



Talk in numbers

Time Limit 1 second

Problem

You came across an old manuscript written entirely in numbers and, thankfully, the instructions to decode it were included, but obviously not the means it is an old manuscript after all and you would rather not decipher the document by hand.

Each word has essentially been sorted first by length then alphabetically such that “a” is the first word followed by “b”, etc. Only the lowercase letters a..z are allowed.

The decoding instructions that came with the manuscript included this subset of words as an example:

```
a      1
b      2
c      3
...
z      26
aa     27
ab     28
...
zz     702
...
```

hello 3752127 ...

Input

The input consists of an arbitrary number of lines, but no more than 200. Each line contains a single number, which will always be less than 2^{63} .

The end of input is indicated by a line containing only the value ‘-1’.

Output

For each input line, output a line containing the word that corresponds to the input number.

| Sample Input 1 | Sample Output 1 |
|----------------|-----------------|
| 13733 | the |
| 8143861 | quick |
| 1241072 | brown |



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|--|--|
| 4470 4948079 278660 13733 212289 3101 -1 | fox jumps over the lazy dog |
|--|--|