

A. Get together

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

There are n people on a straight line, they need to gather at one point. Each person knows his current position x_i and his speed v_i . Help them find out in what minimum time they can gather at one point.

Input

The first line contains integer n ($1 \leq n \leq 10^5$), next n lines contain pairs of integers x_i and v_i ($-10^9 \leq x_i \leq 10^9, 1 \leq v_i \leq 10^9$).

Output

Print one number, the minimum time it takes people to gather at one point. The answer will be considered correct if the relative or absolute error does not exceed 10^{-6} .

Example

input	Copy
5 -1 5 10 3 4 2 7 10 8 1	
output	Copy
1.5	

→ Submit?

Language:

GNU G++20 13.2 (64 bit, win

Choose file:

Choose File

No file chosen

Submit

