Chips (`chips`)

William is crazy about cosmic poker! In this game, coins of three colors (r, g, b) are used instead of cards. The game is simple, the casino defines two numbers A and C as coefficients for calculating bets, and the player's win is calculated with the formula:

$$A \cdot \left(r^2 + g^2 + b^2\right) + C \cdot \min \{r, g, b\}$$

where r, g, b are the number of red, green and blue chips in the game.

Figure 1: A bunch of cosmic poker chips.

William is facing the following task: there are already r red, g green and b blue chips on the table, but with **one last move**, he can add on the table **exactly one chip** of any color. Help him choose a colour to maximize his win.

Moreover, William wants to solve this problem for T different game configurations.

☞ Among the attachments of this task you may find a template file `chips.*` with a sample incomplete implementation.

Input

The first line contains the only integer T, the number of games to solve. Each of the following T lines represents one game configuration and is formed by 5 integers: A, C, r, g and b.

Output

You need to write T lines, each of them should contain the color that William should choose for the corresponding game; in other words, each line should be one of the following string: RED, GREEN or BLUE.

Constraints

- $1 \leq T \leq 10\,000$.
- $1 \leq A, C \leq 10$.
- $0 \leq r, g, b \leq 15$.
- In case of many optimal solutions, print any of them.

Scoring

Your program will be tested against several test cases. Your score is proportional to the number of correctly solved test cases.

Examples

input	output
3 2 10 2 4 4 1 2 3 4 5 4 2 7 7 7	RED BLUE GREEN

Explanation

In **the first scenario** it's better to add a red chip, the calculated winning is 112.