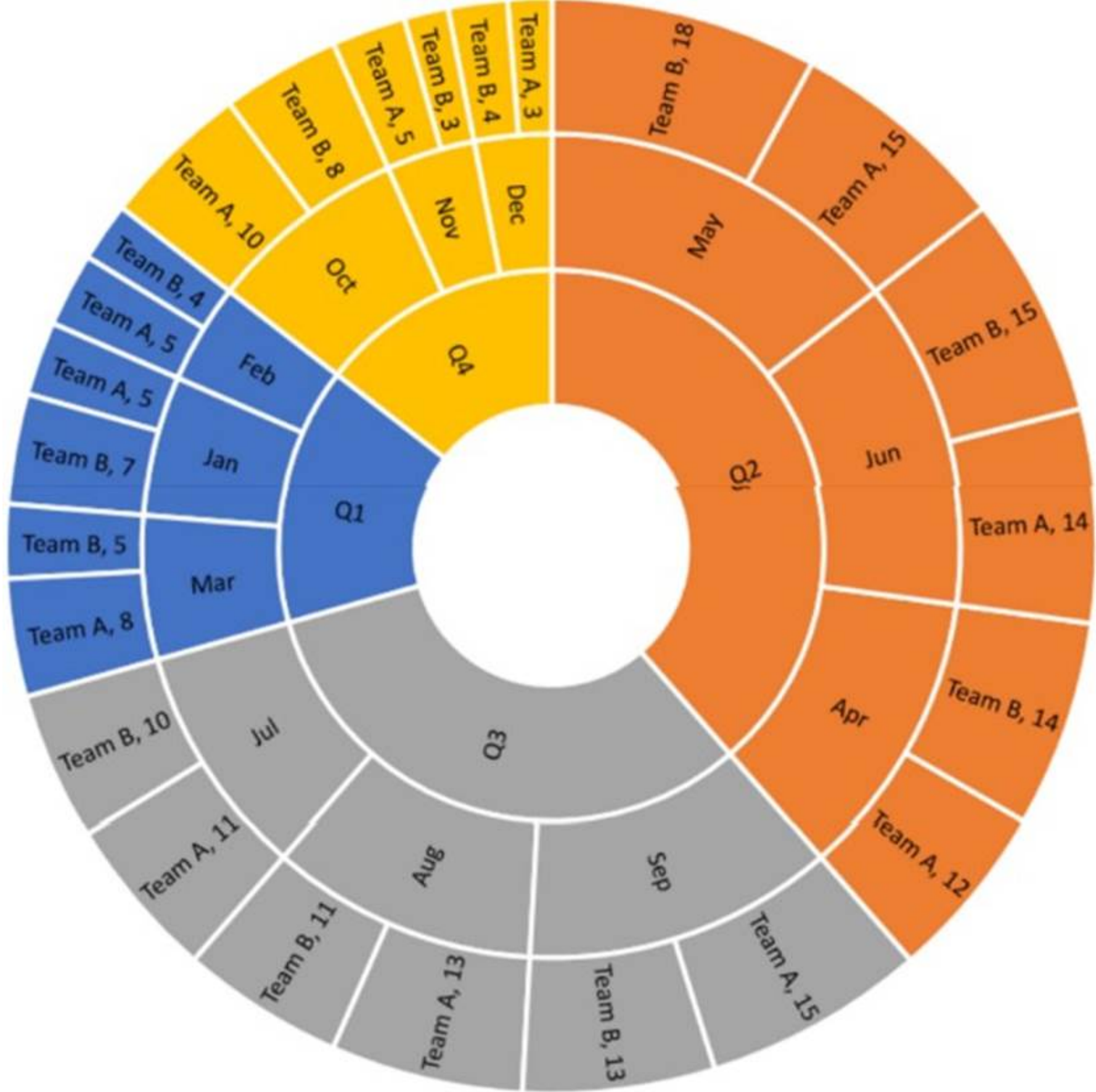
Explanation:

Descriptive analytics is a type of analytics that summarizes and visualizes the data to provide an overview of what has happened or is happening, such as the trend of winter- related accidents over the past three years, or the percentage of drivers using winter tires¹². Diagnostic analytics is a type of analytics that explores and analyzes the data to understand why something has happened or is happening, such as the primary reasons for these accidents, or the factors that influence the drivers’ decisions¹³. To answer the question, both descriptive and diagnostic analytics would be needed to provide the relevant information and insights for the company. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 182: Business Analytics: Data Analysis & Decision Making, S. Christian Albright and Wayne L. Winston, 2015, p. 53: Data Science for Business, Foster Provost and Tom Fawcett, 2013, p. 13.

NEW QUESTION 9

- (Topic 1)

A real estate broker is tracking monthly sales between two of its teams. The results have been visualized. What insights can be drawn from the chart?



- A. Q2 was the strongest performing quarter with Team B having the top monthly sales in May
- B. Q3 was the strongest performing quarter with Team A having the top monthly sales in the quarter
- C. Q4 was the lowest performing quarter with November having the lowest monthly sales in the year
- D. Q4 was the lowest performing quarter with Team A having the lowest monthly sales in the Quarter

Answer: C

Explanation:

The chart visualizes monthly sales data for two teams over a year, divided into quarters. By analyzing the data, it is evident that November (part of Q4) had the lowest monthly sales in the year, making option C correct. There isn't enough information to verify the performance of individual teams in each quarter as per

Business Data Analytics (IIBA®- CBDA) objectives and resources. References:

- [Business Analysis Certification in Data Analytics, CBDA | IIBA®], CBDA Competencies, Domain 4: Interpret and Report Results
 - [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 7

NEW QUESTION 10

- (Topic 1)

A database analyst is modelling a database for a large toy manufacturer. Which statement describes a logical database model?

