1. **Ask**: Business Challenge/Objective/Question
2. **Prepare**: Data generation, collection, storage, and data management
3. **Process**: Data cleaning/data integrity
4. **Analyze**: Data exploration, visualization, and analysis
5. **Share**: Communicating and interpreting results
6. **Act**:  Putting your insights to work to solve the problem

**1.**

Question 1

Which of the following statements best defines data?

**1 point**



Data is an assortment of questions.



Data is a business process.



Data is a collection of facts.



Data is the use of calculations and statistics.

**2.**

Question 2

Fill in the blank: In data analytics, the data ecosystem refers to the various elements that interact with one another to produce, manage, store, \_\_\_\_\_, analyze, and share data.

**1 point**



locate



merge



organize



ingest

**3.**

Question 3

Which of the following terms refers to the collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision-making?

**1 point**



Data insight



Data life cycle



Data analysis



Data elements

**4.**

Question 4

An airline collects, observes, and analyzes its customers' online behaviors. Then, it uses the insights gained to choose what new products and services to offer. What business process does this describe?

**1 point**



Performance measurement



Data-driven decision-making



Collaboration with stakeholders



Analytical thinking

**1.**

Question 1

Which of the following examples is an appropriate use of the discussion forum?

**1 point**



Sharing a photo of your new pet



Asking a question about a lesson from this program



Posting answers to quiz questions



Asking other learners to give your resume to their employer

**2.**

Question 2

In order to create clear and engaging discussions in the forum, which type of writing styles should you use? Select all that apply.

**1 point**



Writing in complete sentences



Writing in text message language, such as BTW for "by the way"



Typing in all lowercase



Including proper punctuation, such as commas and periods

**3.**

Question 3

When posting in the discussion forum, what type of behavior is acceptable?

**1 point**



Being sensitive, kind, and open-minded



Sharing advertisements and product promotions



Using cursing to emphasize your point



Conveying your opinion clearly by arguing against someone’s perspective

**1.**

Question 1

The collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision-making describes what?

**1 point**



Data analysis



Data ecosystem



Data life cycle



Data science

**2.**

Question 2

In data analytics, a model is a group of elements that interact with one another.

**1 point**



True



False

**3.**

Question 3

Fill in the blank: Using data to create new ways of understanding and modeling the unknown is known as \_\_\_\_\_.

**1 point**



data science



data engineering



data design



data analysis

**4.**

Question 4

Fill in the blank: In data science, \_\_\_\_\_\_\_\_ is when a data analyst uses their unique past experiences to understand the story the data is telling.

**1 point**



gut instinct



rational thought



awareness



personal opinion

**5.**

Question 5

A data analyst at Billings Upholstery is trying to find more environmentally friendly way to produce furniture. The data analyst gathers relevant data, analyzes it, and uses it to draw conclusions. Then they share this analysis with subject-matter experts in manufacturing. Once the subject-matter experts have reviewed the analysis, a plan is put into action. What process does this scenario describe?

**1 point**



Customer service



Identification of trends



Data science



Data-driven decision-making

**6.**

Question 6

You have just received the results of your latest analysis about the effectiveness of your firm’s recent marketing campaign. However, because you want to follow data-driven decision-making you share your results with colleagues from the marketing department for their validation. In this role, these colleague’s are acting as what?

**1 point**



customers



subject-matter experts



competitors



stakeholders

**7.**

Question 7

You have just finished analyzing data for a marketing project. Before moving forward, you share your results with members of the marketing team to see if they might have additional insights into the business problem. What process does this support?

**1 point**



Data-driven decision-making



Data science



Data management



Data analytics

**8.**

Question 8

You read an interesting article in a magazine and want to share it in the discussion forum. What should you do when posting? Select all that apply.

**1 point**



Check your post for typos or grammatical errors



Take credit for creating the article



Make sure the article is relevant to data analytics



Include your email address for people to send questions or comments

Description

The analytical skill that involves how you organize information

Skill

Data design

Description

The qualities and characteristics associated with solving problems using facts

Skill

Analytical skills

Description

The analytical skill that has to do with how you group things into categories

Skill

Understanding context

Description

The analytical skill that involves managing the processes and tools used in data analysis

Skill

Data strategy

Description

The analytical skill that involves breaking processes down into smaller steps and working with them in an orderly, logical way

Skill

A technical mindset

To execute a plan using detail-oriented thinking, what does a data analyst consider?



The big picture



The main idea



The specifics



The root cause

**1.**

Question 1

What practice involves identifying, defining, and solving a problem by using data in an organized, step-by-step manner?

**1 / 1 point**



Visualization



Analytical thinking



Context



Data design

**Correct**

Analytical thinking involves identifying and defining a problem, then solving it by using data in an organized, step-by-step manner.

**2.**

Question 2

Which of the following are examples of data visualizations? Select all that apply.

**1 / 1 point**



Maps

**Correct**

Graphs, maps, and charts are used in data visualization.



Charts

**Correct**

Graphs, maps, and charts are used in data visualization.



Graphs

**Correct**

Graphs, maps, and charts are used in data visualization.



Reports

**3.**

Question 3

Gap analysis is used to examine and evaluate how a process currently works with the goal of getting to where you want to be in the future.

**1 / 1 point**



True



False

**Correct**

Gap analysis is used to examine and evaluate how a process currently works with the goal of getting to where you want to be in the future.

**4.**

Question 4

Which aspect of analytical thinking involves being able to identify a relationship between two or more pieces of data?

**1 / 1 point**



Visualization



Context



Data design



Correlation

**Correct**

Correlation involves being able to identify a relationship between two or more pieces of data. A correlation is like a relationship.

**1.**

Question 1

Fill in the blank: Curiosity, understanding context, and having a technical mindset are all examples of \_\_\_\_\_ used in data-driven decision-making.

**1 / 1 point**



data models



analytical skills



thought processes



business strategies

**Correct**

Curiosity, understanding context, and having a technical mindset are all examples of analytical skills used to make data-driven decisions.

**2.**

Question 2

Surveying customers about their preferences and using that information to inform business strategy is an example of data-driven decision-making.

**1 / 1 point**



True



False

**Correct**

Surveying customers about their preferences and using that information to inform business strategy is an example of data-driven decision-making.

**3.**

Question 3

In data analysis, which analytical skill involves the management of people, processes, and tools?

**1 / 1 point**



Data control



Data design



Data analytics



Data strategy

**Correct**

Data strategy involves the management of the people, processes, and tools.

**1.**

Question 1

Fill in the blank: The analytical skill of \_\_\_\_\_\_ involves seeking out new experiences in order to gain knowledge.

**1 point**



curiosity



having a technical mindset



data strategy



understanding context

**2.**

Question 2

Adding descriptive headers to columns of data in a spreadsheet is an example of which analytical skill?

**1 point**



Having a technical mindset



Understanding context



Curiosity



Data strategy

**3.**

Question 3

A technical mindset involves the ability to break things down into smaller steps or pieces and work with them in an orderly and logical way.

**1 point**



True



False

**4.**

Question 4

Fill in the blank: Data strategy involves \_\_\_\_\_ the people, processes, and tools used in data analysis.

**1 point**



managing



choosing



visualizing



supervising

**5.**

Question 5

Identifying a relationship between two or more pieces of data is known as what?

**1 point**



problem-orientation



correlation



detail-oriented thinking



visualization

**6.**

Question 6

The five whys is a technique that involves asking, “Why?” five times in order to achieve what goal?

**1 point**



Visualize how a process should look in the future



Identify the root cause of a problem



Use facts to guide business strategy



Put a plan into action

**7.**

Question 7

In data analysis, one often examines and evaluates how a process currently works in order to get it to where they want it to be in the future. This is known as what?

**1 point**



Asking the five whys



Gap analysis



Determining the stakeholders



Building a data visualization

**8.**

Question 8

Fill in the blank: Data analysts use the five analytical skills of curiosity, understanding context, having a technical mindset, data design, and data strategy to make \_\_\_\_\_ decisions.

**1 point**



forward-looking



intuitive



more efficient



data-driven

**1.**

Question 1

Fill in the blank: During the \_\_\_\_\_ phase of the data life cycle, a business decides what kind of data it needs, how it will be managed, who will be responsible for it, and the optimal outcomes.

**1 point**



planning



manage



archive



capture

**2.**

Question 2

In the data life cycle, which phase involves gathering data from various sources and bringing it into the organization?

**1 point**



Manage



Archive



Capture



Analyze

**3.**

Question 3

A data analyst finishes using a dataset, so they erase or shred the files in order to protect private information. This is called archiving.

**1 point**



True



False

**4.**

Question 4

A dairy farmer decides to open an ice cream shop on her farm. After surveying the local community about people’s favorite flavors, she takes the data they provided and stores it in a secure hard drive so it can be maintained safely on her computer. This is part of which phase of the data life cycle?

