COCI '12 Contest 2 #1 Mortadela

Time limit: 1.0s   **Memory limit:** 32M

The National Supermarket Chain (NSC) likes to boast that it has the lowest price for mortadella in the country. In fact, if a customer manages to find cheaper mortadella in any other chain, the NSC will match the price for that customer.

Matej and Filip decided to accept that challenge. They will visit N **different supermarket chains** in order to find mortadella not only cheaper than the one in NSC, but the **cheapest on the market**. If they are successful, they will be able to buy the cheapest mortadella in an NSC branch close to their school.

NSC was hoping that no one would be able to find cheaper mortadella since all supermarket chains (including NSC) express mortadella prices in a convoluted way: X **dollars for** Y **grams of mortadella.**

Write a program to, given mortadella prices in NSC as well as the remaining N chains, determine the price that Matej and Filip will have to pay for $1\,000$ **grams of mortadella** in the NSC close to their school.

Input Specification

The first line of input contains two positive integers X_{NSC} $(1 \leq X_{\text{NSC}} \leq 100)$ and Y_{NSC} $(1 \leq Y_{\text{NSC}} \leq 1\,000)$, where X_{NSC} is the price of Y_{NSC} grams of mortadella in the NSC chain.

The second line of input contains the positive integer N $(1 \leq N \leq 100)$, the number of supermarket chains (excluding NSC).

Each of the following N lines contains two positive integers X_i $(1 \leq X_i \leq 100)$ and Y_i $(1 \leq Y_i \leq 1\,000)$, $i = 1 \ldots N$, where X_i is the price of Y_i grams of mortadella in the ith supermarket chain.

Output Specification

The first and only line of output must contain the requested real number (price). It is allowed to differ at most 0.01 from the exact solution.

Sample Input 1

```
5 100
3
4 100
3 100
7 100
```

Sample Output 1

```
30.00
```

Sample Input 2

```
13 6
5
56 679
35 120
99 999
56 73
37 532
```

Sample Output 2

```
69.55
```

Sample Input 3

```
100 5
3
99 8
65 14
78 10
```

Sample Output 3

```
4642.86
```