1. Write a query to get the sum of impressions by day

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2. Write a query to get the top three revenue-generating states in order of best to worst. How much revenue did the third best state generate?

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3. Write a query that shows total cost, impressions, clicks, and revenue of each campaign. Make sure to include the campaign name in the output.

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4. Write a query to get the number of conversions of Campaign5 by state. Which state generated the most conversions for this campaign?

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5. In your opinion, which campaign was the most efficient, and why?

To determine the most efficient campaign, we typically assess key performance indicators (KPIs) to understand the return on investment (ROI) or other metrics of interest. The commonly used metrics in the marketing realm are:

Cost Per Click (CPC): This is calculated as total\_cost/total\_clicks. A lower CPC indicates that you are paying less for each click, which can be seen as efficient if the quality (or conversion rate) of those clicks is maintained.

Cost Per Conversion (CPCon): Calculated as total\_cost/total\_conversions. A lower CPCon means you're spending less money to get a conversion (sale, sign-up, etc.), which can be a strong indicator of efficiency.

Conversion Rate (CR): This is calculated as total\_conversions/total\_clicks. A higher CR means that more of the people who click on the ad end up converting.

Return on Ad Spend (ROAS): If revenue data is linked with campaign costs, then ROAS, which is total\_revenue/total\_cost, can be an essential metric. A higher ROAS means you're getting more revenue for each dollar spent on ads.

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1. **CPCon (Cost Per Conversion)**:
   * Lower is better.
   * Campaign4 has the lowest CPCon, making it the most cost-effective in terms of converting users.
2. **ROAS (Return on Ad Spend)**:
   * Higher is better since it shows the revenue generated for each dollar spent.
   * Campaign4 again tops this metric with the highest ROAS, indicating the best revenue return on advertising spend.
3. **CPC (Cost Per Click)**:
   * Lower is better.
   * Campaign1 has the lowest CPC, which means it's the most cost-effective for getting users to click on the ads.
4. **CR (Conversion Rate)**:
   * Higher is better as it shows the proportion of clicks that lead to conversions.
   * Campaign3 has the highest CR, indicating that it's most effective in turning ad interactions into conversions.

Based on the metrics, **Campaign4** appears to be the most efficient overall. It has the lowest CPCon and the highest ROAS. Even though its CR is not the highest, it's still competitive. Campaign1 has the lowest CPC, but its other metrics (especially CPCon and ROAS) are not as strong as Campaign4. Campaign3 has the highest CR, but Campaign4's ROAS and CPCon give it the edge in terms of overall efficiency.

1. Write a query that showcases the best day of the week (e.g., Sunday, Monday, Tuesday, etc.) to run ads.

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