NOI '20 P4 - Dish

Time limit: 2.0s **Memory limit:** 512M

The chef is preparing m dishes, and each dish uses k grams of ingredients. As a result, the chef has bought n ingredients, and the ingredients are numbered $1, 2, \ldots, n$. The i-th ingredient weighs d_i grams. The sum of weights of all n ingredients is exactly $m \times k$ grams. d_i and k are positive integers.

An ingredient may be used in multiple dishes. However, each dish may use *at most 2* ingredients. Now you are asked to decide if there exists a valid way to prepare the m dishes. More formally, the final plan shall satisfy the following requirements:

1. Prepare m dishes in total.
2. Each dish uses at most 2 ingredients.
3. Each dish uses exactly k grams of ingredients.
4. For each ingredient used in a given dish, the amount used is a positive integer measured in grams.
5. All of the n ingredients will be completely utilized.

If there exists a feasible solution, you should output a detailed plan.

Input Specification

In this problem, each test case may have multiple instances. The first line is an integer T denoting the number of instances. For each instance, the first line contains three positive integers n, m, k denoting the number of ingredients, the number of dishes to prepare, and the amount of ingredients each dish uses. The second line contains n integers, and the i-th integer denotes there are a_i grams of ingredient i.

Output Specification

For each instance, if there is no feasible solution, output `-1`. Otherwise, you need to output m lines, and each line specifies the way to prepare a dish. Depending on the number of ingredients used in the dish, a line shall be in one of the following two formats:

- a line containing two integers i and x denoting the dish will use x grams of ingredient i. Here, $1 \leq i \leq n$ and $x = k$.
- a line containing four integers i, x, j, y denoting the dish will use x grams of ingredient i and y grams of ingredient j. Here, $1 \leq i, j \leq n$, $i \neq j$, $x + y = k$, $x, y > 0$.

Your answer will be checked by a special judge. Therefore, if there are multiple feasible solutions, you may print any solution. You should make sure the output is in the correct format, and two adjacent integers in a line are separated by a single space. Finally, your output shall not contain any extra characters.

Sample Input

```
4
1 1 10
10
4 3 100
80 30 90 100
5 3 1000
200 400 500 900 1000
6 4 100
25 30 50 80 95 120
```

Sample Output

```
1 10
1 80 2 20
2 10 3 90
4 100
-1
1 5 5 95
1 20 4 80
2 30 6 70
3 50 6 50
```

For all test cases:
$1 \leq T \leq 10$, $1 \leq n \leq 500$, $n-2 \leq m \leq 5000$, $m \geq 1$,
$1 \leq k \leq 5000$, $\sum_{i=1}^{n} d_i = m \times k$.

Test case	n	m	k
1~3	≤ 4	≤ 4	≤ 50
4~5	≤ 10	≤ 10	≤ 5000
6~7	≤ 500	$= n-1$	
8~9		$n-1 \leq m \leq 5000$	

10	≤ 25	≤ 5000	
11~12			≤ 500
13~14	≤ 50		
15~17	≤ 100		≤ 5000
18~20	≤ 500		