PRODUCT CASE

Puzzle is one of the biggest genres in mobile gaming and it still continues to grow rapidly.

To create the best game and the most unique experience for users, you have to master a lot of successful examples from the industry, understand what each of them tries to accomplish and what differences they aim to create for its audience.

As an example of this practice, we would like you to play the following games at least 60 levels.

- Toon Blast
- Candy Crush Saga
- Gardenscapes

1. Analyze and compare special items & combos of these games.

2. There is a 9x9 sized board in Toon Blast. How many cells will be affected on average if a Bomb&Bomb combo is executed?

Note: Combo cell can be any cell and all cells have the same probability.

3. Propose 2 different features from Toon Blast that could be added in Gardenscapes and Candy Crush. What do you expect with each addition of features?

4. We are bound to follow daily metrics of our game in order to create the best experience. Monitoring daily metrics helps us understand how players are interacting with our game and enables us to make informed decisions. Below, there are some terminologies and you are expected to search and understand them.

DAU: Daily Active User

ARPDAU: Average Revenue per Daily Active User

Retention(x): Percentage of users who returned to play the game on specifically x days after their install.

Assume there is an A/B test for your new game. There are daily 10.000 installs for each variant and some metrics of A/B variants are given below:

Metrics	Variant A	Variant B
ARPDAU	$0.50	$0.50
Retention(1)	41.00%	46.00%
Retention(3)	39.46%	41.28%
Retention(7)	38.28%	37.63%
Retention(14)	37.31%	34.65%
Retention(28)	36.33%	31.67%

Hint: You can use trendline in excel, sheets or etc. to find retention formulas.

A) If your goal is to maximize DAU on day 15, which variant would you pick?

B) What if your goal is to maximize the cumulative revenue at the end of day 15, which variant would you pick?

C) On day 15, you find out that there is an opportunity of instant jump on ARPDAU to $0.70 and it will drop to $0.50 linearly in 10 days. How much does this change affect these variants and which variant would you choose?

D) Assume, ARPDAU jump on Q4.C does not happen and ARPDAU remains $0.50 for the variants.

During the AB test, a new marketing source has been found for your game. From day 15, 3.000 of your installs come from the new source. The total number of installs remains 10.000 and 7.000 of your installs still come from the original source. Retention curves of the new source for both variants are given below:

Variant A: y=(-2.1*ln(x)+48)/100; **Variant B:** y=(-5.1*ln(x)+53)/100

Note: The old source's retention metrics are not affected by the new source and new install counts.

With this news, which variant would you choose for the game? Why?

E) If you have to pick one of these changes given in Part C (instant jump on ARPDAU) and Part D (new source effect), which one will be your pick? Why?

Note: Share your calculations for question 4

* You can prepare the case in any medium you like, in English or Turkish.

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