## 科协好声音

**Description**

鉴于最近的中国好声音很火，琪琪打算在科协内部举办一个科协好声音让大家来娱乐一下，现在第一轮海选已经结束参赛的每个人都得到了自己的分数，但是选择晋级的人是个蛋疼的事情啊，他不想让淘汰的人太尴尬，所以他决定不说晋级的人有多少，而是宣布得分大于等于所有分数中第k高的得分的人都晋级，现在他想知道晋级的人到底有多少。

**Input**

多组数据，EOF结束。

每组数据第一行有两个整数n,k (1 ≤ *k* ≤ *n* ≤ 50) ，第二行为n个整数，代表n个人的排名（保证这个n个人的成绩是一个不增的序列）

**Output**

每组数据输出一个数，为晋级的人数。

**Sample Input**

8 5

10 9 8 7 7 7 5 5

4 2

0 0 0 0

**Sample Output**

6

0

## BigBenBird的自行车

**Description**

BigBenBird有一辆土豪专用车，这个车的前轮和后轮都有很多种型号，每种型号的齿轮数都不一样，只有当后轮的齿轮数与前轮齿轮数的比值越大时骑起来越省力，但是他觉得如果这个比值不是个整数的话他就会觉得很不爽，这种情况下他是不会骑他的车子的。土豪都是不喜欢单调的，所以他想知道到底有多少种不同的策略能让他骑车的时候尽可能省力。

**Input**

有多组数据，以EOF结束。

每组数据第一行有一个整数n (1 ≤ *n* ≤ 50) ，接下来一行有n个数为每种型号的前轮齿轮个数（以递增方式给出），分别为*a*1, *a*2, ..., *an* (1 ≤ *ai* ≤ 104)。

第三行有一个整数m (1 ≤ *m* ≤ 50) ，接下来一行有m个数分别为每种型号的后轮齿轮个数（以递增方式给出），分别为*b*1, *b*2, ..., *bm* (1 ≤ *bi* ≤ 104)。

**Output**

每组数据输出一个整数，满足要求的方案的个数

**Sample Input**

2

4 5

3

12 13 15

**Sample Output**

2

## 不爽的琪琪

**Description**

科协又要举办培训啦，这次我们申请到了好多机房，而且不限流量上网哦，亲。但是每个机房都有一定的人数设置，坐满了就不能再坐了，但是如果有位置空着的话他就会很不爽（卧槽，好不容易找的机房都尼玛不来是什么意思），每个人在选择教室的时候都会给他增加一个不爽值，这个不爽值就是当然这个人选择教室的空余座位数量。选择教室的策略不同，得到的不爽值可能也是不相同的，现在在已知教室座位数和人数的情况下，不爽值最大和最小各为多少。

**Input**

多组数据，EOF结束。

每组数据第一行有两个整数n,m (1 ≤ *n*, *m* ≤ 1000) ，接下来一行有m个数，每个数代表相应教室能容纳的人数。

**Output**

每组数据输出两个数，不爽值的最大值和最小值。

**Sample Input**

4 3

2 1 1

4 3

2 2 2

**Sample Output**

5 5

7 6

## Wooden Sticks

|  |  |  |
| --- | --- | --- |
| **Time Limit:** 1000MS |  | **Memory Limit:** 10000K |

**Description**

There is a pile of n wooden sticks. The length and weight of each stick are known in advance. The sticks are to be processed by a woodworking machine in one by one fashion. It needs some time, called setup time, for the machine to prepare processing a stick. The setup times are associated with cleaning operations and changing tools and shapes in the machine. The setup times of the woodworking machine are given as follows:   
(a) The setup time for the first wooden stick is 1 minute.   
(b) Right after processing a stick of length l and weight w , the machine will need no setup time for a stick of length l' and weight w' if l <= l' and w <= w'. Otherwise, it will need 1 minute for setup.   
You are to find the minimum setup time to process a given pile of n wooden sticks. For example, if you have five sticks whose pairs of length and weight are ( 9 , 4 ) , ( 2 , 5 ) , ( 1 , 2 ) , ( 5 , 3 ) , and ( 4 , 1 ) , then the minimum setup time should be 2 minutes since there is a sequence of pairs ( 4 , 1 ) , ( 5 , 3 ) , ( 9 , 4 ) , ( 1 , 2 ) , ( 2 , 5 ) .

**Input**

The input consists of T test cases. The number of test cases (T) is given in the first line of the input file. Each test case consists of two lines: The first line has an integer n , 1 <= n <= 5000 , that represents the number of wooden sticks in the test case, and the second line contains 2n positive integers l1 , w1 , l2 , w2 ,..., ln , wn , each of magnitude at most 10000 , where li and wi are the length and weight of the i th wooden stick, respectively. The 2n integers are delimited by one or more spaces.

**Output**

The output should contain the minimum setup time in minutes, one per line.

**Sample Input**

3

5

4 9 5 2 2 1 3 5 1 4

3

2 2 1 1 2 2

3

1 3 2 2 3 1

**Sample Output**

2

1

3

## Ride to School

|  |  |  |
| --- | --- | --- |
| **Time Limit:** 1000MS |  | **Memory Limit:** 30000K |

**Description**

Many graduate students of Peking University are living in Wanliu Campus, which is 4.5 kilometers from the main campus – Yanyuan. Students in Wanliu have to either take a bus or ride a bike to go to school. Due to the bad traffic in Beijing, many students choose to ride a bike.   
  
We may assume that all the students except "Charley" ride from Wanliu to Yanyuan at a fixed speed. Charley is a student with a different riding habit – he always tries to follow another rider to avoid riding alone. When Charley gets to the gate of Wanliu, he will look for someone who is setting off to Yanyuan. If he finds someone, he will follow that rider, or if not, he will wait for someone to follow. On the way from Wanliu to Yanyuan, at any time if a faster student surpassed Charley, he will leave the rider he is following and speed up to follow the faster one.   
  
We assume the time that Charley gets to the gate of Wanliu is zero. Given the set off time and speed of the other students, your task is to give the time when Charley arrives at Yanyuan.

**Input**

There are several test cases. The first line of each case is N (1 <= N <= 10000) representing the number of riders (excluding Charley). N = 0 ends the input. The following N lines are information of N different riders, in such format:   
  
Vi [TAB] Ti   
  
Vi is a positive integer <= 40, indicating the speed of the i-th rider (kph, kilometers per hour). Ti is the set off time of the i-th rider, which is an integer and counted in seconds. In any case it is assured that there always exists a nonnegative Ti.

**Output**

Output one line for each case: the arrival time of Charley. Round up (ceiling) the value when dealing with a fraction.

**Sample Input**

4

20 0

25 -155

27 190

30 240

2

21 0

22 34

0

**Sample Output**

780

771