**Team Selection**

**Author:**

**Time limit:** 1 second

**Memory limit:** 256 megabytes

For an upcoming International Programming Contest, IIUC needs a strong team of ***3*** members. To accomplish this, IIUC's Competitive Programming Community arranged an Intra-University programming contest for all the competitive coders of IIUC.

After the contest, the top ***n*** coders with the maximum scores have been selected. Among the ***n*** coders, ***3*** coders will be chosen to form a team. The selection process is based on two criteria:

1. The team must have the maximum total score, which is calculated as the sum of the scores of the ***ith***, ***jth***, and ***kth*** coder ***(1 <= i, j, k <= n)***.

2. The team's combined programming skills must cover ***10*** specific programming concepts, namely: String, Stack, Queue, Hashing, Searching, Recursion, DP, Graph, Tree, and Maths.

Your task is to find the maximum total score of such a team. A team that fulfills the given criteria always exists. The selected team will be eligible to participate in the International Programming Contest.

**Input**

The first line contains ***t***, the number of test cases ***(1 <= t <= 10)***.

For each test case:

* The first line contains ***n***, the number of top participants after the contest ***(3 <= n <= 20)***.
* The second line contains two integers ***si (1 <= si <= 100)*** and ***ci (1 <= ci <= 10)***, where ***si*** represents the score of the ***ith (1 <= i <= n)*** participant, and ***ci*** represents the number of programming concepts he/she is proficient at.
* The last line contains ***c*** space-separated topics indicating the programming concepts the participant is skilled in.

**Output**

For each test case, print the total maximum score of the team.

**Example**

|  |  |
| --- | --- |
| **Input** | **Output** |
| 1  5  100 4  String Stack Queue Hashing  100 2  Hashing Searching  80 4  Recursion DP Graph Tree  70 5  Recursion DP Graph Tree Maths  90 1  Maths | 270 |

**Explanation**

The maximum total score is achieved by selecting coders 1, 2, and 4. Their total score is 100 + 100 + 70 = 270, and they collectively have 10 programming concepts (String, Stack, Queue, Hashing, Searching, Recursion, DP, Graph, Tree, and Maths).