**Sales Data Analysis Questions**

1. **Trends Over Time**:
   * What are the monthly/quarterly/annual sales trends?
   * Are there specific days, weeks, or months with unusually high or low sales?
   * Is there seasonality in sales data?
2. **Product Performance**:
   * Which products are the top-selling and least-selling?
   * What is the contribution of each product category to total sales?
   * Are there products with declining or increasing sales trends?
3. **Customer Behavior**:
   * Who are the top customers contributing to sales?
   * What is the average purchase value per customer?
   * Are there repeat customers, and how do they compare to one-time buyers?
4. **Geographical Insights**:
   * Which regions or locations generate the most sales?
   * Are there regional differences in product preferences?
5. **Discounts and Promotions**:
   * How do discounts or promotions impact sales volume and revenue?
   * Are there specific promotions that performed exceptionally well or poorly?
6. **Sales Channels**:
   * Which sales channels (online, in-store, wholesale) perform the best?
   * How do sales vary across different channels?

**Marketing Data Analysis Questions**

1. **Campaign Effectiveness**:
   * Which marketing campaigns drove the most sales or engagement?
   * What is the ROI (Return on Investment) for each marketing campaign?
2. **Customer Acquisition**:
   * How many new customers were acquired through each marketing channel?
   * What is the cost per acquisition (CPA) for each channel?
3. **Customer Segmentation**:
   * Can customers be segmented based on demographics, purchase behavior, or preferences?
   * Which customer segments are the most profitable?
4. **Marketing Channel Performance**:
   * Which marketing channels (email, social media, paid ads) have the highest conversion rates?
   * How does customer engagement vary across channels?
5. **A/B Testing Insights**:
   * Are there significant differences in performance between different versions of ads or campaigns?
   * Which ad creatives or messaging resonate most with the audience?
6. **Funnel Analysis**:
   * Where are the drop-offs in the marketing funnel (e.g., awareness to purchase)?
   * How can the conversion rate at each stage be improved?

**Inventory Data Analysis Questions**

1. **Stock Levels**:
   * What is the current stock level for each product or category?
   * Are there products that are overstocked or understocked?
2. **Inventory Turnover**:
   * What is the inventory turnover rate for each product?
   * Are there slow-moving or fast-moving products?
3. **Stockouts and Overstock**:
   * How often do stockouts occur, and which products are most affected?
   * Are there products with excessive inventory that could lead to obsolescence?
4. **Reorder Points**:
   * What is the optimal reorder point for each product to avoid stockouts?
   * How does lead time impact inventory management?
5. **Seasonal Demand**:
   * Are there seasonal patterns in inventory demand?
   * How well does inventory planning align with seasonal sales trends?
6. **Supplier Performance**:
   * Which suppliers provide the best delivery times and quality?
   * Are there delays or inconsistencies in supplier deliveries?

**Cross-Functional Analysis Questions**

1. **Sales vs. Inventory**:
   * Are there products with high sales but low inventory (risk of stockouts)?
   * Are there products with low sales but high inventory (risk of overstocking)?
2. **Marketing Impact on Sales and Inventory**:
   * How do marketing campaigns affect inventory turnover?
   * Are there campaigns that led to unexpected spikes in demand, causing inventory issues?
3. **Customer Preferences**:
   * How do customer preferences (from marketing data) align with sales and inventory trends?
   * Are there products that customers want but are not adequately stocked?
4. **Profitability Analysis**:
   * Which products or categories have the highest profit margins?
   * Are there products with high sales but low profitability due to discounts or costs?
5. **Forecasting**:
   * Can historical sales and inventory data be used to forecast future demand?
   * How accurate are current forecasting models?

**General EDA Techniques to Apply**

* **Descriptive Statistics**: Mean, median, mode, standard deviation, etc.
* **Data Visualization**: Use histograms, bar charts, line graphs, scatter plots, and heatmaps.
* **Correlation Analysis**: Identify relationships between variables (e.g., marketing spend vs. sales).
* **Outlier Detection**: Identify unusual data points that may need further investigation.
* **Segmentation**: Group data by categories (e.g., product, region, customer segment).
* **Time Series Analysis**: Analyze trends and patterns over time.