

Problem F

Expected Tokens

Time Limit: 1 second

Memory Limit: 512 megabytes

You are given a set of n coins, and the probability of turning head for the i^{th} coin is p_i . The game is as follows:

- You are going to play k games. At the beginning, you have x tokens.
- In each game, you choose one coin in the coin set and always pick head. If the coin you choose in that game turns head, you win the game, otherwise, you lose.
- In case you win a game, you will receive a_i tokens ($a_i \geq 0$).
- In case you lose a game, you will lose l_i percent of your current amount of tokens.

Your task is to choose k coins in the set of n coins and the order of the coins you use in the k games to maximize the expected amount of tokens. Note that each coin can be used only once.

Input

There are multiple test cases in the input.

The first line of each test case contains three space-separated integers n , k , and x .

$(1 \leq k \leq n \leq 100, 0 \leq x \leq 10^6)$.

Each of the next n lines specifies the properties of the i^{th} game with three space-separated integers a_i , l_i , and p_i ($0 \leq a_i, l_i, p_i \leq 100$). The input terminates with a line containing 0 0 0 which should not be processed.

Output

For each test case, output a single line containing the maximum expected amount of your final tokens rounded to exactly two digits after the decimal point.

Sample Input

```
2 2 100
10 0 50
100 10 20
2 1 100
10 0 50
100 10 20
0 0 0
```

Sample Output

```
117.00
112.00
```