📣 Marketing Channel Effectiveness

📌 **Channel-Wise Engagement**
1. Which channel had the highest impressions and clicks?
2. What is the cost per click (CPC) and cost per acquisition (CPA) for each channel?
3. How many customers were reached by each marketing channel?
4. Which channel had the best conversion rate (click to purchase)?
5. What is the monthly spend per channel, and how does it relate to customer purchases?
6. How many customers were exposed to multiple channels?

📊 Comparative & Trend-Based Questions

📌 **Cross-Analysis**
1. Do younger customers respond better to social media ads compared to email or programmatic ads?
2. Which marketing channel performs best in specific regions or income groups?
3. Is there a difference in product preferences between male and female customers?
4. Are higher-income customers more likely to convert through LinkedIn or YouTube ads?
5. What are the trends in ad spend vs. customer acquisition across quarters?

🔁 Retention & Performance Indicators

📌 **Loyalty and ROI**
1. What percentage of customers made multiple purchases?
2. How does the customer's average monthly spending change after exposure to ads?
3. Which marketing channel yields the best ROI (Revenue generated / Cost)?
4. What is the lifetime value (LTV) of customers acquired through each channel?
5. Is customer behavior (conversion, spending) consistent across years?

real-world analytical thinking, KPI tracking, and data storytelling, ideal for dashboards or even interview case studies.

Retail Marketing Analysis

🧍‍♂️ Customer-Level Analytics (Advanced)

1. What is the average purchase frequency per customer in the promotional vs. non-promotional year?
2. What is the churn rate – % of customers who didn't return after first purchase?
3. What is the average time between first and second purchase for repeat customers?
4. Can we classify customers into segments (high spenders, occasional buyers, inactive)?
5. What is the correlation between income and total revenue contributed by customer?
6. Which customers have the highest ratio of ad impressions to purchases?
7. Which cities have a high customer base but low conversion rates?
8. Who are our "sleeping" customers (those who were reached but didn't buy)?
9. Which age group shows the best response to promotional campaigns?
10. Create RFM segmentation (Recency, Frequency, Monetary value) and rank customers.

📊 Sales Behavior Analysis (Deep-Dive)

1. What is the seasonality pattern of sales (month-wise/quarter-wise)?
2. Which items have highest cart abandonment rates?
3. How does the time gap between 'viewed' and 'purchased' differ by category?
4. What is the cross-sell ratio? Are customers buying items from multiple categories?
5. Compare average order value (AOV) across product categories and customer income levels.
6. Which SKUs contribute to 80% of the total revenue (Pareto analysis)?
7. What are the top reasons for purchase drop-offs (analyze funnel leaks)?
8. Do customers tend to purchase the same item repeatedly or explore different ones?
9. How do sales performance metrics vary regionally despite similar ad budgets?
10. How many new customers were acquired each month through purchases?

📢 Multi-Channel Attribution Analysis (Complex)

1. What is the multi-touch attribution impact (when a customer is exposed to >1 channel)?
2. Which channel combinations are most effective in driving conversions?
3. What is the average cost per converted customer for each channel?
4. Which channel has the best ROI when factoring in customer LTV?
5. How does channel performance vary by demographic segment (age, gender, income)?
6. What's the average lag time between ad impression and purchase per channel?
7. How many customers were only reached by 1 channel vs multiple channels?
8. What is the lift in sales before and after launching each individual channel?
9. What percentage of customers clicked but didn't purchase (wasted ad spend)?
10. Which channels are effective for specific product categories?

📈 Time-Series & Trend Analysis

1. How did average daily revenue change month-over-month?
2. Identify anomalies or spikes in revenue – correlate with ad spend or promotions.
3. What's the rolling 7-day/30-day average sales and ad engagement?
4. Are there lead indicators from ad metrics predicting sales in the following week?
5. How did the product portfolio contribution change across months?

🧠 Predictive & Simulation-Type Questions (Excel Feasible)

1. Based on current trends, what is the forecasted revenue for next 3 months?
2. Simulate how a 10% increase in Instagram ads spend could impact conversions.
3. Which top 5 customers are likely to churn based on recency and frequency?
4. Which category is most likely to be promoted next, based on past success?
5. What is the break-even point of ad spend vs sales revenue by channel?

📁 Customer Lifetime Value (CLV) & Profitability Analysis

1. What is the average customer lifetime value (CLV) by acquisition channel?
2. Which customers generated the highest profit margin (consider cost vs revenue)?
3. Are there customers whose acquisition cost is higher than their total spend?
4. How long does it take to recover the marketing cost per customer?
5. What is the contribution margin of each marketing channel?

🛒 Purchase Journey & Funnel Breakdown

1. What % of customers go through full funnel (view → cart → buy)?
2. What's the average drop-off time at each funnel stage?
3. Create a visual funnel analysis for each product category.
4. Which stage of funnel is most impacted by ads (more views vs more purchases)?
5. Compare funnel efficiency by demographics (e.g., male vs female)

⚡ Bonus Challenges (Stretch Goals)

1. Create a composite score for customer quality using multiple KPIs.
2. Use quartile analysis to profile spending patterns.
3. Calculate the marketing efficiency ratio (Revenue / Ad Spend) over time.
4. Apply ABC classification (A=top 80%, B=next 15%, C=last 5%) to customer value.
5. Track cohort behavior (e.g., customers acquired in Jan vs Feb—how do they behave over time?)

Retail Marketing Analysis