Problem D

Date Checking

Time limit: 1s
Memory Limit: 8MB

You will be given a date in dd-mm-yyyy format. You need to output whether the given date is a valid date or not. “34-13-1990” is obviously not a valid date. It looks like an easy problem, but let me tell you the tricky part of this problem: the leap year. During a leap year, February that usually has 28 days will has 29 days. These extra days occur in years which are multiples of four (with the exception of years divisible by 100 but not by 400). So, make sure that you handle that properly.

Input

The first line consists of an integer N $(1 \leq N \leq 1000)$ which means there’ll be N inputs.
The next line consists N integers, the date asked in the format of “dd-mm-yyyy”.
Dd stands for “day”, “mm” stands for month, and “yyyy” stands for year.
$(1 \leq dd \leq 50,\ 1 \leq mm \leq 50,\ 1990 \leq dd \leq 3000)$

Output

For each input, you need to output “VALID” if the given date is a valid date, or “NOT VALID” otherwise.

Sample Input 1
7 9-2-1990 37-13-2013 29-02-2020 29-2-2100 07-1-2017 7-03-2017 31-4-2017
Sample Output 1
VALID NOT VALID VALID NOT VALID VALID VALID NOT VALID

Note: Always print a newline (\n) at the end of the answer.