

Contest Duration: 2025-06-14(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250614T2100&p1=248>) - 2025-06-14(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250614T2240&p1=248>) (local time) (100 minutes)

[Back to Home \(/home\)](/home)

[🏠 Top \(/contests/abc410\)](/contests/abc410)

[📋 Tasks \(/contests/abc410/tasks\)](/contests/abc410/tasks)

[❓ Clarifications \(/contests/abc410/clarifications\)](/contests/abc410/clarifications)

[📊 Results ▼](#)

[🏆 Standings \(/contests/abc410/standings\)](/contests/abc410/standings)

[🏆 Virtual Standings \(/contests/abc410/standings/virtual\)](/contests/abc410/standings/virtual)

[📖 Editorial \(/contests/abc410/editorial\)](/contests/abc410/editorial)

[💬 Discuss \(https://codeforces.com/blog/entry/143737\)](https://codeforces.com/blog/entry/143737)



E - Battles in a Row

[Editorial \(/contests/abc410/tasks/abc410_e/editorial\)](/contests/abc410/tasks/abc410_e/editorial)



Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 450 points

Problem Statement

Takahashi is about to play a game where he fights N monsters in order. Initially, Takahashi's health is H and his magic power is M .

For the i -th monster he fights, he can choose one of the following actions:

- Fight without using magic. This can only be chosen when his health is at least A_i , and his health decreases by A_i and the monster is defeated.
- Fight using magic. This can only be chosen when his magic power is at least B_i , and his magic power decreases by B_i and the monster is defeated.

The game ends when all N monsters are defeated or when he cannot take any action. What is the maximum number of monsters he can defeat before the game ends?

Constraints

- $1 \leq N \leq 3000$
- $1 \leq H, M \leq 3000$
- $1 \leq A_i, B_i \leq 3000$
- All input values are integers.

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Input

The input is given from Standard Input in the following format:

```
 $N$   $H$   $M$   
 $A_1$   $B_1$   
 $A_2$   $B_2$   
 $\vdots$   
 $A_N$   $B_N$ 
```

Output

Output the answer.

Sample Input 1

Copy

```
4 10 14  
5 8  
5 6  
7 9  
99 99
```

Copy

Sample Output 1

Copy

```
3
```

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By taking the following actions, Takahashi can defeat 3 monsters before the game ends.

- Initially, his health is 10 and his magic power is 14.
- Fight the 1st monster without using magic. His health decreases by 5, becoming health 5 and magic power 14.
- Fight the 2nd monster without using magic. His health decreases by 5, becoming health 0 and magic power 14.
- Fight the 3rd monster using magic. His magic power decreases by 9, becoming health 0 and magic power 5.
- For the 4th monster, he cannot choose either action, so the game ends.

Sample Input 2

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```
3 3000 3000
3 3
3 3
3 3
```

Sample Output 2

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```
3
```

[Copy](#)

He may be able to defeat all monsters.

Sample Input 3

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```
10 8 8
2 2
2 3
2 2
1 2
2 3
1 2
3 3
3 2
3 1
3 2
```

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Sample Output 3

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```
9
```

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