The following questions are designed to help you assess your comfort level with general data analytics principles and data types. Use them to self-reflect and make your own decisions about the foundational knowledge you need to be successful in this course.

1. What is data science?   1 / 1 point

    ⦿ A field of study that uses data to create new ways of modeling and understanding the unknown
    ◯ A tool for organizing data elements and how they relate to one another
    ◯ The collection, transformation, and organization of data in order to draw conclusions, and drive informed decision-making
    ◯ A process used to solve complex problems in a user-centric way

    ⊘ Correct
    Data science is a field of study that uses data to create new ways of modeling and understanding the unknown.

2. What is the key difference between qualitative and quantitative data?   0 / 1 point

    ⦿ Qualitative data is about the quality of a product or service; quantitative data is about how much of that product or service is available in the marketplace.
    ◯ Qualitative data is subjective; quantitative data is specific.
    ◯ Qualitative data measures qualities and characteristics; quantitative data measures numerical facts.
    ◯ Qualitative data describes the kind of data being analyzed; quantitative data describes how much data is being analyzed.

    ⊗ Incorrect
    Qualitative data measures qualities and characteristics; quantitative data measures numerical facts.
    To learn about qualitative and quantitative data, enroll in the Google Data ↗ Analytics Certificate.

3. Which of the following statements accurately describe wide and long data? Select all   0 / 1 point
    that apply.

    ☑ Long data subjects can have data in multiple columns.

    ⊗ This should not be selected
    Wide data subjects can have data in multiple columns. Long data subjects can have multiple rows that hold the values of subject attributes.
    To learn about data types, enroll in the Google Data Analytics Certificate. ↗

    ☑ Wide data subjects can have multiple rows that hold the values of subject attributes.

    ⊗ This should not be selected
    Wide data subjects can have data in multiple columns. Long data subjects can have multiple rows that hold the values of subject attributes.
    To learn about data types, enroll in the Google Data Analytics Certificate. ↗

☐ Wide data subjects can have data in multiple columns.

☐ Long data subjects can have multiple rows that hold the values of subject attributes.

4. Structured data is likely to be found in which of the following formats? Select all that apply.

1 / 1 point

☐ Digital photo

☑ Database table

   ⊘ **Correct**
Structured data is organized in a certain format such as rows and columns. It is likely to be found in a table or spreadsheet.

☑ Spreadsheet

   ⊘ **Correct**
Structured data is organized in a certain format such as rows and columns. It is likely to be found in a table or spreadsheet.

☐ Audio file

5. Fill in the blank: A Boolean data type can have _____ possible values.

1 / 1 point

○ five

○ three

◉ two

○ infinite

   ⊘ **Correct**
A Boolean data type can have two possible values.

The following questions are designed to help you assess your comfort level with data strategy. Use them to self-reflect and make your own decisions about the foundational knowledge you need to be successful in this course.

6. What is the term for the individuals who have invested time and resources in a project and are interested in its outcome?

1 / 1 point

◉ Stakeholders

○ Executives

○ Subject-matter experts

○ Project sponsors

⊘ Correct
Stakeholders are individuals who have invested time and resources in a project and are interested in its outcome.

7. When collecting data for a study, what are some reasons to consider sample size? Select all that apply.   0.75 / 1 point

☑ To make sure a few unusual responses don't skew results

    ⊘ Correct
    Considering sample size ensures the data represents a diverse set of perspectives and helps avoid skewed results or inaccurate judgements.

☑ To collect data that represents a diverse set of perspectives

    ⊘ Correct
    Considering sample size ensures the data represents a diverse set of perspectives and helps avoid skewed results or inaccurate judgments.

☑ To include as many participants as possible in the study

    ⊗ This should not be selected
    Considering sample size ensures the data represents a diverse set of perspectives and helps avoid skewed results or inaccurate judgements.
    To learn about sample size, enroll in the Google Data Analytics Certificate.↗

☐ To eliminate certain segments of a population

8. The SMART methodology can be used to ask a question that promotes change. What type of SMART question leads to change?   0 / 1 point

🔘 Transformational
⚪ Action-oriented
⚪ Results-focused
⚪ Motivational

    ⊗ Incorrect
    A SMART question that promotes change is action-oriented.
    To learn about SMART questions, enroll in the Google Data Analytics   ↗
    Certificate.

9. Which of the following inquiries are leading questions? Select all that apply.   0.5 / 1 point

☑ How did you learn about our company?

⊗ This should not be selected
Leading questions include: How satisfied were you with our customer representative? In what ways did our product meet your needs? And what do you enjoy most about our service? Leading questions direct the respondent to a particular answer, often because they suggest the answer within the question.
To learn about leading questions, enroll in the Google Data Analytics Certificate. ↗

☐ How satisfied were you with our customer representative?

☑ What do you enjoy most about our service?

