ASHIGIFT

#include "bits/stdc++.h"

using namespace std;

struct element{

int id; //id = 0 means dish id =1 means clan

long long x; //Position

long long dish\_p; // People eating dish

long long clan\_q; //Number of people that needs to approach it

long long clan\_r;//Number of tribal people joining chef.

};

int T, B, C;

long long X;

vector <element> A;

bool solve(long long G)

{

int L = A.size();

int dead = 0;

for(int i=0; i<L; i++){

if(A[i].id == 0)

{

//Dish

if(A[i].dish\_p < G)

G -= A[i].dish\_p;

else{

dead = 1;

G = 0;

break;

}

}

else

{

//Clan

if(G >= A[i].clan\_q)

G += A[i].clan\_r;

}

}

if(dead == 1)

return false;

if(G > 0)

return true;

return false;

}

bool cmp(element a, element b)

{

return a.x<b.x;

}

int main()

{

cin>>T;

while(T--)

{

A.clear();

cin>>X;

cin>>B;

for(int i=0; i<B; i++){

element tmp;

cin>>tmp.x>>tmp.dish\_p;

tmp.id = 0;

A.push\_back(tmp);

}

cin>>C;

for(int i=0; i<C; i++){

element tmp;

tmp.id = 1;

cin>>tmp.x>>tmp.clan\_q>>tmp.clan\_r;

A.push\_back(tmp);

}

sort(A.begin(), A.end(), cmp);

long long low = 1; long long high = 1000000000000000001;

long long mid; long long ans = -1;

while(high>=low)

{

mid = (high + low)/2;

if(solve(mid))

{

ans = mid;

high = mid -1;

}

else

low = mid + 1;

}

cout<< ans << endl;

}

return 0;

}