Love is in the air

As you could know there are no male helicopters nor female helicopters. However, each helicopter on Earth likes some other helicopter. There are n helicopters on Earth, numbered from *1* to *n*, and the helicopter with number *i* likes the helicopter with number *fi*, where $1 \le fi \le n$ and $fi \ne i$.

We call a triple threat a situation in which helicopter A likes helicopter B, helicopter B likes helicopter C and helicopter C likes helicopter A. Find out if there is a triple threat situation on Earth.

Input Format

The first line contains a single integer **t** - the number of test cases. **t** test cases follow with the following descrption.

The first line of each test case contains a single integer **n** — the number of helicopters.

The second line contains **n** integers *f1, f2, ..., fn*, meaning that the **i-th** helicopter likes the **fi-th** helicopter.

Constraints

- $1 \le t \le 100$
- $2 \le n \le 5000$
- $1 \le fi \le n, fi \ne i$

Output Format

Print t lines with output "YES" if there is a triple threat situation consisting of planes on Earth. Otherwise, output "NO". Quotes shouldn't be printed.

Sample Input 0

```
1
7
3 4 7 5 7 2 1
```

Sample Output 0

```
YES
```

Explanation 0

There is a triple threat situation between helicopters 1, 3 and 7. 1 likes 3, 3 likes 7 and 7 likes 1.