**1 point**



Archive



Manage



Plan



Analyze

**5.**

Question 5

After opening the ice cream shop on her farm, the same dairy farmer then surveys the local community about people’s favorite flavors. She uses the data she collected to determine that the top five flavors are strawberry, vanilla, chocolate, mint chip, and peanut butter. She feels confident in her decision to sell these flavors. This is part of which phase of the data life cycle?

**1 point**



Capture



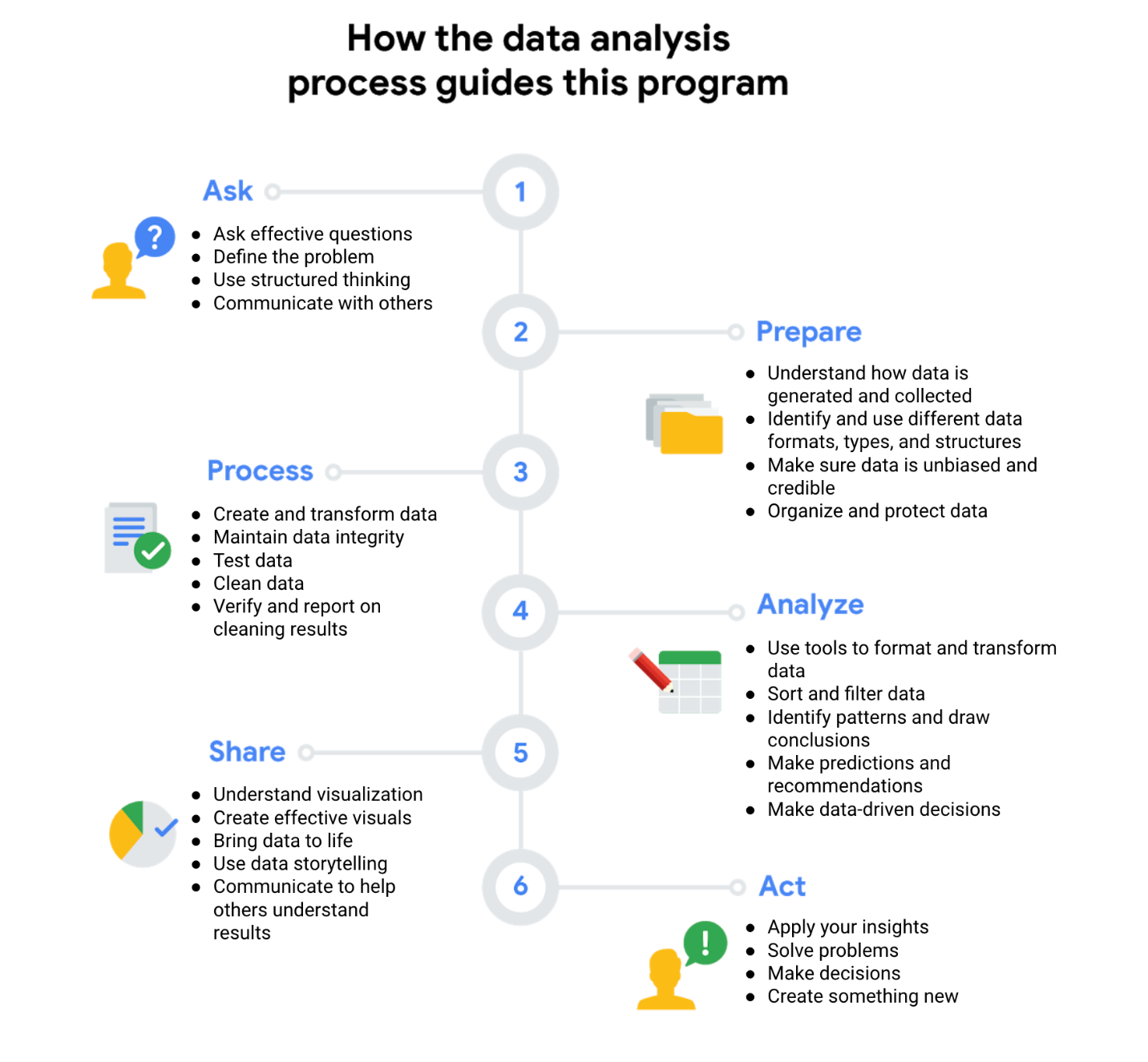
Analyze



Archive



Plan



**1.**

Question 1

The data analysis process phases are ask, prepare, process, analyze, share, and act. What do data analysts do during the ask phase?

**1 / 1 point**



Define the problem to be solved



Collect and store data



Create data visualizations



Clean the data

**Correct**

During the ask phase, data analysts define the problem by looking at the current state and identifying how it’s different from the ideal state.

**2.**

Question 2

During the process phase of data analysis, a data analyst cleans data to ensure it’s complete and correct.

**1 / 1 point**



True



False

**Correct**

The process phase is all about getting the details right, so data analysts clean data by fixing typos, inconsistencies, and missing or inaccurate data.

**3.**

Question 3

During which phase of data analysis would a data analyst use spreadsheets or query languages to transform data in order to draw conclusions?

**1 / 1 point**



Analyze



Prepare



Process



Act

**Correct**

The analyze phase involves using data analytics tools such as spreadsheets and query languages to transform data in order to draw conclusions and make informed decisions.

**4.**

Question 4

In which data analysis phase would a data analyst use visuals such as charts or graphs to simplify complex data for better understanding?

**1 / 1 point**



Process



Share



Prepare



Act

**Correct**

The share phase involves how results are interpreted and shared with others, often through data visualization.

**5.**

Question 5

A data analyst shares insights from their analysis during a formal presentation to stakeholders. In a slideshow, they make a data-driven recommendation for how to solve a business problem. What phase of the data analysis process would come next?

**1 / 1 point**



Process



Act



Ask



Prepare

**Correct**

In this scenario, the data analyst has just shared insights. So, the next phase would be to act and put those insights to work in order to solve the business problem.

| **Spreadsheets** | **Databases** |
| --- | --- |
| Software applications | Data stores - accessed using a query language (e.g. SQL) |
| Structure data in a row and column format | Structure data using rules and relationships |
| Organize information in cells | Organize information in complex collections |
| Provide access to a limited amount of data | Provide access to huge amounts of data |
| Manual data entry | Strict and consistent data entry |
| Generally one user at a time | Multiple users |
| Controlled by the user | Controlled by a database management system |

**1.**

Question 1

Based on what you have learned in this course, spreadsheets are digital worksheets that enable data analysts to do which of the following tasks? Select all that apply.

**0.75 / 1 point**



Store data



Choose a topic for data analysis



Organize data in columns and rows

**Correct**

Spreadsheets enable data analysts to store, organize, sort, and filter data. This helps them see patterns, group information, and easily find the information they need.



Sort and filter data

**Correct**

Spreadsheets enable data analysts to store, organize, sort, and filter data. This helps them see patterns, group information, and easily find the information they need.

You didn’t select all the correct answers

**2.**

Question 2

Fill in the blank: A set of instructions that performs a specific calculation using spreadsheet data is called \_\_\_\_\_.

**1 / 1 point**



a formula



an operation



a program



a report

**Correct**

A set of instructions that performs a specific calculation using spreadsheet data is called a formula.

**3.**

Question 3

A database is a collection of data stored in a computer system.

**1 / 1 point**



True



False

**Correct**

A database is a collection of data stored in a computer system.

**4.**

Question 4

In data analytics, SQL is an acronym meaning \_\_\_\_\_ query language.

**1 / 1 point**



software



structured



statistical



syntax

**Correct**

SQL stands for structured query language. It enables data analysts to communicate with a database.

**5.**

Question 5

What is the term for the graphical representation of data?

**1 / 1 point**



Data collection



Data summary



Data visualization



Data language

**Correct**

Data visualization is the graphical representation of data.

**1.**

Question 1

In the plan stage of the data life cycle, what decisions would a data analyst make? Select all that apply.

**1 / 1 point**



Who will be responsible for the data

**Correct**



How the data will be analyzed



How the data will be managed

**Correct**



What kind of data is needed

**Correct**

**2.**

Question 2

In the destroy phase of the data lifecycle, a data analyst might shred paper files.

**1 / 1 point**



True



False

**Correct**

**3.**

Question 3

In the analyze phase of the data life cycle, what might a data analyst do? Select all that apply.

**0.75 / 1 point**



Create a report from their data



Chooses the format of their spreadsheet headings



Use spreadsheets to aggregate data

**Correct**



Use a formula to perform calculations

**Correct**

You didn’t select all the correct answers

**4.**

Question 4

Describe how the data life cycle differs from data analysis.

**1 / 1 point**



The data life cycle deals with transforming and verifying data; data analysis is using the insights gained from the data.



The data life cycle deals with making informed decisions; data analysis is using tools to transform data.



The data life cycle deals with the stages that data goes through during its useful life; data analysis is the process of analyzing data.



The data life cycle deals with identifying the best data to solve a problem; data analysis is about asking effective questions.