⊘ Correct
Leading questions include: How satisfied were you with our customer representative? In what ways did our product meet your needs? And what do you enjoy most about our service? Leading questions direct the respondent to a particular answer, often because they suggest the answer within the question.

☑ In what ways did our product meet your needs?

⊘ Correct
Leading questions include: How satisfied were you with our customer representative? In what ways did our product meet your needs? And what do you enjoy most about our service? Leading questions direct the respondent to a particular answer, often because they suggest the answer within the question.

10. Which of the following data security tools can be used to ensure only specific people can access, edit, and download a spreadsheet? Select all that apply.　　1 / 1 point

☐ Tabs

☑ Sharing permissions

⊘ Correct
Encryption and sharing permissions can be used to ensure only specific people can access, edit, and download a spreadsheet.

☐ Filters

☑ Encryption

⊘ Correct
Encryption and sharing permissions can be used to ensure only specific people can access, edit, and download a spreadsheet.

The following questions are designed to help you assess your comfort level with data integrity and data cleaning. Use them to self-reflect and make your own decisions about the foundational knowledge you need to be successful in this course.

11. Which type of bias is the tendency to construe ambiguous situations in a positive or negative way?   0 / 1 point

- ◉ Observer bias
- ○ Confirmation bias
- ○ Cultural bias
- ○ Interpretation bias

ⓧ Incorrect
Interpretation bias is the tendency to construe ambiguous situations in a positive or negative way.
To learn about types of bias, enroll in the Google Data Analytics Certificate. ↗

12. Before completing a survey, an individual acknowledges reading information about how and why the data they provide will be used. What concept does this describe?   1 / 1 point

- ◉ Consent
- ○ Openness
- ○ Transaction transparency
- ○ Privacy

✓ Correct
This concept is called consent. Consent is the aspect of data ethics that presumes an individual's right to know how and why their personal data will be used before agreeing to provide it.

13. A data analyst commits a SQL query to a repository as a new and improved query. Then, they specify the modifications they made during data cleaning and why they were made. What process does this scenario describe?   1 / 1 point

- ◉ Creating a changelog
- ○ Data reporting
- ○ Sharing results
- ○ Data transferal

✓ Correct
This scenario describes creating a changelog.

14. Fill in the blank: To remove leading, trailing, and repeated spaces when cleaning data, use the _____ function.   1 / 1 point

- ◉ TRIM
- ○ EXTRACT
- ○ CLIP

○ CLEAN

✓ Correct
To remove leading, trailing, and repeated spaces when cleaning data, use the TRIM function.

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15. Which spreadsheet tool changes how cells appear when values meet a specific condition?

1 / 1 point

○ Data validation
⦿ Conditional formatting
○ Alternating colors
○ Protected ranges

✓ Correct
Conditional formatting is the spreadsheet tool that changes how cells appear when values meet a specific condition.

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16. Fill in the blank: In a spreadsheet, the SPLIT function divides a text string around a ___ and puts each fragment into a new, separate cell.

1 / 1 point

○ indicator
⦿ delimiter
○ mark
○ substring

✓ Correct
A delimiter is the specified character separating each item.

The following questions are designed to help you assess your comfort level with spreadsheet and SQL tools for data aggregation and analysis. Use them to self-reflect and make your own decisions about the foundational knowledge you need to be successful in this course.

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17. The date and time a photo was taken is an example of which kind of metadata?

0 / 1 point

○ Administrative
○ Structural
○ Representative
⦿ Descriptive

✗ Incorrect

The date and time a photo was taken is an example of administrative metadata. To learn about metadata, enroll in the Google Data Analytics Certificate. ↗

18. In spreadsheets, an absolute reference is used to lock a function array so that rows and columns don't change if the function is copied. What symbol is used to create an absolute reference?

○ Asterisk (*)
◉ Dollar sign ($)
○ Ampersand (&)
○ Hash (#)

1 / 1 point

✓ Correct
A dollar sign is used to create an absolute reference.

19. Which spreadsheet function vertically searches for a certain value in a column in order to return a corresponding piece of information?

○ VIEW
○ VALIDATE
◉ VLOOKUP
○ VALUE

1 / 1 point

✓ Correct
VLOOKUP vertically searches for a certain value in a column in order to return a corresponding piece of information.

20. When creating a SQL query, which JOIN clause returns all matching records in two or more database tables?

○ LEFT
◉ INNER
○ OUTER
○ RIGHT

1 / 1 point

✓ Correct
The INNER JOIN clause returns all matching records in two or more database tables.

21. In a SQL query, which calculation does the modulo (%) operator perform? 1 / 1 point

    ○ It applies an exponent to a value.

    ◉ It returns the remainder of a division calculation.

    ○ It converts a decimal to a percent.

    ○ It finds the square root of a number.

    ⊘ Correct
    The modulo operator returns the remainder of a division calculation when included in a SQL query.

