

## E. Valera and Queries

time limit per test: 2 seconds  
memory limit per test: 512 megabytes  
input: standard input  
output: standard output

Valera loves segments. He has recently come up with one interesting problem.

The  $Ox$  axis of coordinates has  $n$  segments, the  $i$ -th segment starts in position  $l_i$  and ends in position  $r_i$  (we will mark it as  $[l_i, r_i]$ ). Your task is to process  $m$  queries, each consists of number  $cnt_i$  and a set of  $cnt_i$  coordinates of points located on the  $Ox$  axis. The answer to the query is the number of segments, such that each of them contains at least one point from the query. Segment  $[l, r]$  *contains* point  $q$ , if  $l \leq q \leq r$ .

Valera found the solution of this problem too difficult. So he asked you to help him. Help Valera.

### Input

The first line contains two integers  $n, m$  ( $1 \leq n, m \leq 3 \cdot 10^5$ ) — the number of segments on the axis of coordinates and the number of queries.

Next  $n$  lines contain the descriptions of the segments. The  $i$ -th line contains two positive integers  $l_i, r_i$  ( $1 \leq l_i \leq r_i \leq 10^6$ ) — the borders of the  $i$ -th segment.

Next  $m$  lines contain the description of the queries, one per line. Each line starts from integer  $cnt_i$  ( $1 \leq cnt_i \leq 3 \cdot 10^5$ ) — the number of points in the  $i$ -th query. Then the line contains  $cnt_i$  distinct positive integers  $p_1, p_2, \dots, p_{cnt_i}$  ( $1 \leq p_1 < p_2 < \dots < p_{cnt_i} \leq 10^6$ ) — the coordinates of points in the  $i$ -th query.

It is guaranteed that the total number of points in all queries doesn't exceed  $3 \cdot 10^5$ .

### Output

Print  $m$  non-negative integers, where the  $i$ -th number is the response to the  $i$ -th query.

### Examples

input	Copy
3 3 1 3 4 5 6 7 3 1 4 7 2 4 5 1 8	
output	Copy
3 1 0	