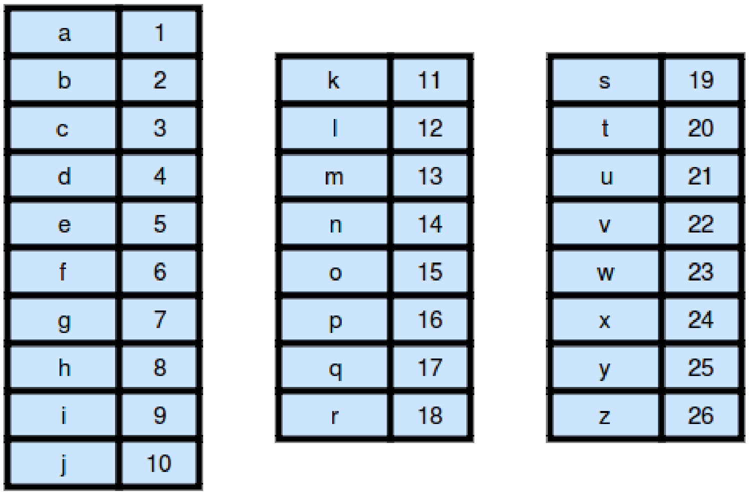
Weighted Uniform Strings

A weighted string is a string of lowercase English letters where each letter has a *weight*. Character weights are 1 to 26 from a to z as shown below:

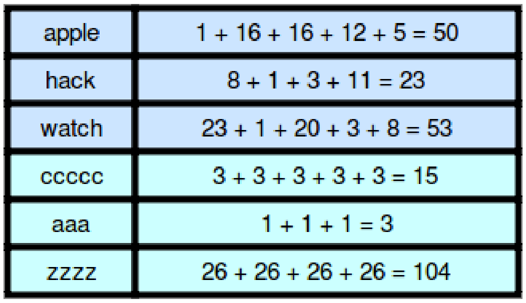


a	1
b	2
c	3
d	4
e	5
f	6
g	7
h	8
i	9
j	10

k	11
l	12
m	13
n	14
o	15
p	16
q	17
r	18

s	19
t	20
u	21
v	22
w	23
x	24
y	25
z	26

- The *weight of a string* is the sum of the weights of its characters. For example:



apple	1 + 16 + 16 + 12 + 5 = 50
hack	8 + 1 + 3 + 11 = 23
watch	23 + 1 + 20 + 3 + 8 = 53
ccccc	3 + 3 + 3 + 3 + 3 = 15
aaa	1 + 1 + 1 = 3
zzzz	26 + 26 + 26 + 26 = 104

- A *uniform string* consists of a single character repeated zero or more times. For example, `ccc` and `a` are uniform strings, but `bcb` and `cd` are not.

Given a string, s, let U be the set of weights for all possible uniform contiguous substrings of string s. There will be n queries to answer where each query consists of a single integer. Create a return array where for each query, the value is `Yes` if $query[i] \in U$. Otherwise, append `No`.

Note: The $\in$ symbol denotes that $x[i]$ is an element of set U.

Example

$s =$ 'abbcccdddd'

$queries = [1, 7, 5, 4, 15]$.

Working from left to right, weights that exist are:

```
string  weight
a       1
b       2
bb      4
c       3
```

```
cc       6
ccc      9
d        4
dd       8
ddd      12
dddd     16
```

Now for each value in $queries$, see if it exists in the possible string weights. The return array is `['Yes', 'No', 'No', 'Yes', 'No']`.

Function Description

Complete the *weightedUniformStrings* function in the editor below.

weightedUniformStrings has the following parameter(s):
- *string s:* a string
- *int queries[n]:* an array of integers

Returns

- *string[n]:* an array of strings that answer the queries

Input Format

The first line contains a string s, the original string.
The second line contains an integer n, the number of queries.
Each of the next n lines contains an integer $queries[i]$, the weight of a uniform subtring of s that may or may not exist.

Constraints

- $1 \leq lengthofs, n \leq 10^5$
- $1 \leq queries[i] \leq 10^7$
- s will only contain lowercase English letters, ascii[a-z].