

Date validation

Enter a unchecked date then check whether it is valid date.

Input

The first line of the input consist of a single integer number t which determines the number of tests.

In each of next t lines there is three numbers are *month* and *date* and *year* that separated by a space.

Constraints

- $0 < t \leq 1\ 000$

Output

For each number n print out the checking status is "VALID" for valid date or INVALID for invalid date.

Separate your answers with a new line character.

Example

Input:

```
7
9 8 2018
3 39 2000
2 29 2018
20 -4 1998
2 29 2000
7 31 1986
11 31 2002
```

Output:

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