# Detailed Explanation of Steps

## 1. Understanding ROI on Day 7

ROI stands for Return on Investment. It tells us how much revenue we earn for each dollar spent. We focus on Day 7 (one week after install) because in mobile games, most in-app purchases and ad views happen within the first seven days. To calculate ROI, we use this formula: ROI = (Revenue ÷ Expenditure) × 100% Example: If we spend $100 on ads and those users spend $120 in the game by Day 7, then ROI = (120 ÷ 100) × 100% = 120%. This means every dollar brings back $1.20, or a 20% profit.

## 2. Grouping Users into Segments

Instead of looking at every single install, we group users by shared characteristics: - Traffic Source (the ad network they came from), - Age group (e.g., 25–29), - Gender (male or female), - OS Version (the Android version they use). By summing revenue and spend within each group and then calculating ROI, we see which “buckets” of users are most profitable. For example, Android-using women aged 25–29 from Network 6 might have higher ROI than other groups.

## 3. Picking Segments That Meet the Goal

The advertiser wants at least 4% ROI by Day 7. We filter out any segment below this threshold. Spending on underperforming segments (ROI < 4%) would drag down overall results. By focusing only on segments with ROI ≥ 4%, we ensure the campaign stays efficient and reaches the target KPI.

## 4. Calculating CPI Headroom

CPI stands for Cost Per Install, the price we pay for each new user. For high-ROI segments, we can actually raise the CPI and still maintain a 4% ROI. We calculate “headroom” to see how much extra we could charge: Headroom (%) = (Segment ROI ÷ 4% - 1) × 100% If a segment has 8% ROI, headroom = (8% ÷ 4% - 1) × 100% = 100%, meaning we could double the CPI and still hit the 4% target.

## 5. Choosing Where to Buy More Traffic

We look at each Traffic Source (ad network) across all US installs and compute overall ROI by Day 7. Networks with ROI well above 4% are clear winners—shifting more budget there maximizes total returns. For example, if Network 1 shows 7.8% ROI vs. Network 5 at 2.5%, we invest more in Network 1.

## Summary

By following these steps—calculating ROI, grouping users, filtering for performance, estimating price flexibility, and selecting top channels—we create a clear, data-driven plan. This ensures the advertiser meets their ROI goals, and adjoe maximizes revenue from high-quality traffic.