Baby Sitter

Filename: babysit

You have been given various offers to baby sit. Unfortunately, you can't just babysit one day for a family. Each family would like to rely on you for several days. Thus, each job you are presented requires you to work for a subset of all possible days. Each job has a payment. (As previously noted a job may require you to babysit for multiple days.) Naturally, you can't take two jobs where both jobs require you to babysit on the same day. (For the purposes of this problem we assume that a babysitting job takes the whole day.) Determine the maximum amount of money you can make from accepting any set of babysitting jobs that don't conflict (require you to work the same day on two different jobs.)

The Problem

Given a list babysitting jobs, where each job is for one or more days, as well as the payment for each job, determine the most amount of money you can make doing any set of jobs without a conflict where you would have to work two different jobs the same day.

The Input

The first line of the input file will contain a single positive integer, c ($c \leq 100$), representing the number of cases to process. The information for each case follows. The first line of input for each case contains a single positive integer, n ($n \leq 20$), the number of jobs to choose from for the case. The information for each job follows, one per line. The input for each job starts with a positive integer d ($d \leq 20$), representing the number of days for that particular job. The following d space-separate integers on the same line represent the days to work for that job. It's guaranteed that each of these integers will be distinct and in between 1 and 20, inclusive. The last integer on the line represents the payment for the job. This is guaranteed to be positive and less than 10^8.

The Output

For each case, output the maximum amount of money you could make if you select the appropriate subset of jobs, on a line by itself.

Sample Input

```
2
4
3 1 3 5 125
2 3 4 100
4 1 2 5 7 150
1 7 124
5
3 2 6 8 149
4 3 5 6 9 187
5 2 3 7 10 12 216
4 1 4 5 11 233
2 10 2 137
```

Sample Output

```
250
449
```