Problem B. Basic Brewing

Source file name:	Brewing.c, Brewing.cpp, Brewing.java, Brewing.py
Input:	`Standard`
Output:	`Standard`

In his first potion lesson Snape asked Harry: "Tell me, what would I get if I added *powdered root of asphodel* to an *infusion of wormwood*?". Back then, Harry had no idea what this meant and Snape had to explain to him that this would make a sleeping potion, so powerful that it is known as *Draught of Living Death*.

Now is Harry's sixth-year and his new professor, Slughorn, wants him and everyone else to brew exactly this potion. To no surprise, Harry is the one to brew it best, as he is the only one who knew that the final potion should contain exactly p percent of powdered root of asphodel.

The classroom. Photo by Rob Young, Wikimedia

After the class is over, professor Slughorn decides to mix some of his students potions together to brew a perfect Draught of Living Death himself. His class consists of n students, including Harry, and each of them attempted to brew the potion. Therefore, Professor Slughorn has access to n potions, each in a different cauldron. The ith cauldron contains c_i liters of potion in total and it contains p_i percent of powdered root of asphodel. How many liters of the Draught of Living Death can Slughorn brew?

Input

The input consists of:

- One line with an integer n and a real value p ($1 \leq n \leq 1000, 0 \leq p \leq 1$), the number of cauldrons and the percentage of powdered root of asphodel the potion should contain.
- n lines, each containing an integer c and a real value p ($1 \leq c \leq 1000, 0 \leq p \leq 1$), the amount of potion in the ith cauldron in liters and the percentage of powdered root of asphodel in that potion.

All real values are given with at most three decimal places.

Output

Print a single real value, the maximal amount of Draught of Living Death that Slughorn can brew. Your solution is considered correct if the relative or absolute error is less than 10^{-4}.

Example

Input	Output
3 0.5 5 0.3 1 0.4 10 0.9	8.75
3 0.5 5 0.3 1 0.4 1 0.9	3.5