**Correct**

**5.**

Question 5

What actions might a data analytics team take in the act phase of the data analysis process? Select all that apply.

**0.75 / 1 point**



Putting a plan into action to help solve the original business problem

**Correct**



Validating insights provided by analysts



Finalizing a strategy based on the analysis

**Correct**



Sharing analysis results using data visualization

You didn’t select all the correct answers

**6.**

Question 6

In data analysis, a function is a predefined operation whereas a formula is a set of instructions used to carry out a specific calculation.

**1 / 1 point**



True



False

**Correct**

**7.**

Question 7

Data analysts use queries to analyze information within a database.

**1 / 1 point**



True



False

**Correct**

**8.**

Question 8

Fill in the blank: Structured query language (SQL) enables data analysts to \_\_\_\_\_ information from a database. Select all that apply.

**0.75 / 1 point**



request

**Correct**



update



visualize



retrieve

**Correct**

In a table, an attribute is a characteristic or quality of data used for what purpose?



To label a column



To reference a cell



To perform a calculation



To gather related data

**1.**

Question 1

In a spreadsheet, what is text wrapping used for?

**1 / 1 point**



To remove text that is too long to fit in a cell



To allow text to overflow into an adjacent cell



To clip text within a cell so it doesn’t overflow into an adjacent cell



To allow all of the text to fit inside a cell

**Correct**

In a spreadsheet, text wrapping is used to allow all of the text to fit inside a cell.

**2.**

Question 2

The columns in a spreadsheet are ordered by letter, and the rows are ordered by number.

**1 / 1 point**



True



False

**Correct**

In a spreadsheet, columns are ordered by letter and rows are ordered by number.

**3.**

Question 3

Fill in the blank: In a data table, a row is called an observation. An observation includes all of the \_\_\_\_\_ for what is contained in the row.

**1 / 1 point**



attributes



diagnostics



commonalities



names

**Correct**

In a data table, a row is called an observation. An observation includes all of the attributes for what is contained in the row. An attribute is a quality or characteristic of data.

Fill in the blank: A data analyst uses a SQL query to retrieve information from a database. They add a WHERE statement to \_\_\_\_\_ the data based on certain conditions.



filter



sort



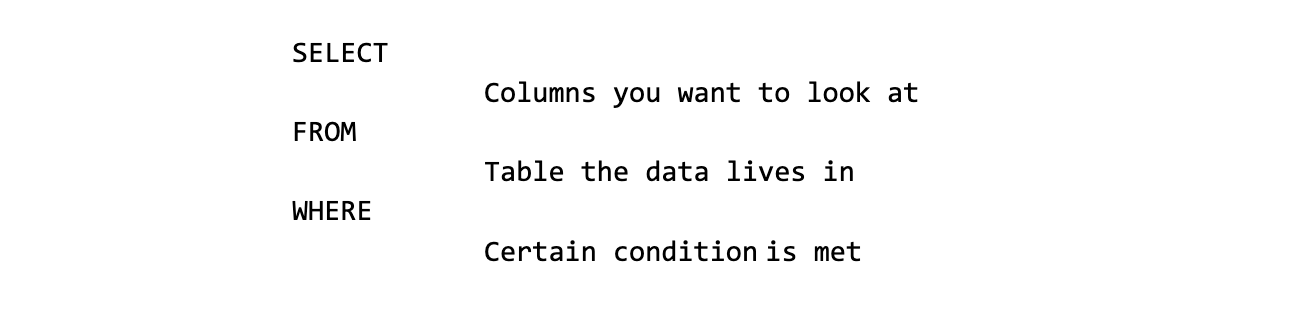
categorize



copy

**Correct**

They add a WHERE statement to filter the data based on certain conditions.



**1.**

Question 1

Fill in the blank: A data visualization is the \_\_\_\_\_ representation of information.

**1 / 1 point**



tabulated



attributed



contextual



graphical

**Correct**

A data visualization is the graphical representation of information.

**2.**

Question 2

When would a pie chart be an effective visualization?

**1 / 1 point**



When showing the relationship between age and income



When showing a class broken down by age



When showing the ages of males versus females



When showing a change in someone's age over time

**Correct**

A pie chart shows how a whole is broken down into parts and is an effective visualization for a class broken down by age.

**3.**

Question 3

What are the key benefits of data visualizations? Select all that apply.

**1 / 1 point**



They can help stakeholders understand complex data more quickly

**Correct**

Data visualizations can clearly demonstrate patterns and trends, help stakeholders understand complex data more quickly, and illustrate relationships between data points.



They can clearly demonstrate patterns and trends

**Correct**

Data visualizations can clearly demonstrate patterns and trends, help stakeholders understand complex data more quickly, and illustrate relationships between data points.



They can ensure that you get fewer questions about your analysis



They can illustrate relationships between data points

**Correct**

Data visualizations can clearly demonstrate patterns and trends, help stakeholders understand complex data more quickly, and illustrate relationships between data points.

**1.**

Question 1

The column attributes for *rank*, *name*, *population*, and *county* are located in which row of the following spreadsheet?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| - | A | B | C | D |
| 1 | **Rank** | **Name** | **Population** | **County** |
| 2 | 1 | Charlotte | 885,708 | Mecklenburg |
| 3 | 2 | Raleigh | 474,069 | Wake (seat), Durham |
| 4 | 3 | Greensboro | 296,710 | Guilford |
| 5 | 4 | Durham | 278,993 | Durham (seat), Wake, Orange |
| 6 | 5 | Winston-Salem | 247,945 | Forsyth |
| 7 | 6 | Fayetteville | 211,657 | Cumberland |
| 8 | 7 | Cary | 170,282 | Wake, Chatham |
| 9 | 8 | Wilmington | 123,784 | New Hanover |
| 10 | 9 | High Point | 112,791 | Guilford, Randolph, Davidson, Forsyth |
| 11 | 10 | Concord | 96,341 | Cabarrus |

**1 / 1 point**



1



11



2



10

**Correct**

**2.**

Question 2

Fill in the blank: In the following spreadsheet, the \_\_\_\_\_\_\_\_ of High Point describes all of the data in row 10.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| - | A | B | C | D |
| 1 | **Rank** | **Name** | **Population** | **County** |
| 2 | 1 | Charlotte | 885,708 | Mecklenburg |
| 3 | 2 | Raleigh | 474,069 | Wake (seat), Durham |
| 4 | 3 | Greensboro | 296,710 | Guilford |
| 5 | 4 | Durham | 278,993 | Durham (seat), Wake, Orange |
| 6 | 5 | Winston-Salem | 247,945 | Forsyth |
| 7 | 6 | Fayetteville | 211,657 | Cumberland |
| 8 | 7 | Cary | 170,282 | Wake, Chatham |
| 9 | 8 | Wilmington | 123,784 | New Hanover |
| 10 | 9 | High Point | 112,791 | Guilford, Randolph, Davidson, Forsyth |
| 11 | 10 | Concord | 96,341 | Cabarrus |

**1 / 1 point**



criteria



dataset



format



observation

**Correct**

**3.**

Question 3

If a data analyst wants to list the cities in this spreadsheet alphabetically, instead of numerically, what feature can they use in column B?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| - | A | B | C | D |
| 1 | **Rank** | **Name** | **Population** | **County** |
| 2 | 1 | Charlotte | 885,708 | Mecklenburg |
| 3 | 2 | Raleigh | 474,069 | Wake (seat), Durham |
| 4 | 3 | Greensboro | 296,710 | Guilford |
| 5 | 4 | Durham | 278,993 | Durham (seat), Wake, Orange |
| 6 | 5 | Winston-Salem | 247,945 | Forsyth |
| 7 | 6 | Fayetteville | 211,657 | Cumberland |
| 8 | 7 | Cary | 170,282 | Wake, Chatham |
| 9 | 8 | Wilmington | 123,784 | New Hanover |
| 10 | 9 | High Point | 112,791 | Guilford, Randolph, Davidson, Forsyth |
| 11 | 10 | Concord | 96,341 | Cabarrus |

**1 / 1 point**



Randomize range



Organize range



Name range



Sort range

**Correct**

**4.**

Question 4

To find the average population of the cities in this spreadsheet, what is the correct AVERAGE function syntax? Type your answer below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| - | A | B | C | D |
| 1 | **Rank** | **Name** | **Population** | **County** |
| 2 | 1 | Charlotte | 885,708 | Mecklenburg |
| 3 | 2 | Raleigh | 474,069 | Wake (seat), Durham |
| 4 | 3 | Greensboro | 296,710 | Guilford |
| 5 | 4 | Durham | 278,993 | Durham (seat), Wake, Orange |
| 6 | 5 | Winston-Salem | 247,945 | Forsyth |
| 7 | 6 | Fayetteville | 211,657 | Cumberland |
| 8 | 7 | Cary | 170,282 | Wake, Chatham |
| 9 | 8 | Wilmington | 123,784 | New Hanover |
| 10 | 9 | High Point | 112,791 | Guilford, Randolph, Davidson, Forsyth |
| 11 | 10 | Concord | 96,341 | Cabarrus |

**1 / 1 point**



AVERAGE(C2-C11)



AVERAGE(C2:C11)



=AVERAGE(C2:C11)



=AVERAGE(C2-C11)

**Correct**

**5.**

Question 5

You are working with a database table named *playlist* that contains data about playlists for different types of digital media. You want to review all the columns in the table.

