

6410 Mealy's Memoirs

After a distinguished career as a computer scientist, Reginald Mealy wrote his memoirs and used a speech recognition program to transcribe his life story as he spoke. The result was many large streams of text.

However, all did not go according to plan because the memoirs contained the email addresses of many of his associates. The speech recognition programs transcribed the email addresses literally such that `me@me.com` was transcribed as `meatmedotcom`. All special characters were transcribed literally: '@' was transcribed as 'at' and '.' was transcribed as 'dot'. As well, spaces were omitted unless there was an unusually long pause.

Reginald Mealy wants to extract the email addresses from the transcribed text, and he has set it as a task for his student. As an incentive, he has offered a bounty of 128 cents for each extracted email address.

The student, being greedy, would like to maximise the number of extracted email addresses, and would like you to write a program to calculate the maximum bounty that can be collected for a stream of text. You may assume that all email addresses have one of the following forms:

```
[word]@[word].[word]
[word]@[word].[word].[word]
[word]@[word].[word].[co]
[word]@[word].[word].[word].[co]
```

where

[word] is a word of between 3 and 16 lower case Roman letters, and
[co] is a two letter country code, where all two-letter combinations are valid country codes.

So the following two strings `aaa@aaa.aaa` and `aaa@aaa.aaa.aaa.aa` are valid email addresses, but the following three strings `a@a.a`, `@a` or `a@a.` are not valid. Note that a bounty is collected only once if multiple email addresses overlap.

Input

The input starts with an integer N , on a line by itself, which indicates the number of test cases. $1 \leq N \leq 100$. The description of each test case consists of a string made entirely of lower case Roman letters from 'a' to 'z', inclusive, and the space character.

Output

For each test case the output consists of a single line that contains the maximum bounty that can be received. The amount is to be given in the format of $\$d.cc$, where d is the number of dollars and cc is the number of cents (with a leading 0 if required).

Sample Input

```
6
aaaaaaaaameatmeedotcombbbbbbbbbb
bbbmmattatdiedotdotnetpatdotdotherityatiinetdotnetaaaa
myemailathomedot com
myemailatabcdefghijklmnopqrstuvwxyzdotcom
```

```
helmattatdidotdotnet  
helmatdotdoherityatiinetdotnet
```

Sample Output

```
$1.28  
$3.84  
$0.00  
$0.00  
$1.28  
$2.56
```