**Hero** [HDU - 4310](https://vjudge.net/problem/30403/origin)

When playing DotA with god-like rivals and pig-like team members, you have to face an embarrassing situation: All your teammates are killed, and you have to fight 1vN.   
  
There are two key attributes for the heroes in the game, health point (HP) and damage per shot (DPS). Your hero has almost infinite HP, but only 1 DPS.   
  
To simplify the problem, we assume the game is turn-based, but not real-time. In each round, you can choose one enemy hero to attack, and his HP will decrease by 1. While at the same time, all the lived enemy heroes will attack you, and your HP will decrease by the sum of their DPS. If one hero's HP fall equal to (or below) zero, he will die after this round, and cannot attack you in the following rounds.   
  
Although your hero is undefeated, you want to choose best strategy to kill all the enemy heroes with minimum HP loss.

Input

The first line of each test case contains the number of enemy heroes N (1 <= N <= 20). Then N lines followed, each contains two integers DPSi and HPi, which are the DPS and HP for each hero. (1 <= DPSi, HPi <= 1000)

Output

Output one line for each test, indicates the minimum HP loss.

Sample Input

1

10 2

2

100 1

1 100

Sample Output

20

201

HDU 4310

• 1 VS n对战，回合制(你打他们一下，需要受到他们所有存活人的

攻击)

• 你的血量无上限，攻击力为1

• 对手血量及攻击力给定

• 消灭所有敌人掉最少的血量

• n ≤ 20

按攻击/血量 降序排列

#include<iostream>

#include <string>

#include<stdio.h>

#include<algorithm>

using namespace std;

struct node

{

int dps,hp;

};

bool cmp(node x,node y)

{

return (1.0\*x.dps/x.hp)>(1.0\*y.dps/y.hp);

}

int main()

{

int n,sum(0),sumdps(0);

node s[1010];

while(cin>>n)

{

sum=0;sumdps=0;

for(int i=1;i<=n;i++)

{

cin>>s[i].dps>>s[i].hp;

sumdps+=s[i].dps;

}

sort(s+1,s+1+n,cmp);

for(int i=1;i<=n;i++)

{

for(int j=1;j<=s[i].hp;j++)

sum+=sumdps;

sumdps-=s[i].dps;

}

cout<<sum<<endl;

}

return 0;

}

不知道的时候可以猜一下H/D还是D/H然后造几组数据验证一下

先把攻击高的血少的，先打死，就是按攻击与血的比值排序！