You write the SQL query below. Add a FROM clause that will retrieve the data from the *playlist* table.

1

2

3

SELECT \*

FROM playlist;





RunReset

What is the playlist with ID number 3?

**1 / 1 point**



Audiobooks



TV Shows



Music



Movies

**Correct**

The clause **FROM playlist** will retrieve the data from the *playlist* table. The complete query is **SELECT \* FROM playlist**. The FROM clause specifies which database table to select data from. The playlist with ID number 3 is TV Shows.

**6.**

Question 6

You are working with a database table that contains invoice data. The *customer\_id* column lists the ID number for each customer. You are interested in invoice data for the customer with ID number 50.

You write the SQL query below. Add a WHERE clause that will return only data about the customer with ID number 50.

1

2

3

SELECT \*

FROM invoice

WHERE customer\_id = 50;





RunReset

*After you run your query, use the slider to view all the data presented.*

What is the billing city for the customer with ID number 50?

**1 / 1 point**



Bangalore



Madrid



Tokyo



Paris

**Correct**

**7.**

Question 7

A data analyst wants to create a visualization that will clearly demonstrate how much more populous Charlotte is than the next-largest North Carolina city, Raleigh. It’s called a line chart.

Chart, histogram

Description automatically generated

**Alt-text:**Horizontal bar chart with the populations of the ten largest North Carolina cities. Charlotte has the most population and Concord has the smallest population.

**0 / 1 point**



True



False

**Incorrect**

Review [the video on data visualizations](https://www.coursera.org/learn/foundations-data/lecture/LriVT/becoming-a-data-viz-whiz).

**8.**

Question 8

Fill in the blank: A data analyst has to demonstrate how the population in a city has increased over time. In particular, they want to be able to see when the population has exceeded certain thresholds. The chart that would work best for this is a/an \_\_\_\_\_ chart.

**1 / 1 point**



area



column



bar



line

**Correct**

**1.**

Question 1

What steps do data analysts take to ensure fairness when collecting data? Select all that apply.

**0.75 / 1 point**



Include data self-reported by individuals



Understand the social context

**Correct**

Considering inclusive sample populations, social context, and self-reported data enable fairness in data collection.



Use an inclusive sample population

**Correct**

Considering inclusive sample populations, social context, and self-reported data enable fairness in data collection.



Clean the data provided

You didn’t select all the correct answers

**2.**

Question 2

Avens Engineering needs more engineers, so they purchase ads on a job search website. The website’s data reveals that 86% of engineers are men. Based on that number, an analyst decides that men are more likely to be successful applicants, so they target the ads to male job seekers. What should the analyst have done instead?

**1 / 1 point**



Make sure their recommendation doesn’t create or reinforce bias



Decline to accept ads from Avens Engineering because of fairness concerns.



Let Avens Engineering decide which type of applicants to target ads to.



Only show ads for the engineering jobs to women.

**Correct**

They should make sure their recommendation doesn't create or reinforce bias. As a data analyst, it’s important to help create systems that are fair and inclusive to everyone.

**3.**

Question 3

On a railway line, peak ridership occurs between 7:00 AM and 5:00 PM. The fairness of a passenger survey could be improved by over-sampling data from which group?

**0 / 1 point**



Daytime riders



Male passengers



Female passengers



Nighttime riders

**Incorrect**

Over-sampling the data from nighttime riders, an under-represented group of passengers, could improve the fairness of the survey. Review this video on [understanding data and fairness](https://www.coursera.org/learn/foundations-data/lecture/EU7EG/understanding-data-and-fairness).

**4.**

Question 4

A real estate company needs to hire a human resources assistant. The owner asks a data analyst to help them decide where to advertise the job opening. The analyst learns that the majority of human resources professionals are women, validates this finding with research, and targets ads to a women's community college. This is fair because the analyst conducted research to make sure the information about gender breakdown of human resources professionals was accurate.

**1 / 1 point**



True



False

**Correct**

This is not fair. Fairness means ensuring that analysis doesn't create or reinforce bias. As a data analyst, it’s important to help create systems that are fair and inclusive to everyone.

**1.**

Question 1

What steps do data analysts take to ensure fairness when collecting data? Select all that apply.

**1 / 1 point**



Use an inclusive sample population

**Correct**

Considering inclusive sample populations, social context, and self-reported data enable fairness in data collection.



Understand the social context

**Correct**

Considering inclusive sample populations, social context, and self-reported data enable fairness in data collection.



Include data self-reported by individuals

**Correct**

Considering inclusive sample populations, social context, and self-reported data enable fairness in data collection.



Clean the data provided

**2.**

Question 2

Avens Engineering needs more engineers, so they purchase ads on a job search website. The website’s data reveals that 86% of engineers are men. Based on that number, an analyst decides that men are more likely to be successful applicants, so they target the ads to male job seekers. What should the analyst have done instead?

**0 / 1 point**



Make sure their recommendation doesn’t create or reinforce bias



Only show ads for the engineering jobs to women.



Let Avens Engineering decide which type of applicants to target ads to.



Decline to accept ads from Avens Engineering because of fairness concerns.

**Incorrect**

They should make sure their recommendation doesn't create or reinforce bias. As a data analyst, it’s important to help create systems that are fair and inclusive to everyone.

**3.**

Question 3

On a railway line, peak ridership occurs between 7:00 AM and 5:00 PM. The fairness of a passenger survey could be improved by over-sampling data from which group?

**1 / 1 point**



Nighttime riders



Male passengers



Daytime riders



Female passengers

**Correct**

Over-sampling the data from nighttime riders, an under-represented group of passengers, could improve the fairness of the survey. Review this video on [understanding data and fairness](https://www.coursera.org/learn/foundations-data/lecture/EU7EG/understanding-data-and-fairness).

**4.**

Question 4

A real estate company needs to hire a human resources assistant. The owner asks a data analyst to help them decide where to advertise the job opening. The analyst learns that the majority of human resources professionals are women, validates this finding with research, and targets ads to a women's community college. This is fair because the analyst conducted research to make sure the information about gender breakdown of human resources professionals was accurate.

