Problem 2: Office of Business Contracts and Brand Protection
3 Point(s)

Problem ID: `rso`
Rank: `1`

Introduction

Registered Student Organizations (RSOs) at the University of California like CALICO are subject to a strict set of *lame* rules set by the Office of Business Contracts and Brand Protection that dictate what we can and cannot call ourselves. In fact, just last week, they threatened to take away our https://calico.berkeley.edu/ domain! >_< Terrifying! This problem is based on a true story of confusing guidelines and a CALICO identity crisis.

Problem Statement

Given the year an RSO was registered Y and the name they registered with N, determine if the RSO's name is valid according to the University's branding guidelines.

The branding guidelines are as follows:
- RSO names must be no longer than 50 characters long.
- RSO names must not begin with any trademarked *words* in any capitalization.
  - The following words are trademarked:
    - "California"
    - "Cal"
    - "Berkeley"
  - **Note that this only applies to *full words*.** For example, "Calendar" is allowed but "Cal" is not.
- RSOs registered prior to the year 2010 are exempt from the trademarked word rule.

*Note: This problem—alongside **all other problems in this contest**—has templates available in Python, Java, and C++! You can find them in the contest.zip provided at the start of the contest. Templates parse the input into a neat function to fill out, so you can jump right into problem solving!*

Input Format

The first line of the input contains an integer T denoting the number of test cases that follow.
For each test case:

- The first line contains an integer Y denoting the year the RSO was established.
- The second line contains a string N denoting the name the RSO registered with.

Output Format

For each test case, output a single line containing `VALID` if the RSO's name is valid or `INVALID` otherwise.

Constraints

$1 \leq T \leq 100$
$1868 \leq Y \leq 2022$ (The University was founded in 1868)
$1 \leq |N| \leq 100$
N only contains letters from the lowercase or uppercase English alphabet:
`abcdefghijklmnopqrstuvwxyz`
`ABCDEFGHIJKLMNOPQRSTUVWXYZ`
N can also contain spaces, but it is guaranteed that it will never start or end with a space.

Sample Test Cases

Main Sample Input

```
8
2021
California Informatics Competition
2021
CALICO Informatics Competition
2022
Competitive Coding at Berkeley
1989
Cal Animage Alpha
2011
Berkeley Math Tournament
2011
Math Tournament at Berkeley
2005
BERKELEY BUSINESS SOCIETY
2003
Saving The World By Overloading It With Fun Brigade
```

Main Sample Output

```
INVALID
VALID
VALID
VALID
INVALID
VALID
VALID
INVALID
```

Sample Explanations

For test case #1, the name begins with the word `California` which is trademarked.

For test case #3, the name contains the word `Berkeley` which is trademarked, but this is allowed since it does not start with a trademarked word.

For test case #7, the name begins with the word `BERKELEY` which is trademarked. However, clubs before 2010 are exempt. Keep in mind trademarked words can be in any capitalization.

For test case #8, the name is longer than 50 characters.