The following questions are designed to help you assess your comfort level with programming languages. Use them to self-reflect and make your own decisions about the foundational knowledge you need to be successful in this course.

22. What are the main benefits of using a programming language to work with data? Select all that apply. 0.5 / 1 point

    ☑ Easily reproduce and share work

    ⊘ Correct
    There are three main benefits of using a programming language to work with data: Easily reproduce and share work, save time, and clarify the steps of analysis.

    ☐ Clarify the steps of analysis

    ☑ Save time

    ⊘ Correct
    There are three main benefits of using a programming language to work with data: Easily reproduce and share work, save time, and clarify the steps of analysis.

    ☑ Automate decision-making

    ⊗ This should not be selected
    There are three main benefits of using a programming language to work with data: Easily reproduce and share work, save time, and clarify the steps of analysis.
    To learn about programming languages, enroll in the Google Data Analytics ↗ Certificate.

23. What goals are programming languages designed to achieve? Select all that apply. 0.5 / 1 point

    ☑ Data transformation

    ⊘ Correct

Programming languages are designed to achieve effective data transformation, cleaning, and visualization.

☑ Data governance

⊗ This should not be selected
Programming languages are designed to achieve effective data transformation, cleaning, and visualization.
To learn about programming languages, enroll in the Google Data Analytics ⬈ Certificate.

☐ Data visualization

☑ Data cleaning

✓ Correct
Programming languages are designed to achieve effective data transformation, cleaning, and visualization.

24. What is the term for programming code that is freely available and may be modified and shared by the people who use it?   1 / 1 point

◉ Open-source
◯ Non-dependant
◯ Common-design
◯ One-access

✓ Correct
Open-source code is freely available and may be modified and shared by the people who use it.

The following questions are designed to help you assess your comfort level with data visualization, dashboards, and sharing insights with others. Use them to self-reflect and make your own decisions about the foundational knowledge you need to be successful in this course.

25. To demonstrate how often data values fall into certain ranges, what type of data visualization should be used?   1 / 1 point

◯ Correlation chart
◯ Bar chart
◉ Histogram
◯ Tree map

✓ Correct
To demonstrate how often data values fall into certain ranges, use a histogram.

26. A dashboard is designed to share insights about the housing market in a city. What type of data visualization would be most effective at demonstrating how the city's annual home sales have risen over time?   1 / 1 point

   ○ Area chart

   ○ Pie chart

   ○ Scatter plot

   ⦿ Line chart

   ⊘ Correct
   To demonstrate how the city's annual home sales have risen over time, a line chart would be most effective.

27. What type of visualizations enable the data in a presentation to automatically update and change over time?   1 / 1 point

   ○ Static

   ○ Customized

   ⦿ Dynamic

   ○ Discrete

   ⊘ Correct
   Dynamic visualizations enable the data in a presentation to automatically update and change over time.

28. Why is it more effective to label a data visualization instead of using a legend? Select all that apply.   1 / 1 point

   ☑ Labels can be placed near the data, whereas legends are typically positioned away from the data.

   ⊘ Correct
   It is more effective to label a data visualization instead of using a legend for several reasons: Labels can be placed near the data, they make the data visualization more accessible, and they allow for text explanations to be placed directly on the visualization.

   ☑ Labels allow for text explanations to be placed directly on the visualization.

   ⊘ Correct
   It is more effective to label a data visualization instead of using a legend for several reasons: Labels can be placed near the data, they make the data visualization more accessible, and they allow for text explanations to be placed directly on the visualization.

   ☐ Labels help keep people's attention on relevant data by redirecting their focus away from outliers.

   ☑ Labels make the data visualization more accessible because they don't rely on the ability to interpret color.

✓ **Correct**

It is more effective to label a data visualization instead of using a legend for several reasons: Labels can be placed near the data, they make the data visualization more accessible, and they allow for text explanations to be placed directly on the visualization.

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29. A data visualization reveals two variables in the data that rise and fall at the same time. When variables are related in this way, what is likely happening?

1 / 1 point

○ Causation
● Correlation
○ Polarity
○ Divergence

✓ **Correct**

When two variables in a visualization rise and fall at the same time, this is an example of correlation. Correlation is the measure of the degree to which two variables change in relationship to each other.

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30. Which of the following are appropriate uses for filters in data visualization tools? Select all that apply.

0.75 / 1 point

☐ Highlighting individual data points
☑ Providing data to different users based on their particular needs

    ✓ **Correct**

    Filters can be used to highlight individual data points, limit the number of rows or columns in view, and provide data to different users based on their needs.

☐ Hiding outliers that do not support the hypothesis
☑ Limiting the number of rows or columns in view

    ✓ **Correct**

    Filters can be used to highlight individual data points, limit the number of rows or columns in view, and provide data to different users based on their needs.

    You didn't select all the correct answers