- A. The layer of views created to summarize data or provide another perspective of certain data
- B. A model that depicts the actual design of the relational database
- C. An abstraction of the conceptual data model that includes rules of normalization
- D. Modelling that involves objects being defined at the schema level

Answer: C

Explanation:

A logical database model is a data model of a specific problem domain expressed independently of a particular database management product or storage technology. It describes data using notation that corresponds to a data organization used by a database management system, such as relational tables and columns. It also includes rules of normalization, which are the process of converting complex data structures into simple, stable data structures12 References: 1: Logical schema - Wikipedia 2: What Is a Data Model? | Coursera

NEW QUESTION 10

- (Topic 1)

The analytics team has been asked to provide an estimate of the number of customers they expect to have in 12 months. They debated how accurate that figure needs to be and determined that based on the availability of good data, they could predict within + or - 10%. This is an example of a:

- A. ROM estimate
- B. Delphi estimate
- C. Parametric estimate
- D. Definitive estimate

Answer: A

Explanation:

A ROM estimate is a rough order of magnitude estimate that provides a quick and approximate estimate of the cost, time, or effort required for a project or a task. A ROM estimate is based on expert opinion or experience from past projects, and it usually has a large range of variation, such as + or - 10%. A ROM estimate is useful when there is limited information or data available, or when a high-level estimate is needed for planning or budgeting purposes. However, a ROM estimate also has a high degree of uncertainty and variability, and it should be refined as more details become available12 References: 1: Project Estimation Techniques Business Analysts Should Know About 2: Estimation techniques for business analysts – The Functional BA

NEW QUESTION 13

- (Topic 1)

An organization's customers are categorized based on the amount of purchases completed over the last 12 months. The analytics team would like to ensure the accuracy of their survey results and decide to randomly select 500 customers to participate in a survey from this large pool of customers. This is an example of:

- A. Stratified sampling
- B. Quota sampling
- C. Purposive sampling
- D. Snowball sampling

Answer: A

Explanation:

Stratified sampling is a technique that divides the population into homogeneous subgroups (strata) based on a relevant characteristic, such as the amount of purchases, and then randomly selects a proportional number of elements from each subgroup to form the sample. Stratified sampling ensures that the sample is representative of the population and reduces the sampling error and bias12. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 312: Statistics for Business and Economics, David R. Anderson et al., 2014, p. 262.

NEW QUESTION 15

- (Topic 1)

As the team discusses how to utilize the results of their data analysis to put forth a business recommendation, an analyst on the team voices concern over the current organizational culture presenting a roadblock to their ability to influence business decision making. Which of the following would be a justifiable concern at this stage of the team's efforts?

- A. Difficulty bringing business stakeholders to a shared understanding about value when sharing data assets across business domains
- B. Changing the mindsets of business stakeholders to trust insights gleaned from data over experience and intuition
- C. Applying a myopic view of data and establishing data silos which create roadblocks to exploring available data sources
- D. Finding data that creates value creating difficulties, as not all data helps a business make better decisions

Answer: B

Explanation:

A justifiable concern at this stage of the team's efforts is changing the mindsets of business stakeholders to trust insights gleaned from data over experience and intuition. This is because some stakeholders may have a strong attachment to their own opinions or beliefs, and may resist or ignore data that contradicts them. This can create a barrier to data-driven decision making, which requires a culture of curiosity, openness, and evidence-based reasoning. The team needs to communicate the value and validity of their data analysis, and persuade the stakeholders to adopt a data-driven mindset12 References: 1: Use Data to Accelerate Your Business Strategy 2: Data-Driven Decision Making: A Step-by-Step Guide

NEW QUESTION 16

- (Topic 1)

There were 7 students enrolled in the Introduction to Artificial Intelligence course. These were the student's scores from the final exam: 64, 70, 80, 80, 90, 98, 100
What is the mean and mode for the outlined scores?

- A. 83.14, 80
- B. 79.84, 81.40
- C. 80,80
- D. 80, 83.14

Answer: A

Explanation:

The mean is the average of all the scores, which is found by adding them up and dividing by the number of scores. The mode is the most frequent score, which is the one that occurs the most times. To find the mean and mode for the outlined scores, we can use the following steps:

- Arrange the scores in ascending order: 64, 70, 80, 80, 90, 98, 100
- Add up the scores: $64 + 70 + 80 + 80 + 90 + 98 + 100 = 582$
- Divide the sum by the number of scores: $582 / 7 = 83.14$
- The mean is 83.14
- Count how many times each score occurs: 64 occurs once, 70 occurs once, 80 occurs twice, 90 occurs once, 98 occurs once, 100 occurs once
- The score that occurs the most times is 80
- The mode is 80

Therefore, the mean and mode for the outlined scores are 83.14 and 80, respectively12 References: 1: Mean, median, and mode review (article) | Khan Academy
2: Mean, Median, and Mode: Measures of Central Tendency - Statistics By Jim

NEW QUESTION 17

- (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 logic1. Querying can be used for different purposes, such as data exploration, data preparation, data analysis, and data visualization2. 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-based3. 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 18

- (Topic 1)

A professor at a university has received a few complaints of the exams being too difficult. The professor is looking at exam performance results over the past 5 years to understand the normal tendency and outliers. Which chart should the professor use?

- A. Sunburst
- B. Scatterplot
- C. Pie chart
- D. Line

Answer: B

Explanation:

A scatterplot is a type of chart that shows the relationship between two variables by plotting data points on a two-dimensional plane. A scatterplot can help the professor to understand the normal tendency and outliers of exam performance results over the past 5 years by displaying the distribution, trend, and correlation of the data. For example, the professor can use the x-axis to represent the year and the y-axis to represent the exam score, and see how the scores vary over time and across different exams. Outliers can be identified as data points that are far away from the main cluster or the line of best fit12 References: 1: Scatter Plot - Statistics How To 2: Scatterplots - IIBA BABOK Guide v3

NEW QUESTION 22

- (Topic 1)

The marketing department for a major restaurant chain is interested in testing a Kids Eat Free campaign to determine if it will help to increase sales. They are interested in piloting the campaign to determine which day of the week will improve sales the most.

