Problem L1: Promotions - Easy

5 points Accepted

Problem My Submissions

Restaurant Rex has a system of levels for their chefs. Each chef falls into one of 3 levels according to their wages. Level 1 chefs have wages in the range of $[0,10^6)$ balabizos per hour, Level 2 chefs have wages in the range of $[10^6, 2 * 10^6)$ balabizos per hour and Level 3 $[2 * 10^6$,infinity) balabizos per hour. Every few months, there is a percentage increase or decrease in the wages depending on the level, where higher levels have their percentage greater than or equal to lower levels.

Note: If a Level 1 employee's wage becomes in the range of level 2 after the increase, then they get promoted to that level. The same applies for Level 2 getting promoted to 3. The opposite also applies for the decrease (ex. a level 3 employee could become a level 2 or 1 employee after a decrease).

Problem

Alice is a chef at Restaurant Rex. Given her start wage and % increases in wages, she would like to know her wages after each increase.

Constraints

$1 \leq t \leq 10$
$1 \leq q \leq 10$
$1 \leq w \leq 4 * 10^6$
$-50 \leq p_i \leq 100$

Input

Input starts with a line containing t, the number of test cases then t test cases follows.
Each test case will start with a line containing w q where w is the starting wage of Alice and q is the number of queries that follow.
q lines follow, each containing 3 integers p_1 p_2 p_3

Output

For each test case, for each query, output a line containing the new wage of Alice as as a floating point number with an absolute or relative error of 10^{-6}.

Note: queries are points of time after each other, so they depend on each other.

Explanation of Sample

Initially Alice was a level 1 employee with a wage of 900000 balabizos/hour.
At time t_1: her wages increased by 20% to be 1080000.00 balabizos/hour and she got promoted to level 2.
At time t_2: her wages increased by 40% to be 1512000.00 balabizos/hour and she is still level 2.
At time t_3: her wages decreased by 50% to be 756000.00 and she got demoted to level 1.

Sample Input

```
1
900000 3
20 30 40
-5 40 50
-50 -50 -50
```

Sample Output

```
1080000.00
1512000.00
756000.00
```