Problem D
Master Teacher

ACM-ICPC Thailand
Mini Programming Contest
Local Training 2016

A Thai university has a harsh life. One must teach, research, give academic services, being academic advisor, help the faculty with management jobs, etc. One may work at least 10 hours day, 7 day a week. One master teacher has finally says enough is enough. The master is going to do the jobs with the most satisfaction levels for each week. To accomplish this, for each weak, the master will list all the jobs that must be completed on the week. Then, the master will select a set of jobs that does not overlap one another, such the total sum of the satisfaction levels.

Input

First line contains an integer, *T*, represent the number of test cases. 1 <= T <= 10

For each test case, there are n+1 lines. In the first line, it contains a single number n, the number of jobs, which the master can do on that week. 1 <= n <= 400. For the next n lines, each line has three numbers, the starting time, s, the length of time required for the job, t, and the satisfaction level, l. 0 <= s <= 40000, 1 <= t <= 2000, 1 <= l <= 200. Note that, if the master does a job which starts at time 5, and finish at time 10, then the master next job may be the job that start at time 11, but not 10.

Output

Answer in *T* lines. Each line contains a single number, the largest total satisfaction levels of job.

Example

Input	Output
2 3 1 4 100 5 100 1 3 6 34 5 0 300 100 0 500 200 50 200 100 550 250 100 300 300 200	100 300