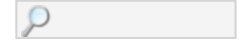


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F. Way Too Long Words

time limit per test: 1 second

memory limit per test: 256 megabytes

Given a string S . Print the **origin string** if it's **not too long** otherwise, print the **special abbreviation**.

Note: The string is called **too long**, if its length is strictly more than **10** characters. If the string is **too long** then you have to print the string in the following manner:

- Print the **first** character in the string.
- Print number of characters between the first and the last characters.
- Print the **last** character in the string.

For example: "localization" will be "l10n", and "internationalization" will be "i18n".

Input

The first line contains a number T ($1 \leq T \leq 100$) number of test cases.

Each of the T following lines contains a string S ($1 \leq |S| \leq 100$) where $|S|$ is the length of the string.

It's guaranteed that S contains only lowercase Latin letters.

Output

For each test case, print the result string.

Example

input

Copy

```
4
word
```

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```
localization
internationalization
pneumonoultramicroscopicsilicovolcanoconiosis
```

output

Copy

```
word
l10n
i18n
p43s
```

→ Group Contests

- Sheet #10 (General Hard)
- Sheet #9 (General medium)
- Sheet #8 (General easy)
- Sheet #7 (Recursion)
- Sheet #6 (Math - Geometry)
- Sheet #5 (Functions)
- **Sheet #4 (Strings)**
- Contest #3.1
- Sheet #3 (Arrays)
- Contest #2
- Sheet #2 (Loops)
- Contest #1
- Sheet #1 (Data type - Conditions)

Sheet #4 (Strings)

Finished

Practice



→ About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the [link](#).

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest](#)

→ Submit?

Language: GNU G++23 14.2 (64 bit, ms) ▼

Choose file: [Choose File](#) No file chosen[Submit](#)

→ Contest materials

- Statements in PDF (en) ✕
- Statements in PDF (en) ✕

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