

Dating Site IT

You run an online dating site with many users. You keep detailed statistics for each user, including the number of times they visit your site this month. You would like to know how many visits your site gets in total this month. Unfortunately this is not as easy as it sounds – some of your users are *spammers*, who use your site to advertise their own products. You do not want to count the spammers’ visits towards your total.

When a user registers with the site, they must supply many personal details including their age, height and weight. Spammers lie about these details, but they are very predictable and you can use their fake answers to spot them. For example, you might know that “any user whose age is between 18 and 30, whose height is between 80cm and 90cm, *and* whose weight is between 40kg and 50kg is a spammer”.

Your task is to write a computer program that takes a number of statements like the above and a list of user statistics, and outputs the total number of visits your site has received this month.

Input

Your program must read from standard input. In the description below, a_i , h_i , w_i , v_i represent a user’s age, height, weight and number of visits this month, respectively.

The first line will consist of two space-separated integers, S and U ($1 \leq S, U \leq 1\,000\,000$). Each of the following S lines will be of the form ‘ $a_{min} a_{max} h_{min} h_{max} w_{min} w_{max}$ ’, representing the statement “any user that satisfies $a_{min} \leq a_X \leq a_{max}$ and $h_{min} \leq h_X \leq h_{max}$ and $w_{min} \leq w_X \leq w_{max}$ is a spammer”. (Of course, $a_{min} \leq a_{max}$ and so on). Following this will be U lines describing a single user, in the form ‘ $a_i h_i w_i v_i$ ’.

All ages, heights and weights are integers between 0 and 99 inclusive. Each user will make between 1 and 1000 visits, inclusive.

See the *Scoring* section for a breakdown of the marks awarded for different test cases.

Output

Your program must write to standard output. The output should consist of a single integer: the number of visits made to your site this month by users who are *not* spammers.

Sample Input

```
2 3
18 24 30 60 80 85
21 30 40 50 0 99
18 30 80 3
25 35 86 5
23 45 82 7
```

Sample Output

```
5
```

Scoring

The score for each input scenario will be 100% if the correct answer is written to the output file, and 0% otherwise.

The following table lists the sizes of the inputs used in the test data. Here, $N - 1$ is the maximum age, height and weight specified in the input.

N	S	U	Percentage of marks
20	10	1000	10%
20	100	8000	10%
10	10000	100000	10%
30	10000	1000000	10%
50	100000	100000	20%
100	1000000	500000	20%
100	1000000	1000000	20%