

Topic : Big Numbers**Problem 748****Exponentiation**

Problems involving the computation of exact values of very large magnitude and precision are common. For example, the computation of the national debt is a taxing experience for many computer systems.

This problem requires that you write a program to compute the exact value of R^n where R is a real number ($0.0 < R < 99.999$) and n is an integer such that $0 < n \leq 25$.

Input

The input will consist of a set of pairs of values for R and n . The R value will occupy columns 1 through 6, and the n value will be in columns 8 and 9.

Output

The output will consist of one line for each line of input giving the exact value of R^n . Leading zeros and insignificant trailing zeros should be suppressed in the output.

Sample Input

```
95.123 12
0.4321 20
5.1234 15
6.7592 9
98.999 10
1.0100 12
```

Sample Output

```
548815620517731830194541.899025343415715973535967221869852721
.00000005148554641076956121994511276767154838481760200726351203835429763013462401
43992025569.928573701266488041146654993318703707511666295476720493953024
29448126.764121021618164430206909037173276672
90429072743629540498.107596019456651774561044010001
1.126825030131969720661201
```

Problem 424**Integer Inquiry**

One of the first users of BIT's new supercomputer was Chip Diller. He extended his exploration of powers of 3 to go from 0 to 333 and he explored taking various sums of those numbers.

"This supercomputer is great," remarked Chip. "I only wish Timothy were here to see these results." (Chip moved to a new apartment, once one became available on the third floor of the Lemon Sky apartments on Third Street.)

Input

The input will consist of at most 100 lines of text, each of which contains a single VeryLongInteger. Each VeryLongInteger will be 100 or fewer characters in length, and will only contain digits (no VeryLongInteger will be negative).

The final input line will contain a single zero on a line by itself.

Output

Your program should output the sum of the VeryLongIntegers given in the input.

Sample Input

```
123456789012345678901234567890
123456789012345678901234567890
123456789012345678901234567890
0
```

Sample Output

```
370370367037037036703703703670
```

Problem 10106

Product

The Problem

The problem is to multiply two integers X, Y. ($0 \leq X, Y < 10^{250}$)

The Input

The input will consist of a set of pairs of lines. Each line in pair contains one multiplier.

The Output

For each input pair of lines the output line should consist one integer the product.

Sample Input

```
12
12
2
222222222222222222222222222222
```

Sample Output

```
144
444444444444444444444444444444
```