The campaign is launched across 7 cities with each city promoting a different day of the week. The sales data is collected and provided to a team for analysis. What concern might the analytics team have regarding data quality across cities?

- A. Normality
- B. Heteroskedacity
- C. Linearity
- D. Variation

Answer: D

Explanation:

Variation is the degree to which the data values differ from each other or from a central tendency measure, such as the mean or median. Variation can affect the

data quality across cities, as it can indicate the presence of outliers, errors, noise, or inconsistency in the data collection or processing methods. Variation can also influence the statistical analysis and interpretation of the results, as it can affect the significance, confidence, and validity of the findings¹². References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 302: Statistics for Business and Economics, David R. Anderson et al., 2014, p. 83.

NEW QUESTION 24

- (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 requirements¹². 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 26

- (Topic 1)

A colleague proposes measuring job satisfaction by asking the question "What is your salary?". What is the concerning factor about this question?

- A. Validity
- B. Clarity
- C. Reproducibility
- D. Subjectivity

Answer: A

Explanation:

Validity is the extent to which a measure or a question accurately captures the intended concept or construct¹. The question ??What is your salary??? is not a valid measure of job satisfaction, as it does not reflect the various aspects of job satisfaction, such as work environment, recognition, autonomy, growth, etc. Salary is only one possible factor that may influence job satisfaction, but it is not a direct or comprehensive indicator of it²³. Therefore, the question is not valid for measuring job satisfaction. References: 1: Guide to Business Data Analytics, IIBA, 2020, p. 302: Job Satisfaction: Application, Assessment, Causes, and Consequences, Paul E. Spector, 1997, p. 23: Job Satisfaction Survey, 1.

NEW QUESTION 27

- (Topic 1)

A Data Dictionary is being developed for an employee database. When reviewing the data dictionary, the analyst recommends adding another primitive data element. Which element would be suggested?

- A. Street address
- B. First name
- C. Customer name
- D. Work phone number

Answer: A

Explanation:

A street address is a primitive data element, because it is a basic unit of data that cannot be further decomposed into smaller components. A primitive data element has a distinct name, definition, format, and value domain. A street address can be used to identify the location of an employee or a customer, and it can be stored as a string or a combination of numbers and characters. Options B, C, and D are not primitive data elements, because they can be further broken down into smaller components. For example, a first name can be divided into a prefix, a given name, and a suffix. A customer name can be composed of a first name and a last name. A work phone number can be split into a country code, an area code, and a local number. References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 2: Source Data
- Business analysis data dictionary – The Functional BA
- CERTIFICATION IN BUSINESS DATA ANALYTICS HANDBOOK - IIBA®, page 8, CBDA Exam Sample Questions and Self-Assessment, Question 15

NEW QUESTION 30

- (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 stage¹². 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 35

- (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 40

- (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 45

- (Topic 1)

Interested in building out the analytics capability based on the positive results obtained by past analytics efforts, the Chief Marketing Officer (CMO) pitches the idea of using analytics to guide future decision making across the enterprise. Before allocating budget to build up an enterprise analytics practice, the decision makers should:

- A. Request that a small team be assembled to brainstorm a list of capabilities to develop with any approved monies
- B. Identify the sponsor and a project manager who can collaborate on the development of the project charter
- C. Oversee the completion of up-front analysis to determine how value can be achieved through an enterprise-wide analytics practice
- D. Determine if the company has the sufficient resources to build up the analytics practice

Answer: C

Explanation:

Before investing in an enterprise analytics practice, the decision makers should have a clear understanding of the expected value and benefits of such a practice. This requires conducting an up-front analysis that identifies the business problems or opportunities that can be addressed by analytics, the data sources and technologies that are needed, the analytical models and methods that are appropriate, and the metrics and indicators that will measure the impact and outcomes of the analytics solutions¹². This analysis will help to define the scope, objectives, and requirements of the enterprise analytics practice, as well as the resources, roles, and governance structures that are necessary to support it³⁴. An up-front analysis will also help to prioritize the analytics initiatives based on their feasibility, alignment with the business strategy, and potential value creation

NEW QUESTION 48

- (Topic 1)

While sourcing data, an analyst runs into a situation where different business units are using different names to refer to the same data element. This lack of standardization is resulting in confusion and additional time required to properly prepare data for analysis. Which practice, if implemented would address this situation and mature the organization's business analytics practice?

- A. Data quality management
- B. Database operations management
- C. Data warehousing
- D. Meta data management

Answer: D

Explanation:

Meta data management is the practice that, if implemented, would address the situation and mature the organization's business analytics practice, because it is a technique that involves defining, documenting, and maintaining the information about the data elements, such as their names, definitions, formats, sources, and relationships. Meta data management can help the analyst resolve the inconsistencies and ambiguities in the data element names, and ensure that the data is standardized, consistent, and understandable across different business units. Meta data management can also help the analyst improve the data quality, accessibility, and usability for the analysis. References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 2: Source Data
- Guide to Business Data Analytics - IIBA - Google Books, page 14
- Business Data Analytics (IIBA®-CBDA Exam preparation) | Udemy, Section 2: Source Data, Lecture 8: Meta Data Management

NEW QUESTION 53

- (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. 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 58

- (Topic 1)

A dataset contains 10 measures of workplace sustainability. The analytics team is in need of producing a single score of sustainability. Which of the following techniques if used would achieve this objective?

