6790 Chaos Management

Sydney is a great city, when they finish building it! In the meantime there will always be construction sites around the city and the locals will suffer the accompanying traffic chaos around each site.

The "Australian Chaos Management" ACM company, which specialises in supplying traffic controllers for construction sites, has a booming business and also has a policy of employing casuals only. Casual employees help the financial bottom line but they are difficult to manage because they are not always available for work.

After many years of using phones to call on an employee for a job, the ACM company decided to switch to a more efficient IT system for assigning employees to traffic control jobs. Employees are asked to nominate the time they are willing to work and the system will allocate them to jobs as needed. Each job can be assigned to at most one employee and each employee can be assigned to at most one job.

Your task is to program a small part of the system whose purpose is to report the maximum number of jobs for which the ACM company can provide traffic controllers.

Input

The first line contains an integer n which denotes the number of cases to be considered. Each case starts with two integers, on a line by themselves, which are the number of casual employees N and the number of jobs M, $0 \leq N, M \leq 200$. Each of the next N lines contains the available time interval of one employee. Each of the following M lines contains the time interval of one job. All time intervals are described by a starting and an end time separated by a single space. The start time and the end time both use the '$hh{:}mm$' format ($00 \leq hh \leq 99$, $0 \leq mm \leq 59$). The start time is strictly before the end time.

Output

For each case, the output consists of a single line that starts with a single number that is the maximum number of jobs for which the ACM company can provide traffic controllers.

Sample Input

```
1
3 3
00:00 05:00
20:00 28:00
07:00 35:00
06:00 10:00
25:00 30:00
22:59 27:09
```

Sample Output

```
2
```