Even though stereotypically associated with psychedelic and hard rock musical acts of the sixties and seventies, recent research suggests that the practice of backmasking is actually older than that, and places its origins in the work of the probably most famous Japanese poet of the Edo period, Matsuo Bashō.

According to Professor John Robert Page at the University of Hindemburg, most of Bashō’s best-known haikus contain at least pagan, if not openly satanic, hidden messages against the publicly accepted Buddhist and Shintoist practices of the time. Some of them are extremely blunt and violent—take for instance these famous verses from the *Philippine Stanzas*:

```
my lima fire
the viceroy watches sunsets
will ikebana practice
```

Reading these words backwards, a message appears, clear as day:

```
ecitcarp anabek iHiw
stesnuw sechtao yourei xo eht
eri fami ym
```

In order to support his claims, Doctor Page reported about a press statement preserved at the Japanese National Library, where Bashō’s publisher reiterates that “our books only read in one direction: right-to-left”, allegedly to dismiss rumours about hidden messages in the poet’s work. It is also suspected that these rumours contributed to Bashō’s early retirement and self-imposed confinement to focus on the fishing of mudsharks and some related hobbies.

**Input**

Input starts with a natural number $n$, followed by $n$ different words, followed by the number of haikus $m$, followed by $m$ haikus, one per line. Assume $1 \leq n \leq 10^3$, $1 \leq m \leq 10^4$, that each word consists of between 1 and $10^3$ lowercase letters, and that each haiku consists of between 1 and $5 \cdot 10^4$ lowercase letters, whitespaces and ‘/’. Moreover, no input file will be larger than 4 MB.

**Output**

For each input haiku, print a line with its hidden message: Consider the reversed haiku (ignoring spaces and slashes), and print any given word that can be found when reading the haiku from left to right, avoiding all overlaps. In case of an overlap, always prefer the word that starts first (at the leftmost position), and longer words in the event of another tie. Separate words with spaces. If a haiku has no hidden words, just print “—”.
Sample input
8
family
kill
your
yadayadayada
2
zz
zb
zbc
4
my lima fire / the viceruoy watches sunsets / will ikebana practice
oh my dear reader / did you really expect something / hidden in plain sight
yada yada ya / yada yada yada ya / yada yada ya
bz zcb / zzz

Sample output
kill your family
-
yadayadayada
zz zbc zz

Problem information
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