- A. Logistic regression
- B. Linkage algorithms
- C. Factor analysis
- D. K means clustering

Answer: C

Explanation:

Factor analysis is the technique that, if used, would achieve the objective of producing a single score of sustainability, because it is a technique that reduces the dimensionality of a data set by identifying the underlying factors or latent variables that explain the variation and correlation among the observed variables. Factor analysis can help the analytics team combine the 10 measures of workplace sustainability into a smaller number of factors, and then derive a composite score of sustainability based on the factor loadings and weights. Factor analysis can also help the analytics team simplify and interpret the data, and identify the key drivers of sustainability. References:

- Business Analysis Certification in Data Analytics, CBDA | IIBA®, CBDA Competencies, Domain 3: Analyze Data
- Understanding the Guide to Business Data Analytics, page 17
- Business Data Analytics (IIBA®-CBDA Exam preparation) | Udemy, Section 3: Analyze Data, Lecture 15: Factor Analysis

NEW QUESTION 61

- (Topic 1)

The architecture team puts forth a solution architecture that integrates multiple data sources from within and outside the organization. The architecture provides the foundation to source a new analytics program. If one of the objectives of the analytics team was to provide 'one source of the truth', this objective would be referring to which of the following?

- A. Identifying one key stakeholder, who can make final decisions about which sources to relate/merge
- B. Evaluating the completeness, validity, and reliability of the data from source systems
- C. Ensuring stakeholders always have clear insight into the final requirements at all times
- D. Enforcing master data management principles and practices

Answer: D

Explanation:

Providing 'one source of the truth' means ensuring that there is a single, consistent, and authoritative source of data that can be used for analytics and decision making across the organization. This objective can be achieved by enforcing master data management principles and practices, which involve defining, governing, and maintaining the quality and integrity of the core data entities that are shared by multiple systems and processes. Master data management helps to eliminate data silos, reduce data duplication and inconsistency, and improve data accuracy and reliability. References: 1: What is Master Data Management (MDM)? - Informatica 2: Master Data Management - IIBA BABOK Guide v3

NEW QUESTION 65

- (Topic 1)

An analyst at a phone manufacturing company is preparing a dashboard for Senior Executives that will cover past year's performance. It will be used in the upcoming senior leadership team meeting to make strategic decisions for the new year. While analyzing the data, the analyst found a lot of interesting revelations related to performance. What should the analyst keep in mind when preparing the Executive dashboard?

- A. Keep some sections high-level, and some sections detailed

- B. Keep it detailed if there is a lot of good information to share
- C. Keep it high-level, summarizing key insights and metrics
- D. Keep it detailed so one dashboard can be shared to all levels of the organization

Answer: C

Explanation:

When preparing an executive dashboard, the analyst should keep in mind that the purpose of the dashboard is to provide a quick and clear overview of the past year's performance and to support strategic decision making for the new year. Therefore, the analyst should keep the dashboard high-level, summarizing the key insights and metrics that are relevant and meaningful for the senior executives. The analyst should avoid cluttering the dashboard with too much detail or information that is not essential for the executives. The analyst should also use visual features, such as charts, graphs, and colors, to display the data in an organized and appealing way.¹² References: 1:Executive Dashboards: 10 Reporting Tips and Examples [2023] • Asana 2: How to Create Executive Dashboard & Reports - Ubiquitous BI

NEW QUESTION 69

- (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 Analytics, 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 70

- (Topic 2)

While formulating the results from completed analysis, the analytics team is applying different techniques to determine an optimal solution to the specified business problem. Which of the following runs the risk of introducing bias in their decision making process?

- A. Evidenced-based decision making
- B. Expert judgement and experience
- C. Correlations identified through artificial intelligence
- D. Letting the data tell the story

Answer: B

Explanation:

Expert judgement and experience are valuable sources of knowledge and insight for business data analytics, but they can also introduce bias in the decision making process. Bias is a tendency to favor or reject a certain perspective, outcome, or solution based on personal or subjective preferences, beliefs, or expectations. Bias can affect the quality, validity, and reliability of the data analysis and the resulting decisions. Some examples of bias that can affect expert judgement and experience are confirmation bias, availability bias, anchoring bias, and overconfidence bias. To avoid or minimize bias, business data analysts should apply critical thinking, data literacy, and ethical principles throughout the data analysis process. They should also seek diverse perspectives, challenge assumptions, validate findings, and communicate uncertainties and limitations. References:10 Cognitive Biases in Business Analytics and How to Avoid Them; Business Data Analytics: A Decision-Making Paradigm, page 8; Guide to Business Data Analytics, page 11.

NEW QUESTION 74

- (Topic 2)

A clinical research organization is using predictive analytics to improve patient safety and decrease costs on its clinical trials. To ensure that a standard set of tools/techniques is identified and best practices adhered to, teams are required to create scenarios to generate appropriate data for initial analysis. This practice is required because it is almost certain that data will be difficult to come by for most research. Which concern would lead the team to establish scenario development as a required technique?

- A. Data validity
- B. Data privacy
- C. Data reliability
- D. Data reproducibility

Answer: A

Explanation:

Data validity refers to the extent to which data accurately represents the phenomenon or concept that it is intended to measure¹. Data validity is essential for predictive analytics, as it affects the quality and credibility of the analysis results and the subsequent decisions or actions based on them. If data is invalid, the predictions may be inaccurate, misleading, or irrelevant. However, data validity may be challenging to ensure in clinical research, as data may be scarce, incomplete, inconsistent, or subject to errors or biases². Therefore, the team may establish scenario development as a required technique to address this concern. Scenario development is a form of document analysis that involves creating hypothetical situations or stories based on assumptions, evidence, and logic to explore the possible outcomes or implications of a problem or opportunity³. Scenario development can help the team generate appropriate data for initial analysis by simulating different conditions, variables, or events that may affect the clinical trials, and by testing the validity of the data against the scenarios⁴. References:1: Validity in data collection methods - OpenLearn - Open University, 2: Data Quality in Clinical Research - NCBI - NIH, 3: Scenario Analysis: How It Works and Examples - Investopedia, 4: Predictive Analytics using simulation models - AnyLogic

