Problem: RUBIES

Time Limit: 1.5 seconds

Memory Limit: 128 MB

Problem Description   Jacob the Rabbit is thinking of buying jewelry for his girlfriend, and is touring Orchard Road to find such shops to buy the jewelry from. There are N stores located along Orchard Road, in a row, numbered from 0 to N - 1. Each store i sells W_i grams of rubies for C_i dollars. He can either buy all the rubies from a store, or none at all; he cannot buy half the rubies and pay half of the price.

   He wants to boost Singapore's jewelry industry, so he wants to buy from at least L stores. However, he is lazy, so he does not want to buy jewelry from more than H stores. He also needs to buy from a contiguous segment of stores, because he can't really be bothered to walk any more than he needs to.

   Due to Jacob's insane amount of accumulated wealth, he does not care about the absolute cost of the rubies, just the cost per gram. Also, he wants to make his girlfriend feel very precious, so he wants to maximise the cost per gram of the rubies he buys. Abiding by the conditions above, help Jacob determine what is the maximum cost per gram of the rubies he can purchase.

Input Format   The first line of input contains three integers, N, L and H. The next N lines of input will contain two integers each, C_i and W_i for each store i.

Output Format   The output should contain one line with one integer, the maximum cost per gram of the rubies. Your answer will be considered correct if it's absolute or relative difference is below 10^{-9} to the correct answer.

Precision   Use *long double* type to prevent precision errors in computation.

Limits   These are the bounds on the input.

Subtask	Score	Additional Bounds
1	8	$1 \le N \le 300$
2	17	$1 \le N \le 3,000$
3	10	$1 \le N \le 100,000$, $L = 1$
4	19	$1 \le N \le 100,000$, $H = N$
5	26	$1 \le N \le 100,000$
6	20	$1 \le N \le 500,000$
All	-	$1 \le C_i, W_i \le 10^6$, $1 \le L \le H \le N$

Sample Input

```
3 2 3
1 1
1 2
1 3
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Sample Output

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0.666666667
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