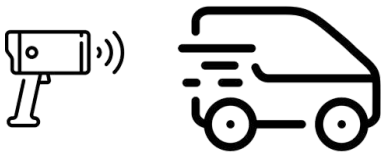
Problem S
Speeding
Time limit: 1 second



You'd like to figure out whether a car was speeding while it was driving down a straight road. Unfortunately you don't have any radar guns or related instruments for measuring speed directly; all you have are photographs taken of the car at various checkpoints on the road at various times. Given when and where these photographs were taken, what is the fastest speed that you can prove the car must have been going at some point along the road?

Input

The first line contains an integer N, the number of photographs taken, with $2 \leq N \leq 100$. The following N lines each contain two integers t_i and d_i, with $0 \leq t_i \leq 10\,000$ and $0 \leq d_i \leq 1\,000\,000$. The first photograph is always taken at time 0 with distance 0. Both the times and distances strictly increase. That is, $t_{i+1} > t_i$ and $d_{i+1} > d_i$.

Output

Output the greatest integral speed that you can be certain the car was going at some point.

Examples

Sample Input 1	Sample Output 1
2 0 0 7 42	6

Sample Input 2	Sample Output 2
5 0 0 5 24 10 98 15 222 20 396	34