NEW QUESTION 77

- (Topic 2)

The analytics team has completed their analytics work and have agreed on a set of five key recommendations. They are now discussing how best to communicate these recommendations to the finance, customer service, and marketing teams. Recognizing that this is a diverse set of stakeholders, the business analysis professional reminds the team:

- A. All stakeholders should receive information about the recommendation in the same way
- B. Stakeholders only have the ability to understand summarized recommendations
- C. Recommendations are important and must be communicated with as much detail as possible
- D. The recommendation should be communicated in different ways for different stakeholders

Answer: D

Explanation:

According to the Guide to Business Data Analytics, the recommendation is the output of the data analysis that provides suggestions or guidance for actions or decisions based on the data insights. The recommendation should be communicated in different ways for different stakeholders, depending on their needs, preferences, and expectations. The communication should consider the following factors:

? The level of detail and complexity: Some stakeholders may require more or less detail and complexity in the recommendation, depending on their role, responsibility, and involvement in the data analysis project. For example, the finance team may need more detail and complexity than the customer service team, as they are more concerned with the financial implications and feasibility of the recommendation.

? The format and medium: Some stakeholders may prefer different formats and mediums for receiving the recommendation, depending on their availability, accessibility, and learning style. For example, the marketing team may prefer a visual and interactive format, such as a dashboard or a presentation, than a textual and static format, such as a report or a document.

? The tone and language: Some stakeholders may respond better to different tones and languages for the recommendation, depending on their culture, background, and personality. For example, some stakeholders may appreciate a formal and professional tone and language, while others may prefer a casual and friendly tone and language.

The communication should also follow the principles of clarity, accuracy, relevance, and timeliness, as well as adhere to the ethical and legal standards for data privacy and security.

References: Guide to Business Data Analytics, page 50-51; CBDA Exam Blueprint, page 7; [Introduction to Business Data Analytics: A Practitioner View], page 16.

NEW QUESTION 78

- (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 83

- (Topic 2)

An operations manager for a new hotel is in need of determining the optimum number of vans to purchase to shuttle guests to/from the airport. It will be necessary to determine the most efficient routes and schedule to follow to ensure guests do not experience excessive delays. Which business analytics technique would lend itself to supporting these types of business decisions?

- A. Linear programming
- B. Factor analysis
- C. Regression
- D. K-means Clustering

Answer: A

Explanation:

Linear programming is a business analytics technique that can lend itself to supporting these types of business decisions. Linear programming is a mathematical method that optimizes the allocation of limited resources to achieve a desired objective, subject to a set of constraints¹. Linear programming can help the operations manager to determine the optimum number of vans to purchase, the most efficient routes and schedule to follow, and the minimum cost or time to shuttle guests to/from the airport, by formulating a linear objective function and a system of linear inequalities that represent the relevant variables, parameters, and restrictions².

The other options are not correct business analytics techniques for these types of business decisions. Factor analysis is a statistical method that reduces the dimensionality of a large set of correlated variables into a smaller set of uncorrelated factors that explain the underlying structure or patterns of the data³. Factor analysis can help the operations manager to identify the key factors that influence the guest satisfaction or loyalty, but it cannot help to optimize the resource allocation or efficiency. Regression is a statistical method that estimates the relationship between one or more independent variables and a dependent variable. Regression can help the operations manager to predict the demand or revenue of the hotel based on the variables such as season, price, or location, but it cannot help to optimize the resource allocation or efficiency. K-means clustering is a machine learning method that partitions a set of data points into a predefined number of clusters based on the similarity or distance between the data points. K-means clustering can help the operations manager to segment the guests into different groups based on their characteristics or preferences, but it cannot help to optimize the resource allocation or efficiency.

References: ¹: Guide to Business Data Analytics, IIBA, 2020, p. 532; Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 93; Guide to Business Data Analytics, IIBA, 2020, p. 54. : Guide to Business Data Analytics, IIBA, 2020, p. 54. : Guide to Business Data Analytics, IIBA, 2020, p. 55. : Guide to Business Data Analytics, IIBA, 2020, p. 53. : Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 9. : Guide to Business Data Analytics, IIBA, 2020, p. 54. : Guide to Business Data Analytics, IIBA, 2020, p. 54. : Guide to Business Data Analytics, IIBA, 2020, p. 55.

NEW QUESTION 87

- (Topic 2)

What is the relationship between a Customer entity and an Order entity, where a customer entry will be present in the Customer entity regardless of whether an order was made?

- A. zero-to-one
- B. many-to-many
- C. zero-to-many
- D. one-to-one

Answer: C

Explanation:

A zero-to-many relationship between two entities means that one instance of the first entity can be associated with zero or more instances of the second entity, and one instance of the second entity can be associated with only one instance of the first entity¹. In this case, a customer entry will be present in the Customer entity regardless of whether an order was made, which means that a customer can have zero or more orders, but an order can only belong to one customer.

Therefore, the relationship between Customer and Order is zero-to-many.

References:1: Entity Relationship Diagram (ERD) Tutorial - Part 1

NEW QUESTION 91

- (Topic 2)

A supermarket chain wants to improve supplier relations. One of the targets to track and help achieve this goal is to improve the average transaction time per order by 10%.From a SMART target perspective, what is missing?

- A. is not attainable as weather conditions can slow down order times
- B. S • should provide a target for each supplier
- C. R - is not relevant to the goal as supplier relations is only dependent on quality of deliveries
- D. T - There is no mention of the time-frame by which this target must be met

Answer: D

Explanation:

SMART is an acronym that stands for Specific, Measurable, Achievable, Relevant, and Time-bound, which are criteria for setting effective and realistic goals¹.

