

Problem 1 – StrangeLand Numbers

Welcome to **StrangeLand** town! **Absolutely everything is strange here!** The **location** of the town is strange, **people** are strange, their **houses** are strange, the **language** they use is strange, their **numeral system** is strange and etc. Let's talk about the **StrangeLand numeral system**. It consists of **7 digits**, each one having a **different length** and all of them using **lowercase** and **possibly uppercase letters** from the **Latin alphabet** (and no – it's not the alphabet that people use in StrangeLand, they have a really special one but that's another story). Here are the StrangeLand digits and their decimal representations:

0	f
1	bIN
2	oBJEC
3	mNTRAVL
4	lPVKNQ
5	pNWE
6	hT

Recently Merry, a very skillful tennis player, found out about StrangeLand. She was very interested in the StrangeLand numeral system and wrote some numbers using it. Now she wants to know what their decimal representations are but she doesn't know how to convert numbers from StrangeLand numeral system to numbers in decimal numeral system. You must help her by writing a program that **converts a StrangeLand number to a decimal number** knowing that the last digit of the number (the most right one) has a value as shown in the above table. The next digit on the left has a value **7** times bigger than the shown in the above table, the next digit on the left has **7*7** times bigger value than the shown in the table and so on.

Input

The input data consists of a single line – the StrangeLand number you must convert to a decimal number.

The input data will always be valid and in the described format. There is no need to check it explicitly.

Output

The output data consists of a single line holding the decimal representation of the StrangeLand number.

Constraints

- The **input number** will have between **1** and **24 digits**.
- Allowed working time for your program: **0.1 seconds**.
- Allowed memory: **16 MB**.

Examples

Input	Output
lPVKNQ	4

Input	Output
pNWEoBJECbINf	1820

Input	Output
bINoBJECpNWEhT	482

Input	Output
hTmNTRAVLoBJEClPVKNQfffoBJECpNWE	37361980