**1 / 1 point**



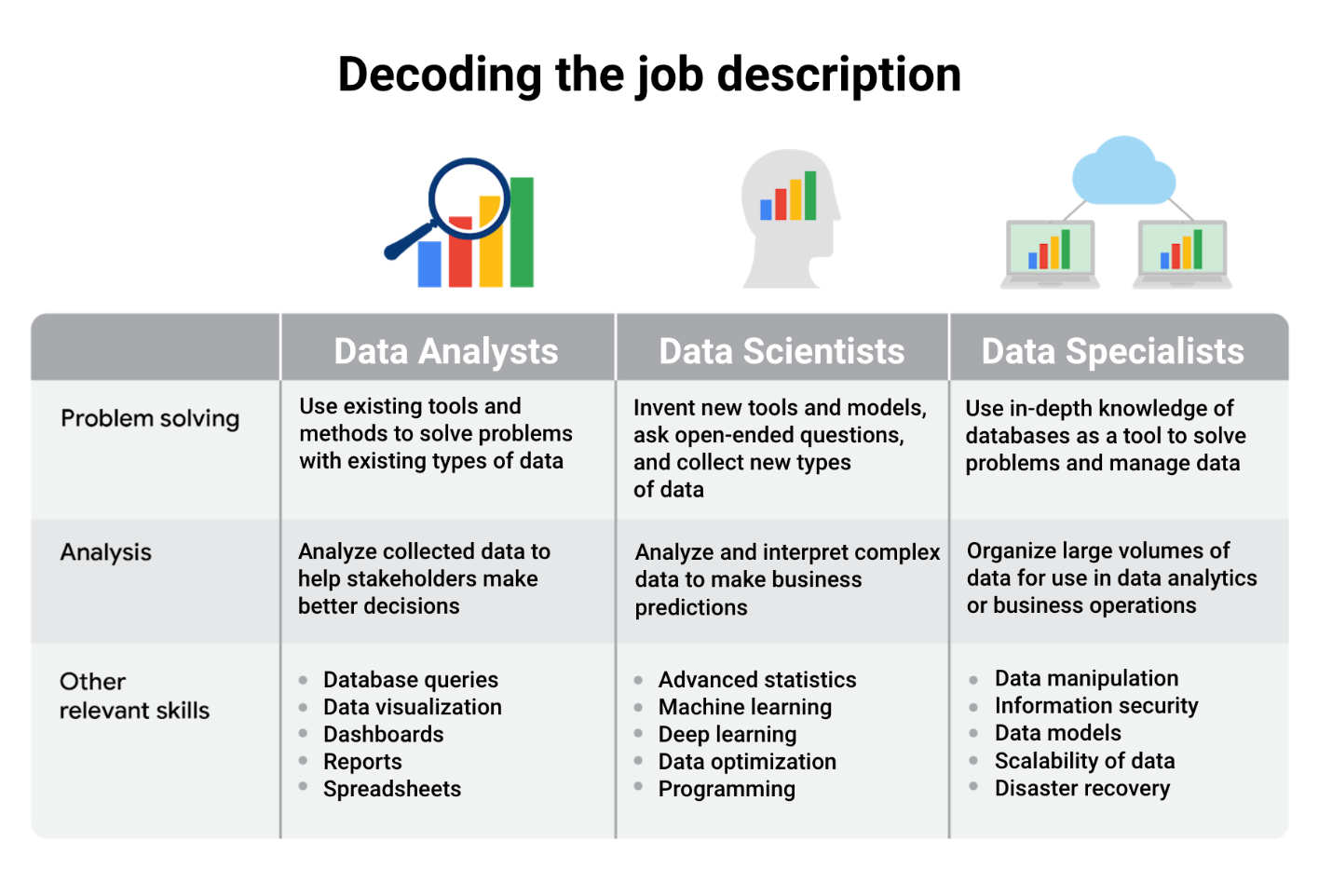
True



False

**Correct**

This is not fair. Fairness means ensuring that analysis doesn't create or reinforce bias. As a data analyst, it’s important to help create systems that are fair and inclusive to everyone.



**1.**

Question 1

A restaurant hires a data analyst to determine the best times to have the restaurant open.Which of the following methods can the data analyst could use to help build a better schedule for the restaurant? Select all that apply.

**1 point**



Examine hourly customer numbers



Analyze weekly weather data



Survey customers on their preferred times to dine



Analyze staffing levels for different days

**2.**

Question 2

A doctor’s office discovers that patients are waiting 20 minutes longer for their appointments than in past years. In what ways could a data analyst help solve this problem? Select all that apply.

**1 point**



Analyze the number of patients seen per day compared to past years.



Analyze the average length of an appointment this year compared to past years.



Analyze how many doctors and nurses are on staff at a given time compared to the number of patients with appointments.



Analyze a recent change in the average rating for the doctor’s office on social media.

**3.**

Question 3

A problem is an obstacle to be solved, an issue is a topic to investigate, and a question is designed to discover information.

**1 point**



True



False

**4.**

Question 4

When working for a restaurant, a data analyst is asked to examine and report on the Picking and choosing data from the data set

from year to year to help with making more efficient staffing decisions. What is this an example of?

**1 point**



A breakthrough



A solution



An issue



A business task

**5.**

Question 5

When you make decisions using observation and intuition as a guide, you only see part of the picture. What can improve your decision-making?

**1 point**



Creating surveys



Being decisive



Using data



Using assumptions

**6.**

Question 6

At what point in the data analysis process should a data analyst consider fairness?

**1 point**



When data collection begins



When decisions are made based on the conclusions



When data is being organized for reporting



When conclusions are presented

**7.**

Question 7

Fill in the blank: As a data analyst considering problems that involve people and their behaviors and activities, it’s important to take into account the complicated \_\_\_\_\_ that could create bias in conclusions.

**1 point**



performance



company politics



attendance habits



social context

**8.**

Question 8

While working on an analysis, a data analyst learns that their team did not account for bias when they originally gathered the data. How might this factor affect the conclusion produced by the analysis?

**1 point**



The analysis could lead to a lack of anonymity.



The analysis could result in a low sample size.



The analysis could create a modeling error.



The analysis could present an incomplete picture.

**1.**

Question 1

A magazine wants to understand why its subscribers have been increasing. A data analyst could help answer that question with a report that predicts the result of a half-price sale on future subscription rates.

**0 / 1 point**



True



False

**Incorrect**

Review [the video on the job of a data analyst](https://www.coursera.org/learn/foundations-data/lecture/wSFpE/the-job-of-a-data-analyst).

**2.**

Question 2

Fill in the blank: A doctor’s office has discovered that patients are waiting 20 minutes longer for their appointments than in past years. To help solve this problem, a data analyst could investigate how many nurses are on staff at a given time compared to the number of \_\_\_\_\_.

**0 / 1 point**



doctors seeing new patients



negative comments about the wait times on social media



doctors on staff at the same time



patients with appointments

**Incorrect**

Review [the video on the job of a data analyst](https://www.coursera.org/learn/foundations-data/lecture/wSFpE/the-job-of-a-data-analyst).

**3.**

Question 3

Fill in the blank: In data analytics, a question is \_\_\_\_\_.

**1 / 1 point**



an obstacle or complication that needs to be worked out



a way to discover information



a subject to analyze



a topic to investigate

**Correct**

**4.**

Question 4

Fill in the blank: Once an analyst has identified a problem for a business, they establish a(n)\_\_\_\_\_ to help inform the process of gathering the correct information.

**1 / 1 point**



statement



business task



solution



issue

**Correct**

**5.**

Question 5

What is the process of using facts to guide business strategy?

**1 / 1 point**



Data-driven decision-making



Data programming



Data visualization



Data ethics

**Correct**

**6.**

Question 6

Fill in the blank: Fairness is achieved when data analysis doesn’t create or \_\_\_\_\_ bias.

**1 / 1 point**



resolve



highlight



constrain



reinforce

**Correct**

**7.**

Question 7

Fill in the blank: \_\_\_\_\_ in data analytics is when the data analysis process does not create or reinforce bias.

**1 / 1 point**



Consideration



Predictability



Transparency



Fairness

**Correct**

**8.**

Question 8

A gym wants to start offering exercise classes. A data analyst plans to survey 10 people to determine which classes would be most popular. To ensure the data collected is fair, what steps should they take? Select all that apply.

**1 / 1 point**



Collect data anonymously.

**Correct**



Survey only people who don’t currently go to the gym.



Ensure participants represent a variety of profiles and backgrounds.

**Correct**



Increase the number of participants.

**Correct**

**1.**

Question 1

An online gardening magazine wants to understand why its subscriber numbers have been increasing. What kind of reports can a data analyst provide to help answer that question? Select all that apply.

**0.75 / 1 point**



Reports that describe how many customers shared positive comments about the gardening magazine on social media in the past year

**Correct**



Reports that predict the success of sales leads to secure future subscribers

**This should not be selected**

Review [the video on the job of a data analyst](https://www.coursera.org/learn/foundations-data/lecture/wSFpE/the-job-of-a-data-analyst).



Reports that examine how a recent 50%-off sale affected the number of subscription purchases

**Correct**



Reports that compare past weather patterns to the number of people asking gardening questions to their social media

**Correct**

**2.**

Question 2

A restaurant has noticed many popular dishes are running out early in the day. How could a data analyst help identify a solution to this problem? Select all that apply.

**0.75 / 1 point**



Analyze the number of staff on shift during peak times



Examine overall daily sales of the restaurant

**This should not be selected**

Review [the video on the job of a data analyst](https://www.coursera.org/learn/foundations-data/lecture/wSFpE/the-job-of-a-data-analyst).



Examine the number of sales of those products

**Correct**



Analyze ordering patterns of those products

**Correct**

**3.**

Question 3

Fill in the blank: In data analytics, a question is \_\_\_\_\_.

**1 / 1 point**



a way to discover information



a topic to investigate



an obstacle or complication that needs to be worked out



a subject to analyze

**Correct**

**4.**

Question 4

When working for a restaurant, a data analyst is asked to examine and report on the daily sales data from year to year to help with making more efficient staffing decisions. What is this an example of?

**1 / 1 point**



A business task



A breakthrough



A solution



An issue

**Correct**

**5.**

Question 5

A data analyst at a restaurant analyzes data about past sales and customer trends. They identify that the restaurant does not generate enough revenue to pay the staff whenever the restaurant is open before 4 p.m. The restaurant then adjusts their hours of operation to open at 4 p.m. What is this an example of?

**1 / 1 point**



Data-driven decision-making



Following data ethics



Survey data gathering



Using intuition to create efficiencies

**Correct**

**6.**

Question 6

It’s possible for conclusions drawn from data analysis to be both true and unfair.

**1 / 1 point**



True



False

**Correct**

**7.**

Question 7

When reviewing student data, a data analyst calculates course pass rates across the entire student population in two ways: once for students in academic support programs and once for students *not* utilizing academic support. What would be an example of a factor creating a bias in this example?

**0 / 1 point**



Picking and choosing data from the data set



Not accounting for opportunities to utilize support programs



Ensuring a large enough sample size is used



Considering systemic issues that may influence data

**Incorrect**

Review [the video on fairness](https://www.coursera.org/learn/foundations-data/lecture/EU7EG/understanding-data-and-fairness).

**8.**

Question 8

A gym wants to start offering exercise classes. A data analyst plans to survey 10 people to determine which classes would be most popular. To ensure the data collected is fair, what steps should they take? Select all that apply.