From a SMART target perspective, what is missing in this scenario is the time-frame by which the target must be met. A time-bound target specifies the deadline or the duration for achieving the target, which helps to create a sense of urgency, motivation, and accountability². Without a time-frame, the target is vague and indefinite, and it is difficult to monitor and evaluate the progress and the results. For example, a time-bound target could be to improve the average transaction time per order by 10% within the next six months.

The other options are not correct explanations of what is missing. The target is attainable, as it is realistic and feasible, and it does not depend on factors that are beyond the control of the organization, such as weather conditions. The target is specific, as it provides a clear and precise description of what needs to be achieved, and it does not need to provide a target for each supplier, as that would make the target too complex and cumbersome. The target is relevant, as it is aligned with the goal of improving supplier relations, and it does not assume that supplier relations is only dependent on quality of deliveries, as transaction time is also an important factor that affects the efficiency, satisfaction, and trust of the suppliers.

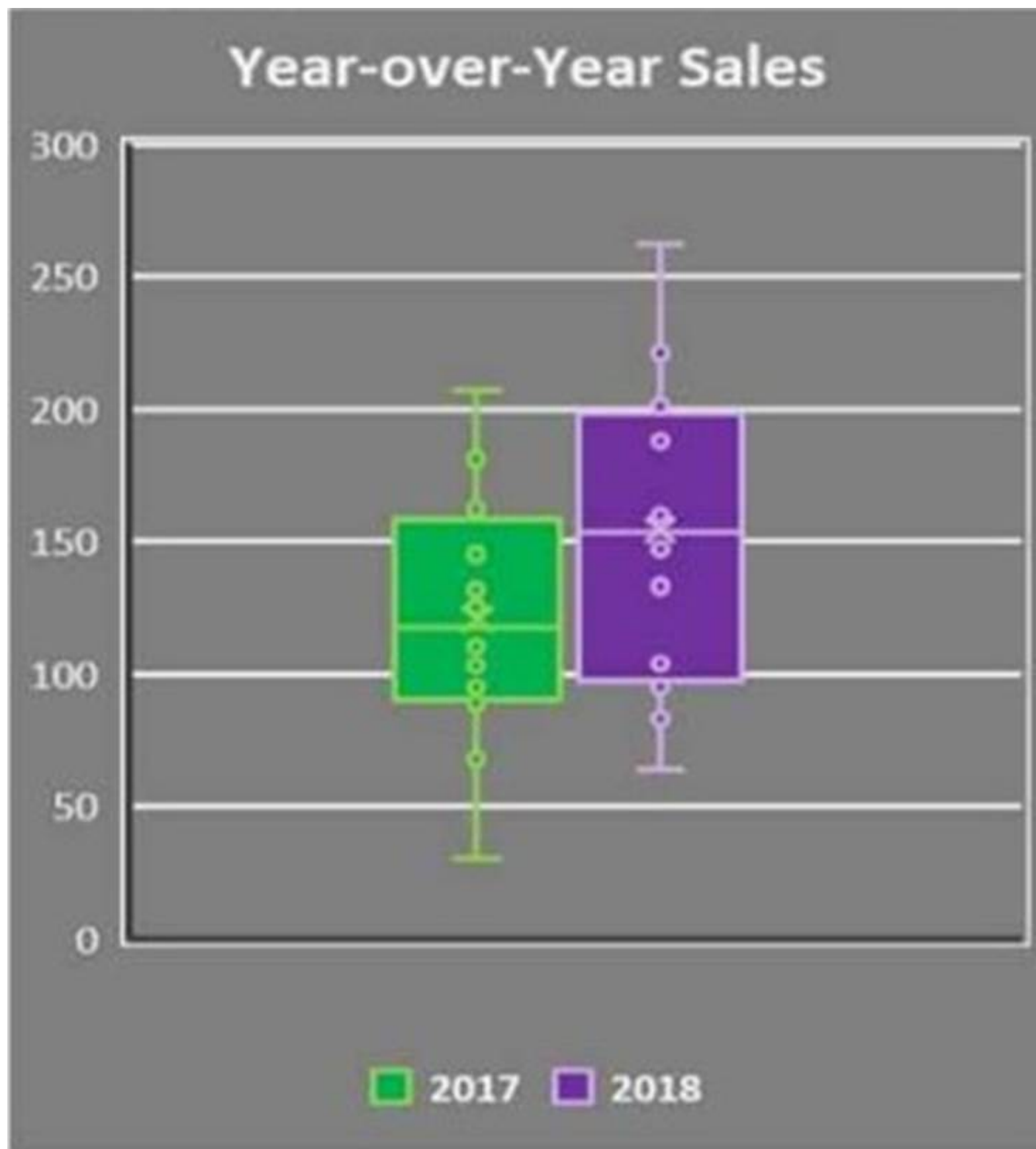
References:1: Introduction to Business Data Analytics: An Organizational View, IIBA, 2019, p. 122: Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 12. : Introduction to Business Data Analytics: An Organizational View, IIBA, 2019, p. 12. : Introduction to Business Data Analytics: A Practitioner View, IIBA, 2019, p. 12.

NEW QUESTION 92

- (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 93

- (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' needs¹. 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 taking². 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 audience³. 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 data⁴. 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 sources⁵.

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 95

- (Topic 2)

Interested in ensuring that analytics continues to contribute value to the overall organization, the lead analyst suggests developing a long term plan to define how the enterprise will identify, store, manage, share, and use its data long-term. The analyst is proposing the development of a:

- A. Data roadmap
- B. Business strategy
- C. Data strategy
- D. Data management plan

Answer: C

Explanation:

A data strategy is a long-term plan that defines how the enterprise will identify, store, manage, share, and use its data to achieve its business goals and objectives¹. A data strategy aligns the data vision, mission, principles, and policies with the business strategy, and guides the data governance, data quality, data architecture, data security, data integration, data analytics, and data culture of the organization². A data strategy helps the organization to leverage its data as a strategic asset, to create value, to improve performance, and to gain competitive advantage³.

