Collection Tests 28.11.2022

Bài 1: Miss IT

Question: The Miss IT contest is taking place every week at the Royal Academy. In the final round to find the best contestants, the organizers introduced a new scoring method in which each judge did not score but chose a **minimum** of 1 and a **maximum** of 3 candidates he rated the highest in order of ranking.

The first contestant on the list will get 3 points, the 2nd contestant will get 2 points and the 3rd contestant will get 1 point. The total score of the contestants will determine the winner. If there are contestants with the same score, the contestant who is selected in 1st place more will win, if all of them have the same number of 1st place votes, the 2nd place will be considered.

If still equal, all contestants will win.

Input Format

For each test set, the first line contains the number of judges - N (N <= 100). The next N lines will show selection of judges. Each line contains number of each judge's choices (from 1 to 3) followed by the selected candidate-id values. Assume candidate-id is no more than 10^6.

Constraints

1 < N < 100

1 < id < 10^6

Output Format

One line show list of winners

Sample Input 0

```
4
3 5 2 1
3 12 5 2
2 1 2
3 2 1 5
```

Sample Output 0

```
2
```

Sample Input 1

```
2
3 3 2 1
3 2 3 1
```

Sample Output 1

```
2 3
```

Bài 2: Happy Number

Question: Happy Numbers are positive non-zero integer numbers also sum of the squares of its every digit and repeat that process until the number will be equals to 1(one). Otherwise, it is called an Unhappy Number or Sad Number.

The examples of happy numbers are: 1, 7, 10, 13, 19, 23, 28 ...

- **Example 01**: 19 is a happy number

1^2 + 9^2 = 82

8^2 + 2^2 = 68

6^2 + 8^2 = 100

1^2 + 0^2 + 0^2 = 1

- **Example 02**: 4 is not a happy number

4^2 = 16

1^2 + 6^2 = 37

3^2 + 7^2 = 58

5^2 + 8^2 = 89

8^2 + 9^2 = 145

1^2 + 4^2 + 5^2 = 42

4^2 + 2^2 = 20

2^2 + 0^2 = 4

4^2 = 16 **repeat infinitely**

Input Format

Number

Constraints

Numbers are positive non-zero integer

Output Format

Boolean

Sample Input 0

```
13
```

Sample Output 0

```
true
```

Sample Input 1

```
19
```

Sample Output 1

```
true
```

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