北京大学 PEKING UNIVERSITY
JUDGE ONLINE FOR ACM/ICPC

Sunscreen

Time Limit: 1000MS **Memory Limit:** 65536K
Total Submissions: 9437 **Accepted:** 3302

Description

To avoid unsightly burns while tanning, each of the C ($1 \le C \le 2500$) cows must cover her hide with sunscreen when they're at the beach. Cow i has a minimum and maximum SPF rating ($1 \le minSPF_i \le 1{,}000$; $minSPF_i \le maxSPF_i \le 1{,}000$) that will work. If the SPF rating is too low, the cow suffers sunburn; if the SPF rating is too high, the cow doesn't tan at all.....

The cows have a picnic basket with L ($1 \le L \le 2500$) bottles of sunscreen lotion, each bottle i with an SPF rating SPF_i ($1 \le SPF_i \le 1{,}000$). Lotion bottle i can cover $cover_i$ cows with lotion. A cow may lotion from only one bottle.

What is the maximum number of cows that can protect themselves while tanning given the available lotions?

Input

* Line 1: Two space-separated integers: C and L
* Lines 2..C+1: Line i describes cow i's lotion requires with two integers: $minSPF_i$ and $maxSPF_i$
* Lines C+2..C+L+1: Line i+C+1 describes a sunscreen lotion bottle i with space-separated integers: SPF_i and $cover_i$

Output

A single line with an integer that is the maximum number of cows that can be protected while tanning

Sample Input

```
3 2
3 10
2 5
1 5
6 2
4 1
```

Sample Output

```
2
```

Source

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