1. **True or False:** When a key metric suddenly changes, the first step is to form a hypothesis immediately, without confirming if the data drop is real.
2. **True or False:** A diagnostic analysis focuses on uncovering *why* a metric changed, rather than just *noting that* it changed.
3. **True or False:** The MECE framework helps ensure that you cover *all* potential causes of a metric drop *without* overlapping categories.
4. **True or False:** Segmenting data by dimensions (like age, gender, device, geography) makes it *harder* to pinpoint exactly where a metric is dropping.
5. **True or False:** Statistical methods like correlation and regression inherently prove causation between two variables.
6. **True or False:** Decomposing a metric (e.g., looking at add-to-cart rate, checkout completion rate, etc.) is a way to pinpoint which part of the funnel is causing the overall drop.
7. **True or False:** A/B testing can help you confirm whether a specific change *causes* a metric to move up or down.
8. **True or False:** When prioritizing fixes after confirming the root cause, you should first address the biggest-impact issues that are most difficult to resolve.
9. **True or False:** External factors, such as competitor activity or regulatory changes, can *also* contribute to a sudden drop in a product metric.
10. **True or False:** After implementing changes to address a metric drop, it's best to stop monitoring the metric if it recovers quickly.

Multiple Choice Questions

1. **What is the first step in investigating a metric decline?**

   A) Conducting A/B testing

   B) Checking data integrity and historical trends

C) Forming a hypothesis

D) Segmenting the data

2. **Which of the following is NOT a component of the MECE framework?**

   A) Internal factors

   B) External influences

   C) Data measurement issues

   D) Hypothesis testing

3. **Why is metric segmentation important?**

   A) It helps break down data to find which groups are affected

   B) It ensures that all data is collected in one place

   C) It removes outliers from the dataset

   D) It eliminates the need for further analysis

4. **Which statistical method is used to check if two variables move together?**

   A) Regression Analysis

   B) Correlation Analysis

   C) A/B Testing

   D) Difference-in-Differences

5. **What does regression analysis tell us?**

   A) Whether two variables are moving in the same direction

   B) How much each independent variable impacts the dependent metric

   C) Whether a metric decline is real

   D) If tracking errors are present in the data

6. **What is the main goal of A/B testing in metric analysis?**

   A) To compare two independent datasets

   B) To prove a correlation between two variables

   C) To establish a causal relationship by testing a controlled change

   D) To improve the accuracy of data collection

7. **Which of the following is an example of an influencing metric for conversion rate?**

   A) Checkout completion rate

   B) Add-to-cart rate

   C) Payment success rate

   D) All of the above

8. **Which of the following best describes the MECE framework?**

   A) A structured way to analyze metrics and prioritize actions

   B) A technique for segmenting data by geography and device type

   C) A method for ensuring all possible causes of a metric change are considered without overlap

   D) A method used in regression analysis

9. **If user engagement suddenly drops, what should you check first?**

   A) Recent product or UI changes

   B) Competitor activity

   C) Seasonal trends

   D) All of the above

10. **What is the final step in the structured metric decline investigation process?**

    A) Running a correlation analysis

    B) Segmenting the data by key dimensions

    C) Validating hypotheses and taking action

    D) Checking for seasonality trends