Best Possible Team

You want to put together the best team, but have a limited amount of money to spend and time to train. Given training time t_i, the cost c_i, and the benefit b_i associated with each potential team member, along with your total time T, and total money M, compute the largest benefit you can achieve. The chosen team members must have t_i-values that sum to at most T, and c_i-values that sum to at most M.

Input Format
The first line contains the number C giving the number of test cases. The first line of each test case will contain the numbers T and M separated by a single space. The next line will contain the number giving the number of potential team members. The following n lines will each contain the three numbers, t_i, c_i, and b_i separated by single spaces. Each value will be between 0 and 500, inclusive.

Constraints
- $1 \le C \le 20$
- $1 \le T \le 500$
- $1 \le M \le 500$
- $1 \le n \le 50$
- $0 \le t_i, c_i, b_i \le 500$

Output Format
Output one line per test case containing the maximum achievable total benefit.

Sample Input	**Sample Output**
7 100 100 3 40 60 100 60 40 100 50 50 190 100 100 3 40 40 100 60 40 100 30 30 190 400 400 1 500 500 500 20 20 4 0 0 10 0 0 10 0 0 10 30 30 30	200 290 0 30 70 200 180

100 100 5 10 50 30 60 50 30 90 20 30 40 40 20 50 10 20 100 100 4 50 50 100 50 50 100 50 50 1 50 50 1 20 20 3 10 10 90 30 30 40 10 10 90	