Glossary terms from Module 1

Terms and definitions for Course 1, Module 1

Analytical skills: Qualities and characteristics associated with using facts to solve problems
Analytical thinking: The process of identifying and defining a problem, then solving it by using data in an organized, step-by-step manner
Context: The condition in which something exists or happens
Data: A collection of facts
Data analysis: The collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision-making
Data analyst: Someone who collects, transforms, and organizes data in order to draw conclusions, make predictions, and drive informed decision-making
Data analytics: The science of data
Data design: How information is organized
Data-driven decision-making: Using facts to guide business strategy
Data ecosystem: The various elements that interact with one another in order to produce, manage, store, organize, analyze, and share data
Data science: A field of study that uses raw data to create new ways of modeling and understanding the unknown
Data strategy: The management of the people, processes, and tools used in data analysis
Data visualization: The graphical representation of data
Dataset: A collection of data that can be manipulated or analyzed as one unit
Gap analysis: A method for examining and evaluating the current state of a process in order to identify opportunities for improvement in the future
Root cause: The reason why a problem occurs
Technical mindset: The ability to break things down into smaller steps or pieces and work with them in an orderly and logical way
Visualization: (Refer to data visualization)

1. Which of the following statements correctly describe data and data analysis? Select all that apply.
    a. Data analysis is the science of data.
    b. Collecting data is part of the data analysis process.
    c. One goal of data analysis is to make predictions.
    d. Data is a collection of facts.

2. Fill in the blank: Data science involves using _____ data to create new ways of modeling and understanding the unknown.
    a. raw
    b. transformed
    c. clean
    d. Processed

3. Which of the following activities are elements of data-driven decision-making? Select all that apply.
    a. Uncover trends or patterns
    b. Eliminate information derived from gut instinct
    c. Analyze data
    d. Determine the problem to be solved

4. A pet shelter wants to receive 15% more donations at this year's holiday fundraiser than were given in previous years. Data team members look into past donations compared to desired donations for this holiday season. They then develop strategies to bridge the difference between the two. What does this scenario describe?
    a. Guiding business decisions
    b. Gap analysis
    c. Planning
    d. Future analysis

5. Fill in the blank: Data analysts use a _____ approach in order to identify, describe, and work out challenges or issues.
    a. strategic
    b. detail-oriented
    c. problem-oriented
    d. Big-picture

6. Which of the following statements correctly describe analytical thinking? Select all that apply.
    a. Analytical thinking involves using data in an organized manner in order to modify or make adjustments to a problem.
    b. Just because two pieces of data trend in the same direction does not necessarily mean they are related.
    c. Visualization is the graphical representation of information.
    d. Figuring out all of the specifics that will help execute a plan is detail-oriented thinking.

7. A data professional working at a nonprofit prepares for a project about community forestry. They use their analytical thinking skills to determine what they want to achieve with the data. They also prioritize staying focused and on track. Which aspect of analytical thinking does this scenario describe?
    a. Detail-oriented thinking
    b. Visualization

c. Strategic thinking
d. Problem-orientation

8. What is the root cause of a problem?
    a. A symptom of the problem
    b. The problem's consequences
    c. The impact of the problem
    d. Why the problem occurs

9. A data professional is assigned a challenging data analysis task. In order to be able to work in an orderly and logical manner, they break down larger, more complex elements into smaller pieces. Which analytical skill does this scenario describe?
    a. Curiosity
    b. Understanding context
    c. Technical mindset
    d. Data design

10. Which of the following examples demonstrate data-driven decision-making? Select all that apply.
    a. A financial advisor interviews clients to assess their risk tolerance and investment goals in order to create personalized plans.
    b. A dentist's office uses specifics from patient records to track treatment outcomes and improve quality of care.
    c. An advertising company relies on the common sense of its copywriting team when creating a new campaign.
    d. A school district uses report cards to track performance and identify areas where students need additional support.