**1 / 1 point**



Ensure participants represent a variety of profiles and backgrounds.

**Correct**



Increase the number of participants.

**Correct**



Collect data anonymously.

**Correct**



Survey only people who don’t currently go to the gym.

**1.**

Question 1

**Scenario 1, question 1-5**

You’ve just started a new job as a data analyst. You’re working for a midsized pharmacy chain with 38 stores in the American Southwest. Your supervisor shares a new data analysis project with you.She explains that the pharmacy is considering discontinuing a bubble bath product called Splashtastic. Your supervisor wants you to analyze sales data and determine what percentage of each store’s total daily sales come from that product. Then, you’ll present your findings to leadership.You know that it's important to follow each step of the data analysis process: ask, prepare, process, analyze, share, and act. So, you begin by defining the problem and making sure you fully understand stakeholder expectations.One of the questions you ask is where to find the dataset you’ll be working with. Your supervisor explains that the company database has all the information you need. Next, you continue to the prepare step. You access the database and write a query to retrieve data about Splashtastic. You notice that there are only 38 rows of data, representing the company’s 38 stores. In addition, your dataset contains five columns: Store Number, Average Daily Customers, Average Daily Splashtastic Sales (Units), Average Daily Splashtastic Sales (Dollars), and Average Total Daily Sales (All Products).

**You know that spreadsheets work well for processing and analyzing a small dataset, like the one you’re using. To get the data from the database into a spreadsheet, what should you do?**

**1 / 1 point**



Email a copy of the dataset to your company email address.



Use Tableau to convert the data into a spreadsheet.



Copy and paste the data into a spreadsheet.



Download the data as a .CSV file, then import it into a spreadsheet.

**Correct**

**2.**

Question 2

**Scenario 1 continued**

You’ve downloaded the data from your company database and imported it into a spreadsheet. To use the dataset for this scenario, click the link below and select “Use Template.”

Link to template: [Course Challenge - Scenario 1](https://docs.google.com/spreadsheets/d/1pIiGuiZ8SZ2xNfXHEIIb5gpX1NNOuKAUbaqtmPh1GUY/template/preview?resourcekey=0-p4GIOWHIaC6wZTvc9HZzyA#gid=0)

OR

If you don’t have a Google account, you can download the template directly from the attachment below.

**[Course Challenge Dataset - Scenario 1 - Scenario 1\_ Pharmacy Data - Part 1](https://d3c33hcgiwev3.cloudfront.net/jgOcTMW9S-uDnEzFvfvrYQ_c46ee66727424d2298e2ff73090392f1_Course-Challenge-Dataset---Scenario-1---Scenario-1_-Pharmacy-Data---Part-1.csv?Expires=1678233600&Signature=NtH8gPO-P3z9P1sFepPy0y44hsErZr0A79g9cQDS3I~wZZBlrD7-mSBi~GTvIglajnCfv1rBEYq-O6g1cgP9hf~bJpEuJr~s6~pyr8sKbdaz-BnSb4gUXFKbc0WAigyEu2ILB0tGI7jUYlCT8h7~i2PgxEYGq0vodhqG9vvYWcA_&Key-Pair-Id=APKAJLTNE6QMUY6HBC5A" \t "_blank)**

[CSV File](https://d3c33hcgiwev3.cloudfront.net/jgOcTMW9S-uDnEzFvfvrYQ_c46ee66727424d2298e2ff73090392f1_Course-Challenge-Dataset---Scenario-1---Scenario-1_-Pharmacy-Data---Part-1.csv?Expires=1678233600&Signature=NtH8gPO-P3z9P1sFepPy0y44hsErZr0A79g9cQDS3I~wZZBlrD7-mSBi~GTvIglajnCfv1rBEYq-O6g1cgP9hf~bJpEuJr~s6~pyr8sKbdaz-BnSb4gUXFKbc0WAigyEu2ILB0tGI7jUYlCT8h7~i2PgxEYGq0vodhqG9vvYWcA_&Key-Pair-Id=APKAJLTNE6QMUY6HBC5A" \t "_blank)



Now, it’s time to process the data. As you know, this step involves finding and eliminating errors and inaccuracies that can get in the way of your results. While cleaning the data, you notice that information about Splashtastic is missing in row 16. **The best course of action is to delete the row with missing data from your dataset so it doesn’t get in the way of your results.**

**1 / 1 point**



True



False

**Correct**

**3.**

Question 3

**Scenario 1 continued**

Once you’ve found the missing information, you analyze your dataset. During analysis, you create a new column F. At the top of the column, you add the attribute Average Percentage of Total Sales - Splashtastic.

**Fill in the blank: An attribute is a \_\_\_\_\_\_\_ or quality of data used to label a column.**

**1 / 1 point**



response



number



characteristic



headline

**Correct**

**4.**

Question 4

**Scenario 1 continued**

Next, you determine the average total daily sales over the past 12 months at all stores. The range that contains these sales is E2:E39. To do this, you use a function. **Fill in the blank to complete the function correctly: =AVERAGE\_\_\_\_\_.**

**1 / 1 point**



E2-E39



E2:E39



(E2-E39)



(E2:E39)

**Correct**

**5.**

Question 5

**Scenario 1 continued**

**You’ve reached the share phase of the data analysis process. What can you do in this phase to share the Splashtastic sales insights you've discovered?**

**1 / 1 point**



Present your findings to customers.



Establish a repository for the data.



Present your findings to stakeholders.



Revisit the analyze phase.

**Correct**

**6.**

Question 6

**Scenario 2, questions 6-10**

You’ve been working for the nonprofit National Dental Society (NDS) as a junior data analyst for about two months. The mission of the NDS is to help its members advance the oral health of their patients. NDS members include dentists, hygienists, and dental office support staff.

The NDS is passionate about patient health. Part of this involves automatically scheduling follow-up appointments after crown replacement, emergency dental surgery, and extraction procedures. NDS believes the follow-up is an important step to ensure patient recovery and minimize infection.

Unfortunately, many patients don’t show up for these appointments, so the NDS wants to create a campaign to help its members learn how to encourage their patients to take follow-up appointments seriously. If successful, this will help the NDS achieve its mission of advancing the oral health of all patients.

Your supervisor has just sent you an email saying that you’re doing very well on the team, and he wants to give you some additional responsibility. He describes the issue of many missed follow-up appointments. You are tasked with analyzing data about this problem and presenting your findings using data visualizations.

An NDS member with three dental offices in Colorado offers to share its data on missed appointments. So, your supervisor uses a database query to access the dataset from the dental group. The query instructs the database to retrieve all patient information from the member’s three dental offices, located in zip code 81137.

**The table is dental\_data\_table, and the column name is zip\_code. You have written the following query, but received an error when it ran.**

**SELECT \* FROM dental\_data\_table WHERE dental\_data\_table = 81137**

**Given the objective of the query, where is the mistake in this query?**

**1 / 1 point**



In line 3, dental\_data\_table should be replaced with zip\_code.



The third line should be WHERE = 81137



SELECT, FROM, and WHERE should *not* be capitalized.



In line 2, dental\_data\_table should be replaced with zip\_code 81137.

**Correct**

**7.**

Question 7

**Scenario 2 continued**

The dataset your supervisor retrieved and imported into a spreadsheet includes a list of patients, their demographic information, dental procedure types, and whether they attended their follow-up appointment. To use the dataset for this scenario, click the link below and select “Use Template.”

Link to template: [Course Challenge - Scenario 2](https://docs.google.com/spreadsheets/d/1tXJvXgUP58iYYSW6tBfiGMD5lJFOgHXvHx2EdDOCxnA/template/preview?resourcekey=0-Ha_b6RzKHJFYElJN20NOyg#gid=0)

OR

If you don’t have a Google account, you can download the template directly from the attachment below.

**[Course Challenge Dataset - Scenario 2](https://d3c33hcgiwev3.cloudfront.net/UVdWSYRdQgeXVkmEXaIHXQ_c621f39757c840b6a484589670699cf1_Course-Challenge-Dataset---Scenario-2.csv?Expires=1678233600&Signature=Fngiu2LWj4-YIp-XcEzSLmKLbftUNIxxJKEjTp0TuMmbS6X~VLDW3UmiU6JpX~95NziGNH0uYchtzIQzE290WpuFiZyplBWhlowjm6GzYOe8LMftQzxJZi-QmdZh-Zk5d37~msyQ-H5CW5b-hIkvZfIyeTFpWeYOhTmuD47qay0_&Key-Pair-Id=APKAJLTNE6QMUY6HBC5A" \t "_blank)**

[CSV File](https://d3c33hcgiwev3.cloudfront.net/UVdWSYRdQgeXVkmEXaIHXQ_c621f39757c840b6a484589670699cf1_Course-Challenge-Dataset---Scenario-2.csv?Expires=1678233600&Signature=Fngiu2LWj4-YIp-XcEzSLmKLbftUNIxxJKEjTp0TuMmbS6X~VLDW3UmiU6JpX~95NziGNH0uYchtzIQzE290WpuFiZyplBWhlowjm6GzYOe8LMftQzxJZi-QmdZh-Zk5d37~msyQ-H5CW5b-hIkvZfIyeTFpWeYOhTmuD47qay0_&Key-Pair-Id=APKAJLTNE6QMUY6HBC5A" \t "_blank)



The patient demographic information includes data such as age and gender. As you’re learning, it’s your responsibility as a data analyst to make sure your analysis is fair. **The fact that the dataset includes people who all live in the same zip code might get in the way of fairness.**

**1 / 1 point**



True



False

**Correct**

**8.**

Question 8

**Scenario 2 continued**

As you’re reviewing the dataset, you notice that there are a disproportionate number of senior citizens. So, you investigate further and find out that this zip code represents a rural community in Colorado with about 800 residents. In addition, there’s a large assisted-living facility in the area. Nearly 300 of the residents in the 81137 zip code live in the facility.

