**#include <bits/stdc++.h>**

**using namespace std;**

**#define MAX 100000**

**#define MIN -1e9**

**int calculateFunctionValue(int m1, vector<pair<int, int>>& info) {**

**int mx = 0, mn = MAX;**

**for(int i=0;i<info.size();i++){**

**mx = max(mx, info[i].first + m1\*info[i].second);**

**mn = min(mn, info[i].first + m1\*info[i].second);**

**}**

**return mx - mn;**

**}**

**int main() {**

**cout<<"Hello I am starting"<<endl;**

**// Car Race**

**int n;**

**cin>>n;**

**vector<pair<int, int>>info(n);**

**for(int i=0;i<n;i++){**

**// First - denotes initial distance**

**// Second - denotes Speed**

**cin>>info[i].first>>info[i].second;**

**}**

**int low = 0, high = MAX;**

**int ans = high;**

**while(low < high) {**

**int m1 = low + (high - low) / 3;**

**int m2 = high - (high - low) / 3;**

**int fm1 = calculateFunctionValue(m1, info);**

**int fm2 = calculateFunctionValue(m2, info);**

**if(fm1 > fm2) {**

**ans = fm2;**

**low = m1 + 1;**

**} else {**

**ans = fm1;**

**high = m2 - 1;**

**}**

**}**

**cout<<ans<<endl;**

**}**