6/16/25, 11:44 PM E - Battles in a Row

Contest Duration: 2025-06-14(Sat) 08:00 (http://www.timeanddate.com/worldclock/fixedtime.html? iso=20250614T2100&p1=248) - 2025-06-14(Sat) 09:40 (http://www.timeanddate.com/worldclock/fixedtime.html? iso=20250614T2240&p1=248) (local time) (100 minutes) Back to Home (/home) Tasks (/contests/abc410/tasks) Top (/contests/abc410) **?** Clarifications (/contests/abc410/clarifications) ✓ Submit (/contests/abc410/submit?taskScreenName=abc410 e) **≡** Results **▼ ↓** Standings (/contests/abc410/standings) ↓ Virtual Standings (/contests/abc410/standings/virtual) Custom Test (/contests/abc410/custom_test) Editorial (/contests/abc410/editorial)

E - Battles in a Row Editorial (/contests/abc410/tasks/abc410_e/editorial)

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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 < N < 3000
- $1 \le H, M \le 3000$
- $1 \le A_i, B_i \le 3000$

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• All input values are integers.

Input

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

Output

Output the answer.

Sample Input 1 Copy

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

Sample Output 1 | Copy



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.

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Sample Input 2 Copy

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

Sample Output 2 Copy



He may be able to defeat all monsters.

Sample Input 3 Copy

10 8 8	Сору
2 2	
2 3	
2 2	
1 2	
2 3	
1 2	
3 3	
3 2	
3 1	
3 2	

Sample Output 3 Copy



Language

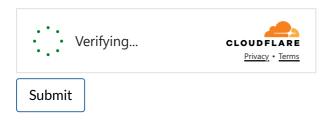
Python (CPython 3.11.4)

Source Code



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- * at most 512 KiB
- * Your source code will be saved as Main. extension.



'#telegram)

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