You recognize that’s a sizable number, so you want to find out if age has an effect on a patient’s likelihood to attend a follow-up dental appointment. You analyze the data, and your analysis reveals that older people tend to miss follow-ups more than younger people.

So, you do some research online and discover that people over the age 60 are 50% more likely to miss dentist appointments. Sometimes this is because they’re on a fixed income. Also, many senior citizens lack transportation to get to and from appointments.

With this new knowledge, you write an email to your supervisor expressing your concerns about the dataset. He agrees with your concerns, but he’s also impressed with what you’ve learned and thinks your findings could be very important to the project. He asks you to change the business task. Now, the NDS campaign will be about educating dental offices on the challenges faced by senior citizens and finding ways to help them access quality dental care.

**Fill in the blank: \_\_\_\_\_ the business task involves defining a new question or problem to be solved.**

**0 / 1 point**



Analyzing



Changing



Strategizing



Sharing

**Incorrect**

Review [the video on business tasks](https://www.coursera.org/learn/foundations-data/lecture/wkLDN/the-power-of-data-in-business) for a refresher.

**9.**

Question 9

**Scenario 2 continued**

You continue with your analysis. In the end, your findings support what you discovered during your online research: As people get older, they’re less likely to attend follow-up dental visits.

But you’re not done yet. You know that data should be combined with human insights in order to lead to true data-driven decision-making. So, your next step is to share this information with people who are familiar with the problem professionally. They’ll help verify the results of your data analysis.

**Fill in the blank: Subject matter experts are people who are familiar with a problem. They can help by \_\_\_\_\_, offering insights into the business problem, and validating the choices being made.**

**1 / 1 point**



redefining the business problem



identifying inconsistencies in the analysis



collecting data relevant to the business problem



creating a presentation with the data

**Correct**

**10.**

Question 10

**Scenario 2 continued**

The subject-matter experts are impressed by your analysis. The team agrees to move to the next step: data visualization. You know it’s important that stakeholders at NDS can quickly and easily understand that older people are less likely to attend important follow-up dental appointments than younger people. This will help them create an effective campaign for members.

It’s time to create your presentation to stakeholders. It will include a data visualization that demonstrates the lifetime trend of people being less likely to attend follow-up appointments as they get older.

**Why would a line chart be the most effective in representing this?**

**1 / 1 point**



Line charts arrange data values into columns.



Line charts are effective in displaying points in series.



Line charts represent data values as proportionally sized wedges.



Line charts arrange data values into rows.

**Correct**

Organizing available information and revealing gaps and opportunities are part of what process?

**0 / 1 point**



Identifying connections between two or more things



Using structured thinking



Applying the SMART methodology



Categorizing things

**Incorrect**

Review [the course intro video](https://www.coursera.org/learn/ask-questions-make-decisions/lecture/YGimm/welcome-to-the-course) for a refresher.

**2.**

Question 2

A data analyst creates data visualizations and a slideshow. Which phase of the data analysis process does this describe?

**1 / 1 point**



Act



Process



Share



Prepare

**Correct**

This describes the share phase of the data analysis process.

**3.**

Question 3

If a cooking supply store wants to attract more customers, where can they advertise to better reach their target audience? Select all that apply.

**1 / 1 point**



In a magazine all about advertising



On TV during the season finale of The Best Chef in the Universe

**Correct**

To better reach their target audience, they can advertise at a bus stop near a local culinary school, on a podcast for foodies, and on TV during the season finale of The Best Chef in the Universe. A target audience is the people you’re trying to reach. In this scenario, people who enjoy food and cooking are the store’s target audience.



On a podcast for foodies

**Correct**

To better reach their target audience, they can advertise at a bus stop near a local culinary school, on a podcast for foodies, and on TV during the season finale of The Best Chef in the Universe. A target audience is the people you’re trying to reach. In this scenario, people who enjoy food and cooking are the store’s target audience.



At a bus stop near a local culinary school

**Correct**

To better reach their target audience, they can advertise at a bus stop near a local culinary school, on a podcast for foodies, and on TV during the season finale of The Best Chef in the Universe. A target audience is the people you’re trying to reach. In this scenario, people who enjoy food and cooking are the store’s target audience.

**4.**

Question 4

Making predictions is one of the six data analytics problem types. It deals with using data to inform decisions about how things may be in the future. Select the scenario that’s an example of making predictions.

**1 / 1 point**



A data analyst at a gas company uses historical data to analyze which time of year customers use the most gas.



A data analyst at a school system uses data to make a connection between home sales and new student enrollment.



A data analyst at a shoe retailer uses data to inform the marketing plan for an upcoming summer sale.



A data analyst at a technology company uses data to identify a unique drop in social media engagement.

**Correct**

A data analyst at a shoe retailer using data to inform the marketing plan for an upcoming summer sale is an example of making predictions.

**5.**

Question 5

Categorizing things involves assigning items to categories. Identifying themes takes those categories a step further, grouping them into broader themes or classifications.

**1 / 1 point**



True



False

**Correct**

Categorizing things involves assigning items to categories. Identifying themes takes those categories a step further, grouping them into broader themes or classifications.

**6.**

Question 6

Which of the following examples are leading questions? Select all that apply.

**0.25 / 1 point**



What do you enjoy most about our service?

**Correct**

Leading questions direct the respondent to a particular answer, often because they suggest the answer within the question.



How satisfied were you with our customer representative?



In what ways did our product meet your needs?



How did you learn about our company?

**This should not be selected**

Review [the video on asking effective questions](https://www.coursera.org/learn/ask-questions-make-decisions/lecture/d1RMT/smart-questions) for a refresher.

**7.**

Question 7

The question, “Why don’t our employees complete their timesheets each Friday by noon?” is not action-oriented. Which of the following questions are action-oriented and more likely to lead to change? Select all that apply.

**0.75 / 1 point**



What functionalities would make our timesheet web page more user-friendly?

**Correct**

These questions are action-oriented. That means they’re more likely to result in specific answers that can be acted on to lead to change.



How could we simplify the time-keeping process for our employees?

**Correct**

These questions are action-oriented. That means they’re more likely to result in specific answers that can be acted on to lead to change.



Why don’t employees prioritize filling out their timesheets by noon on Fridays?

**This should not be selected**

Review [the video on asking effective questions](https://www.coursera.org/learn/ask-questions-make-decisions/lecture/d1RMT/smart-questions) for a refresher.



What features could we add to our calendar app as a weekly timesheet reminder to employees?

**Correct**

These questions are action-oriented. That means they’re more likely to result in specific answers that can be acted on to lead to change.

**8.**

Question 8

Which of the following questions make assumptions? Select all that apply.

**1 / 1 point**



It must be frustrating waiting on hold for so long, right?

**Correct**

A common example of an unfair question is one that makes assumptions. Unfair questions assume the respondent’s answer to the question.



Wouldn’t you agree that product A is better than product B?

**Correct**

A common example of an unfair question is one that makes assumptions. Unfair questions assume the respondent’s answer to the question.



Did you get through to customer service?



Keeping employees engaged is important, isn’t it?

**Correct**

A common example of an unfair question is one that makes assumptions. Unfair questions assume the respondent’s answer to the question.

**1.**

Question 1

Organizing available information and revealing gaps and opportunities are part of what process?

**1 / 1 point**



Identifying connections between two or more things



Using structured thinking



Categorizing things



Applying the SMART methodology

**Correct**

Organizing available information and revealing gaps and opportunities are part of structured thinking.

**2.**

Question 2

A data analyst creates data visualizations and a slideshow. Which phase of the data analysis process does this describe?

**0 / 1 point**



Share



Prepare



Process



Act

**Incorrect**

Review [the video on the data analysis process](https://www.coursera.org/learn/ask-questions-make-decisions/lecture/je9iD/data-in-action) for a refresher. SHARE

**3.**

Question 3

If a cooking supply store wants to attract more customers, where can they advertise to better reach their target audience? Select all that apply.

