2216 - Wordstorm

Description

In Sean O'Connor's highly addictive App "WORDSTORM", the player must make words using a subset of the 9 letters in the puzzle. Each word must be 4 or more letters long and contain the central letter. Your first task today is to write a program that will validate a player's words.

Input specification

The input will consist of several test cases. The first line of each test case will begin with a 9-letter puzzle word, in uppercase characters. The central letter is the ... um ... central (5th) letter. The second line is a positive integer **N**, followed by **N** lines of uppercase characters. These are the player's guesses. You should read until you reach the end of file (EOF).

Output specification

For each of the player's guesses, print the single line, "word is invalid", depending on whether or not it is valid.

Sample input

```
WORDSTORM
2
WORD
STORM
MOEMBRLYA
7
ABLE
BLEARY
MEMORABLY
ROB
SOBER
ROBBER
EARLY
```

Sample output

```
WORD is invalid
STORM is valid
```

```
ABLE is valid
BLEARY is valid
MEMORABLY is valid
ROB is invalid
SOBER is invalid
ROBBER is invalid
EARLY is invalid
```

Hint(s)

Source	The 2012 ACM-ICPC Qualifier Contest I (SFU)
Added by	**ymondelo20**
Addition date	2013-01-26
Time limit (ms)	3000
Test limit (ms)	2000
Memory limit (kb)	256000
Output limit (mb)	64
Size limit (bytes)	15000
Enabled languages	Bash C C# C++ Java Pascal Perl PHP Python Ruby Text