J: Tournament

You are given the task to organize a basketball tournament. *N* people showed up to participate in the tournament, but teams are not yet created, so your task is to create the teams. Each team will consist of exactly three players. You are given each individual player's level as an integer. There is also a compatibility score for any two players i and j, shown by a matrix *M* given in the input data. In other words, M_{ij} = the compatibility score when player i plays with player j on the same team. The level of a team is the sum of the levels of all team members, added to the compatibility score for each pair of players on the same team. Your job is to maximize the sum of all the teams' levels.

Input
The first line will be an integer T denoting the number of test cases. Each of the test cases begin with an integer *N* . Then *N* integers follow, the *i-th* integer represents the level of the *i-th* player. Then *N* lines follow, each followed by N integers. The *j-th* integer of the *i-th* line represents how well player i and j play together.

Output
For each test case output the highest possible sum of all team scores.

Constraints: $3 \le N \le 12$ (N mod 3 == 0), and ($-10{,}000 < a_{ij} < 10{,}000$)

Sample input:	Sample description:
2	In the first test case, you can create any two teams, since the compatibility scores are all zero. A team containing players (1,2,3) would have a combined level = 2 + 3 + 1 ; then a team containing players (4,5,6) would have a combined level = 2 + 2 + 2. The sum of the combined levels of the two teams is 12.

Sample input:
```
2
6 2 3 1 2 2 2
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
6 1 2 3 4 5 6
0 1 0 2 0 0
1 0 0 0 0 0
0 0 0 0 0 0
2 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
```

Sample output:
```
12
24
```

Sample description:

In the first test case, you can create any two teams, since the compatibility scores are all zero. A team containing players (1,2,3) would have a combined level = 2 + 3 + 1 ; then a team containing players (4,5,6) would have a combined level = 2 + 2 + 2. The sum of the combined levels of the two teams is 12.

In the second test case, according to the matrix, players (1,2) and (1,4) should be on the same team. Therefore, the first team would be (1, 2, 4) with a level of 7, plus compatibility 1 + 2 = 3, for a total level of 10. The second team would be (3, 5, 6) with a level of 14. The sum of the two team levels is 24.