**Walmart Sales Dataset – Case Study Questions**

1. **Customer Segmentation Challenge**  
   Identify the top 10% of customers who contributed the most to the total profit. What common characteristics (region, category, city) do they share?
2. **Monthly Sales Recovery Strategy**  
   Determine which month in the past year had the lowest overall profit. What specific product category and region contributed most to this loss?
3. **Profitability Anomaly Detection**  
   Identify any orders with **high sales but negative profit**. What patterns do you notice in terms of region, category, or quantity?
4. **Optimizing Product Mix for Regions**  
   For each region, find the **best-selling category by volume** and the **most profitable category**. Are they the same? What does this imply?
5. **Demand Prediction Case**  
   Using historical data, identify if there is a trend or seasonal pattern in **quantity sold** for each product category over time.
6. **Loss-Leading Product Investigation**  
   Find products or categories that have **repeatedly** shown negative profit despite high sales. Should they be discontinued or repriced?
7. **Regional Sales Consistency**  
   Which region shows the **most stable monthly sales performance** over time? Use standard deviation or coefficient of variation to support your analysis.
8. **Customer Retention Analysis**  
   Based on Customer ID, find the number of repeats vs. one-time customers. How does their average profit and sales differ?
9. **Bulk Buying Patterns**  
   Are their specific cities or regions where customers **consistently buy in higher quantities** than average? What product categories are driving this?
10. **Sales Efficiency Score**  
    Create a new metric: **Profit per Unit Sold**. Rank cities based on this efficiency. What actionable insights can Walmart take?
11. **Price Sensitivity Study**  
    Is there a **negative correlation between quantity sold and profit per unit** in any region or category? What does this suggest?
12. **Campaign Impact Simulation**  
    Assume Walmart ran a 10% discount campaign in **August 2024**. Recalculate profit for that month and evaluate how the campaign would have affected overall profitability.
13. **Return Risk Zones**  
    If high-quantity orders with low profit are considered risky for returns, which region shows the **highest risk exposure**?
14. **Time to Profit Threshold**  
    Calculate how many days (based on order date) it took each region to cross a cumulative profit of ₹1,00,000. Who was fastest?
15. **High-Impact Customer Recovery Plan**  
    Identify the bottom 5% of customers by profit. Suggest a personalized sales strategy for them based on their past order behaviour.