**1 / 1 point**



On a podcast for foodies

**Correct**

To better reach their target audience, they can advertise at a bus stop near a local culinary school, on a podcast for foodies, and on TV during the season finale of The Best Chef in the Universe. A target audience is the people you’re trying to reach. In this scenario, people who enjoy food and cooking are the store’s target audience.



In a magazine all about advertising



At a bus stop near a local culinary school

**Correct**

To better reach their target audience, they can advertise at a bus stop near a local culinary school, on a podcast for foodies, and on TV during the season finale of The Best Chef in the Universe. A target audience is the people you’re trying to reach. In this scenario, people who enjoy food and cooking are the store’s target audience.



On TV during the season finale of The Best Chef in the Universe

**Correct**

To better reach their target audience, they can advertise at a bus stop near a local culinary school, on a podcast for foodies, and on TV during the season finale of The Best Chef in the Universe. A target audience is the people you’re trying to reach. In this scenario, people who enjoy food and cooking are the store’s target audience.

**4.**

Question 4

A company wants to make more informed decisions regarding next year’s business strategy. An analyst uses data to help identify how things will likely work out in the future. This is an example of which problem type?

**1 / 1 point**



Making predictions



Identifying themes



Discovering connections



Spotting something unusual

**Correct**

This is an example of making predictions. Making predictions deals with making informed decisions about how things may be in the future.

**5.**

Question 5

Categorizing things involves assigning items to categories. Identifying themes takes those categories a step further, grouping them into broader themes or classifications.

**0 / 1 point**



True



False

**Incorrect**

Review [the video on the six data problem types](https://www.coursera.org/learn/ask-questions-make-decisions/lecture/8sRAJ/common-problem-types) for a refresher. TRUE

**6.**

Question 6

Which of the following examples are vague questions? Select all that apply.

**0.75 / 1 point**



How much time did you spend waiting in line?



Do you generally prefer hot or cold?



What’s the best place to purchase the things we need?

**Correct**

A vague question is usually out of context and too broad to lead to a useful response.



Who was the greatest of all time?

**Correct**

A vague question is usually out of context and too broad to lead to a useful response.

You didn’t select all the correct answers

**7.**

Question 7

The question, “Why was the Monday afternoon yoga class successful?” is not measurable. Which of the following questions presents a measurable way to learn about the yoga class?

**0 / 1 point**



How many customers responded to our half-price yoga promotion?



Why do people like taking yoga classes on Mondays?



Is yoga a great way to stretch and strengthen your body?



Do yoga instructors seem more energetic at the beginning of the week?

**Incorrect**

Review [the video on asking effective questions](https://www.coursera.org/learn/ask-questions-make-decisions/lecture/d1RMT/smart-questions) for a refresher.

**8.**

Question 8

On a customer service questionnaire, a data analyst asks, “If you could contact our customer service department via chat, how much valuable time would that save you?” Why is this question unfair?

**1 / 1 point**



It makes assumptions



It is closed-ende



It uses slang words that not everyone can understand



It is vague

**Correct**

A common example of an unfair question is one that makes assumptions. These are questions that assume the answer to the question being asked.

**1.**

Question 1

Structured thinking involves which of the following processes? Select all that apply.

**1 point**



Revealing gaps and opportunities



Organizing available information



Asking SMART questions



Recognizing the current problem or situation

**2.**

Question 2

A data analyst creates data visualizations and a slideshow. Which phase of the data analysis process does this describe?

**1 point**



Act



Prepare



Process



Share

**3.**

Question 3

A recycling center that sponsors a podcast about saving the environment is an example of what strategy?

**1 point**



Defining the problem to be solved



Making recommendations



Staying on budget



Trying to reach a target audience

**4.**

Question 4

Making predictions is one of the six data analytics problem types. It deals with using data to inform decisions about how things may be in the future. Select the scenario that’s an example of making predictions.

**1 point**



A data analyst at a technology company uses data to identify a unique drop in social media engagement.



A data analyst at a school system uses data to make a connection between home sales and new student enrollment.



A data analyst at a gas company uses historical data to analyze which time of year customers use the most gas.



A data analyst at a shoe retailer uses data to inform the marketing plan for an upcoming summer sale.

**5.**

Question 5

Fill in the blank: Categorizing things involves assigning items to categories, whereas \_\_\_\_\_ takes those categories a step further, grouping them into broader classifications.

**1 point**



Discovering connections



Finding patterns



Making predictions



Identifying themes

**6.**

Question 6

Which of the following examples are vague questions? Select all that apply.

**1 point**



Do you generally prefer hot or cold?



What’s the best place to purchase the things we need?



How much time did you spend waiting in line?



Who was the greatest of all time?

**7.**

Question 7

The question, “Why was the Monday afternoon yoga class successful?” is not measurable. Which of the following questions presents a measurable way to learn about the yoga class?

**1 point**



Do yoga instructors seem more energetic at the beginning of the week?



Why do people like taking yoga classes on Mondays?



How many customers responded to our half-price yoga promotion?



Is yoga a great way to stretch and strengthen your body?

**8.**

Question 8

Which of the following questions make assumptions? Select all that apply.

**1 point**



Keeping employees engaged is important, isn’t it?



Wouldn’t you agree that product A is better than product B?



It must be frustrating waiting on hold for so long, right?



Did you get through to customer service?

**1.**

Question 1

Structured thinking involves which of the following processes? Select all that apply.

**1 / 1 point**



Revealing gaps and opportunities

**Correct**

Structured thinking involves recognizing the current problem or situation, organizing available information, revealing gaps and opportunities, and identifying the options.



Organizing available information

**Correct**

Structured thinking involves recognizing the current problem or situation, organizing available information, revealing gaps and opportunities, and identifying the options.



Asking SMART questions



Recognizing the current problem or situation

**Correct**

Structured thinking involves recognizing the current problem or situation, organizing available information, revealing gaps and opportunities, and identifying the options.

**2.**

Question 2

A data analyst creates data visualizations and a slideshow. Which phase of the data analysis process does this describe?

**1 / 1 point**



Act



Prepare



Process



Share

**Correct**

This describes the share phase of the data analysis process.

**3.**

Question 3

A recycling center that sponsors a podcast about saving the environment is an example of what strategy?

**1 / 1 point**



Defining the problem to be solved



Making recommendations



Staying on budget



Trying to reach a target audience

**Correct**

A recycling center sponsoring a podcast about saving the environment is an example of reaching a target audience. In this scenario, people who care about the environment are likely to be interested in recycling.

**4.**

Question 4

Making predictions is one of the six data analytics problem types. It deals with using data to inform decisions about how things may be in the future. Select the scenario that’s an example of making predictions.

**1 / 1 point**



A data analyst at a technology company uses data to identify a unique drop in social media engagement.



A data analyst at a school system uses data to make a connection between home sales and new student enrollment.



A data analyst at a gas company uses historical data to analyze which time of year customers use the most gas.



A data analyst at a shoe retailer uses data to inform the marketing plan for an upcoming summer sale.

**Correct**

A data analyst at a shoe retailer using data to inform the marketing plan for an upcoming summer sale is an example of making predictions.

**5.**

Question 5

Fill in the blank: Categorizing things involves assigning items to categories, whereas \_\_\_\_\_ takes those categories a step further, grouping them into broader classifications.

**1 / 1 point**



Discovering connections



Finding patterns



Making predictions



Identifying themes

**Correct**

Categorizing things involves assigning items to categories. Identifying themes takes those categories a step further, grouping them into broader themes.

**6.**

Question 6

Which of the following examples are vague questions? Select all that apply.

**0.75 / 1 point**



Do you generally prefer hot or cold?

**Correct**

A vague question is usually out of context and too broad to lead to a useful response.



What’s the best place to purchase the things we need?



How much time did you spend waiting in line?



Who was the greatest of all time?

**Correct**

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You didn’t select all the correct answers

**7.**

Question 7

The question, “Why was the Monday afternoon yoga class successful?” is not measurable. Which of the following questions presents a measurable way to learn about the yoga class?

**1 / 1 point**



Do yoga instructors seem more energetic at the beginning of the week?



Why do people like taking yoga classes on Mondays?



How many customers responded to our half-price yoga promotion?



Is yoga a great way to stretch and strengthen your body?

**Correct**

The number of customers who responded to the promotion can be counted, making this question measurable.

**8.**

Question 8

Which of the following questions make assumptions? Select all that apply.

**1 / 1 point**



Keeping employees engaged is important, isn’t it?

**Correct**

A common example of an unfair question is one that makes assumptions. Unfair questions assume the respondent’s answer to the question.



Wouldn’t you agree that product A is better than product B?

**Correct**

A common example of an unfair question is one that makes assumptions. Unfair questions assume the respondent’s answer to the question.



It must be frustrating waiting on hold for so long, right?

**Correct**

A common example of an unfair question is one that makes assumptions. Unfair questions assume the respondent’s answer to the question.



Did you get through to customer service?