

## EXERCISE 1.6

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### Scenario 1:

GameCo's marketing team has noticed that puzzle game sales are down this year. The finance director wants a report on what's causing this drop in sales, so the marketing team reaches out to the analysts for help.

Question	Answer
2. Specify which type of analysis would best address the central challenge.	I would conduct a <b>Diagnostic Analysis</b> using data from this year and past years to investigate why puzzle game sales have decreased.
3. Note down the most suitable form of variate analysis and type of statistics.	<p>1. I would use <b>Multivariate Analysis</b> to understand patterns between puzzle game sales and variables like year, platform, and historical sales figures.</p> <p>2. <b>Descriptive statistics</b> is appropriate for this report as it specifically focuses on GameCo's puzzle games.</p>
4. Write three questions for each scenario outlining what information you would need in order to get the analysis up and running. What would the answers to these questions let you do that you couldn't otherwise?	<p>1. What are the top-selling puzzle games within GameCo's portfolio, and how have their sales trends evolved?</p> <ul style="list-style-type: none"><li>➤ This analysis would help identify which specific games may be contributing to the overall sales decline in the puzzle game category.</li></ul> <p>2. How do pricing strategies for GameCo's puzzle games compare to competitors in the market?</p> <ul style="list-style-type: none"><li>➤ Examining pricing dynamics can reveal insights into consumer preferences, price elasticity, and potential pricing strategies to boost sales.</li></ul> <p>3. Are there any notable changes in marketing campaigns or promotional activities for puzzle games this year compared to previous years?</p> <ul style="list-style-type: none"><li>➤ Understanding marketing efforts and their impact on consumer behaviour can help pinpoint potential factors influencing the sales decline in the puzzle game category.</li></ul>

**Scenario 2:**

The sales team wants to know which games it should stock in each city in order to most effectively meet local customer demand. Shipping rates vary by location and this difference will need to be reflected in which games are recommended for which locations.

Question	Answer
2. Specify which type of analysis would best address the central challenge.	I'd opt for <b>Prescriptive Analysis</b> , which provides actionable recommendations based on data insights. This approach would guide decisions on stocking games in specific cities to meet customer demand, factoring in shipping rates and GameCo's logistical capabilities for sustainable outcomes.
3. Note down the most suitable form of variate analysis and type of statistics.	<p>1. <b>Multivariate Analysis</b> aligns well with the need to understand complex relationships between variables like game genre, platforms, and sales across cities.</p> <p>2. Employing <b>Inferential Statistics</b> is crucial as it helps conclude broader consumer populations in different cities based on representative samples, ensuring informed decision-making for stocking games effectively.</p>
4. Write three questions for each scenario outlining what information you would need in order to get the analysis up and running. What would the answers to these questions let you do that you couldn't otherwise?	<p>1. What are the historical sales data for different game titles in each city?</p> <ul style="list-style-type: none"><li>➤ Knowing past sales performance helps identify popular games in specific locations.</li></ul> <p>2. How do customer preferences for game genres vary across different cities?</p> <ul style="list-style-type: none"><li>➤ Understanding local preferences guides stocking decisions for relevant game genres.</li></ul> <p>3. What are the shipping rates and logistics constraints for delivering games to each city?</p> <ul style="list-style-type: none"><li>➤ Knowing shipping costs and logistical challenges helps optimize inventory placement and minimize costs.</li></ul>

**Scenario 3:**

A GameCo executive is due to give a presentation at an upcoming gaming conference and they want to know how sales vary by month of the year.

Question	Answer
2. Specify which type of analysis would best address the central challenge.	For this scenario, I would opt for a <b>Descriptive Analysis</b> . This approach utilizes historical data to examine sales patterns across different months of the year, providing valuable insights into seasonal variations and trends.
3. Note down the most suitable form of variate analysis and type of statistics.	<p>1. To address the central challenge effectively, I would employ <b>Bivariate Analysis</b>. This method allows me to explore and understand the relationship between two variables - sales figures and the month of the year.</p> <p>2. By using <b>Descriptive Statistics</b> within this analysis, I can summarize and present the sales data of GameCo clearly and understandably for a broader audience, ensuring that key insights are effectively communicated and understood.</p>
4. Write three questions for each scenario outlining what information you would need in order to get the analysis up and running. What would the answers to these questions let you do that you couldn't otherwise?	<p>1. What is the historical sales data for GameCo broken down by month of the year?</p> <ul style="list-style-type: none"><li>➤ Understanding past sales trends by month provides insights into seasonal variations and sales patterns over time.</li></ul> <p>2. How do sales figures correlate with different months of the year?</p> <ul style="list-style-type: none"><li>➤ Exploring the relationship between sales and months helps identify any recurring patterns or trends.</li></ul> <p>3. Are there any notable fluctuations or trends in sales data across different months?</p> <ul style="list-style-type: none"><li>➤ Analyzing sales variations over the year allows for the identification of peak seasons or periods of increased sales activity.</li></ul>

<b>Scenario 4:</b> The Olympic Games will take place in six months. GameCo's operations team wants to forecast how many sports games it will sell in the months before, during, and after the games so it can order the correct amount from the production facility.	
Question	Answer
2. Specify which type of analysis would best address the central challenge.	<b>Predictive Analysis</b> involves using descriptive and diagnostic analyses to make predictions about future events or outcomes. By understanding past trends and identifying key factors influencing the outcome, analysts can effectively forecast what will happen. This approach enables the client to gain insights into future scenarios and make informed decisions based on the predictive insights provided by the analyst.
3. Note down the most suitable form of variate analysis and type of statistics.	1. <b>Multivariate Analysis</b> would be my choice as it allows for understanding patterns among multiple variables like sports games, sales figures, and time of the year.  2. I would opt for <b>Inferential Statistics</b> to conclude the broader population of game players globally. This approach ensures a thorough examination of various factors influencing sales trends in the games market.
4. Write three questions for each scenario outlining what information you would need in order to get the analysis up and running. What would the answers to these questions let you do that you couldn't otherwise?	1. What is the historical trend of sports game sales in the months leading up to the Olympic Games, during the games, and after the games? ➤ Understanding past sales patterns helps anticipate potential fluctuations in demand.  2. How does consumer sentiment or interest in sports games typically change during Olympic seasons compared to non-Olympic periods? ➤ Exploring consumer behaviour insights provides context for forecasting sales dynamics.  3. Are there any specific marketing or promotional strategies that have proven effective in driving sports game sales during Olympic seasons in the past? ➤ Analyzing successful strategies helps inform future marketing campaigns and sales forecasts.