A data roadmap is a document that outlines the specific actions, milestones, deliverables, and timelines for implementing the data strategy. A data roadmap is a tactical tool that helps the organization to prioritize, coordinate, and communicate its data initiatives, and to track its progress and outcomes. A data roadmap is not a long-term plan, but a dynamic and flexible plan that can be updated and revised as the data strategy evolves.

A business strategy is a high-level plan that defines how the enterprise will achieve its vision, mission, and goals in a competitive market. A business strategy sets the direction, scope, and value proposition of the organization, and guides its decisions on resource allocation, product development, customer segmentation, pricing, marketing, and differentiation. A business strategy is not a plan that defines how the enterprise will identify, store, manage, share, and use its data, but a plan that defines how the enterprise will create and sustain value for its stakeholders.

A data management plan is a document that describes the data that will be collected, generated, or used in a specific project, and how the data will be handled, stored, preserved, shared, and reused during and after the project. A data management plan is a operational tool that helps the project team to comply with the data policies, standards, and best practices of the organization, and to ensure the quality, integrity, security, and accessibility of the data. A data management plan is not a long-term plan, but a project- specific plan that can be modified and updated as the project progresses.

References:1: Guide to Business Data Analytics, IIBA, 2020, p. 392: Introduction to Business Data Analytics: An Organizational View, IIBA, 2019, p. 143: Data Strategy: The Definitive Guide, Tableau, . : Data Strategy: The Definitive Guide, Tableau, . : Data Roadmap: The Definitive Guide, Tableau, . : Business Strategy: The Definitive Guide, Tableau, . : Business Strategy: The Definitive Guide, Tableau, . : Data Management Plan: The Definitive Guide, Tableau, . : Data

Management Plan: The Definitive Guide, Tableau, . : Data Strategy: The Definitive Guide, Tableau, . : Guide to Business Data Analytics, IIBA, 2020, p. 39. : Introduction to Business Data Analytics: An Organizational View, IIBA, 2019, p. 14. : Data Strategy: The Definitive Guide, Tableau, . : Data Roadmap: The Definitive Guide, Tableau, . : Business Strategy: The Definitive Guide, Tableau, . : Data Management Plan: The Definitive Guide, Tableau, .

NEW QUESTION 99

- (Topic 2)

From a prior analytics study, a telecommunications company has concluded that due to the maturity of the market the cost of obtaining new customers is on the rise. As a result, the company wants to increase their efforts on retaining customers. One of the key performance indicators that will help them track their progress in this area is the rate at

which customers leave/unsubscribe from their services over a given time period. Which performance indicator is this referring to?

- A. Subscription rate
- B. Acquisition rate
- C. Churn rate
- D. Retention rate

Answer: C

Explanation:

According to the Introduction to Business Data Analytics: A Practitioner View, churn rate is a measure of customer attrition, or the percentage of customers who stop using a product or service over a given time period. Churn rate is an important indicator of customer satisfaction, loyalty, and retention. A high churn rate implies that customers are dissatisfied or have found better alternatives, which can negatively affect the revenue and growth of a business. A low churn rate implies that customers are satisfied and loyal, which can positively affect the revenue and growth of a business. In this situation, the telecommunications company wants to increase their efforts on retaining customers, so they need to track their churn rate and try to reduce it.

References: Introduction to Business Data Analytics: A Practitioner View, page 17; CBDA Exam Blueprint, page 7; [Churn Rate Definition - Investopedia]

NEW QUESTION 103

- (Topic 2)

A large retail chain has asked their analytics team to complete a study on their customers' purchasing patterns. The analyst assigned to the study has decided to draw further insight by grouping customers based on their purchasing habits. This clustering approach is an example of:

- A. Untrained learning
- B. Trained learning
- C. Unsupervised learning
- D. Supervised learning

Answer: C

Explanation:

Unsupervised learning is a category of data analysis techniques that does not require labeled data or predefined outcomes. Unsupervised learning aims to discover patterns, structures, or relationships in the data without any guidance or supervision. Clustering is a common example of unsupervised learning, where the data is grouped into clusters based on some similarity or distance measure. Clustering can help reveal customer segments, market trends, or product preferences, among other insights. References: Guide to Business Data Analytics, page 39; Introduction to Business Data Analytics: A Practitioner View, page 10.

NEW QUESTION 105

- (Topic 2)

A grocery store chain has requested help in determining how customer preferences are changing with regards to home delivery. An analytics team has completed researching the number of online orders received requesting home delivery versus in-store pickup. The business analyst has selected a model to enable a quick comparison between curbside pick-up, in-store pickup, and home delivery for the last 3 years. Which model has the business analyst chosen?

- A. Pie chart
- B. Funnel chart
- C. Scatter plot
- D. Bar chart

Answer: D

Explanation:

A bar chart is a graphical representation of data that uses rectangular bars of different heights or lengths to show the values of one or more variables¹. A bar chart is suitable for comparing the number of online orders received requesting different types of delivery options for the last 3 years, as it can show the frequency or proportion of each category across time. A bar chart can also help identify trends, patterns, or outliers in the data².

A pie chart is a circular chart that shows the relative sizes of data points in a whole by using different-sized and colored slices³. A pie chart is not suitable for comparing the number of online orders received requesting different types of delivery options for the last 3 years, as it can only show the distribution of one variable at a time, and it does not show the changes over time. A pie chart can also be misleading or confusing if there are too many categories or if the slices are too similar in size⁴.

