E - Battles in a Row   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

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

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Input

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

$$
\begin{array}{ccc}
N & H & M \\
A_1 & B_1 \\
A_2 & B_2 \\
\vdots \\
A_N & B_N
\end{array}
$$

Output

Output the answer.

Sample Input 1   Copy

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

Sample Output 1   Copy

```
3
```

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   Copy

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

Sample Output 2 Copy

```
3
```
Copy

He may be able to defeat all monsters.

Sample Input 3 Copy

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

Sample Output 3 Copy

```
9
```
Copy

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