

Scientific Notation

When working with numbers that are really big, it is common to use scientific notation to shorten their representation. In scientific notation, numbers are written in the form:

$$M * 10^N$$

Where M is a decimal number between 1.00 and 9.99, which we will always round to two decimal places, and N is an integer. For example:

$$\begin{aligned} 987 &= 9.87 * 10^2 \\ 1209 &= 1.21 * 10^3 \end{aligned}$$

We can also convert numbers out of scientific notation, rounding if needed. For example:

$$\begin{aligned} 1.21 * 10^3 &= 1210 \\ 9.87 * 10^1 &= 99 \end{aligned}$$

Given a number in either decimal notation or scientific notation, convert the number to its alternate form.

Input

Each test case contains one number **N** ($1 \leq N \leq 10^9$) represented either in decimal or scientific notation. **N** is guaranteed to fit in a 32-bit integer.

Output

For each test case, output **N** in scientific notation if **N** is in decimal notation or output **N** in decimal notation if it is in scientific notation.

Sample Input 1:

987

Sample Output 1:

9.87 * 10^2

Sample Input 2:

1.21 * 10^3

Sample Output 2:

1210