A funnel chart is a type of chart that shows the stages of a process and the amount of data that passes through each stage⁵. A funnel chart is not suitable for comparing the number of online orders received requesting different types of delivery options for the last 3 years, as it does not show the categories of delivery options, but rather the progression of customers through a sales or marketing funnel. A funnel chart can help visualize the conversion rates, drop-off rates, or bottlenecks in a process⁶.

A scatter plot is a type of chart that shows the relationship between two numerical variables by using dots to represent the values of each pair of data points. A scatter plot is not suitable for comparing the number of online orders received requesting different types of delivery options for the last 3 years, as it does not show the categories of delivery options, but rather the correlation or association between two continuous variables. A scatter plot can help identify the direction, strength, and shape of the relationship, as well as any outliers or clusters in the data.

References: ¹: Guide to Business Data Analytics, IIBA, 2020, p. 672: Data Visualization: The Definitive Guide, Tableau, ³: Guide to Business Data Analytics, IIBA, 2020, p. 674: Data Visualization: The Definitive Guide, Tableau, ⁵: Guide to Business Data Analytics, IIBA, 2020, p. 686: Data Visualization: The Definitive Guide, Tableau, ⁶: Guide to Business Data Analytics, IIBA, 2020, p. 68. ²: Data Visualization: The Definitive Guide, Tableau, ⁴.

NEW QUESTION 106

- (Topic 2)

An insurance company would like to develop a range of insurance products for different types of customers. The analytics team is asked to conduct some research and share their insights with senior management. Which technique would be useful to divide the customer base into groups?

- A. Linear regression
- B. Survey sampling
- C. Factor analysis
- D. K-means clustering

Answer: D

Explanation:

K-means clustering is a technique that partitions a set of data points into a predefined number of clusters, based on their similarity or distance. This technique can be useful to divide the customer base into groups that have similar characteristics, preferences, or behaviors, and then design insurance products that cater to each group's needs and expectations. K-means clustering can also help identify outliers or anomalies in the customer data that may require further investigation or attention.

References: Guide to Business Data Analytics, page 58-59; CBDA Exam Blueprint, page 7; [Introduction to Business Data Analytics: A Practitioner View], page 17.

NEW QUESTION 107

- (Topic 2)

An analyst is interested in providing a visual diagram to compare and contrast the characteristics of four different solution options. Each option should be represented by their cost, value, and risk level. What type of chart would accomplish this task?

- A. Bubble
- B. Waterfall
- C. Pie
- D. Bullet

Answer: A

Explanation:

A bubble chart is a type of chart that displays three dimensions of data: the x-axis, the y-axis, and the size of the bubble. A bubble chart can be used to compare and contrast the characteristics of different solution options by plotting their cost, value, and risk level on the three axes. For example, a solution option with a high cost, high value, and low risk would be represented by a large bubble on the upper left corner of the chart, while a solution option with a low cost, low value, and high risk would be represented by a small bubble on the lower right corner of the chart. A bubble chart can help the analyst and the stakeholders to visualize the trade-offs and benefits of each solution option and to select

the most optimal one based on the business objectives and constraints. References: Guide to Business Data Analytics, page 77; Introduction to Business Data Analytics: A Practitioner View, page 16; [Business Data Analytics: A Practical Guide], page 121.

NEW QUESTION 109

- (Topic 2)

A private school has decided to include bullet charts in students' end of year performance report. It will depict the student's score against the highest score achieved in that grade, and the qualitative category that the student's score falls under. Should a column chart be used instead?

- A. Both charts are insufficient in meeting the requirements of a student score card
- B. Both charts can be used as a column chart is a comparable alternative to a bullet chart
- C. Yes, a column chart would be a better option to depict all three criteria in one chart
- D. No, a bullet chart is a good option as it will depict all three criteria in one chart

Answer: D

Explanation:

A bullet chart is a type of bar chart that shows progress towards a goal or performance against a reference line¹. It consists of a bar representing the featured measure, a reference line denoting a target or threshold, and a background with qualitative ranges (such as poor, fair, good, excellent)². In this case, the featured measure is the student's score, the reference line is the highest score achieved in that grade, and the background ranges are the qualitative categories that the student's score falls under. A bullet chart is a good option for this use case because it can display all three criteria in one chart, using minimal space and avoiding clutter. A column chart, on the other hand, would require either multiple columns for each student to show the score, the highest score, and the category, or a separate legend to map the colors of the columns to the categories. This would make the chart less effective in communicating the information and more difficult to compare across students.

References: ¹Understanding and Using Bullet Graphs | Tableau, ²Bullet Charts - What Is It And How To Use It - JSCharting

NEW QUESTION 111

- (Topic 2)

There were 7 students enrolled in the Introduction to Artificial Intelligence course. The scores from the final exam were as follows: 64, 70, 80, 80, 90, 98, 100. What is the mean and median for the outlined scores?

- A. 79.84.80
- B. 83.14,80
- C. 80,83.14
- D. 83.14.90

Answer: B

Explanation:

The mean of a set of numbers is the sum of the numbers divided by the number of numbers. The median of a set of numbers is the middle value when the numbers are arranged in ascending or descending order. To find the mean and median of the given scores, we can use the following steps:

? To find the mean, we add up all the scores and divide by 7, the number of students. The mean is $(64 + 70 + 80 + 80 + 90 + 98 + 100) / 7 = 582 / 7 = 83.14$

? To find the median, we arrange the scores in ascending order: 64, 70, 80, 80, 90, 98, 100. Since there are an odd number of scores, the median is the middle score, which is 80.

Therefore, the mean and median for the outlined scores are 83.14 and 80, respectively. References: Guide to Business Data Analytics, page 54; CBDA Exam Blueprint, page 7; [Introduction to Business Data Analytics: A Practitioner View], page 16.

NEW QUESTION 115

- (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 117

- (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 118

- (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 123

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